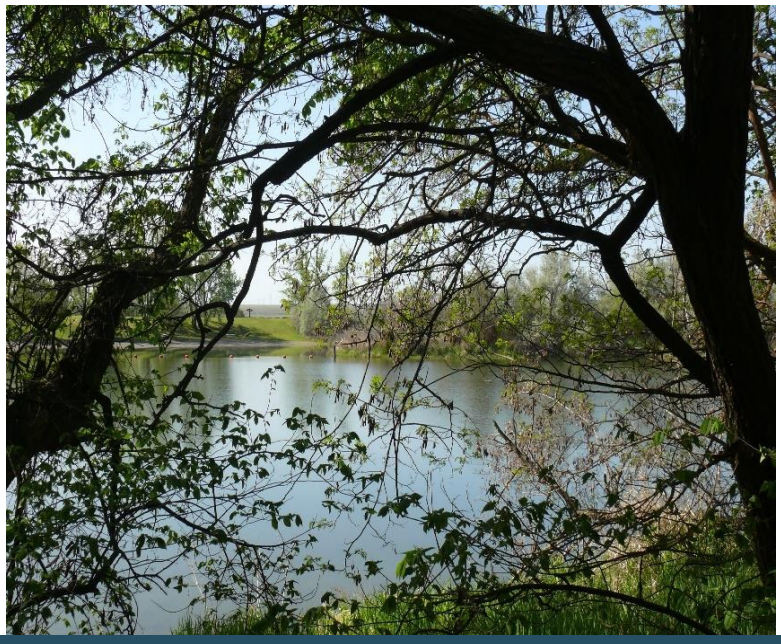

May 14, 2024

Benton County Comprehensive Plan

Updated by:
White Bluffs Consulting
189205 E. 36th Avenue
Kennewick WA 99337

Updated May 14, 2024

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Comprehensive Plan
FOR
BENTON COUNTY

Adopted on February 13, 2018
Ordinance #600
Resolution # 2018-137

AMENDMENTS:

Resolution # 2020-062	Ordinance #620 Effective Date:	January 14, 2020
Resolution # 2021-448	Land Use Designation Change	June 8, 2021
Resolution # 2021-449	Section 2.7, 6.2 & 6.4 Map Fig. 5	June 8, 2021
Resolution # 2021-450	Land Use Designation Change	June 8, 2021
Resolution # 2022-262	Land Use Designation Change	April 12, 2022
Resolution # 2022-263	Land Use Designation Change	April 12, 2022
Resolution # 2022-264	Land Use Designation Change	April 12, 2022
Resolution # 2022-265	Text Change/UGA Maps/Corrections	April 12, 2022
Resolution # 2024-0361	Text Change/UGAMaps	May 14, 2024
Resolution # 2024-0362	Land Use Designation Change	May 14, 2024

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APPENDICES

ABBREVIATIONS

2013 Plan	*2013 Benton County Comprehensive Solid Waste Management and Moderate Risk Waste Management Plan*
AADT	Annual Average Daily Trip
ARRA	American Recovery and Reinvestment Act
AVA	American Viticultural Area
BCC	Benton County Code
Benton PUD	Benton County Public Utility District
Benton REA	Benton Rural Electric Association
BFCG	Benton-Franklin Council of Government
BFT	Ben Franklin Transit
BPA	Bonneville Power Administration
CAO	Critical Areas Ordinance
CIP	Capital Improvement Plan
Comprehensive Plan	Benton County Comprehensive Plan Update
CWPP	Countywide Planning Policies
Du/acre	dwelling unit per acre
Ecology	Washington State Department of Ecology
FEMA	Federal Emergency Management Agency
GMA	Washington State Growth Management Act
KID	Kennewick Irrigation District
LAMIRD	limited area of more intense rural development
LOS	level of service
MPR	Master Planned Resort
OFM	Washington State Office of Financial Management
Parks Plan	Benton County Comprehensive Parks Plan
PD	Planned Development
PL	Public Lands designation
RCW	Revised Code of Washington
RM MSP	Red Mountain AVA Master Site Plan
RMSF	Rattlesnake Mountain Shooting Facility
Roza	Roza Irrigation District
SEPA	State Environmental Policy Act
SMA	satellite management agency
SMP	Shoreline Master Program
SSRT	Small-scale Recreational or Tourist
TCSA	Tri-Cities Shooting Association

UGA	urban growth area
VSP	Voluntary Stewardship Program
WAC	Washington Administrative Code
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WUTC	Washington Utilities and Transportation Commission
Yakima Integrated Plan	Yakima River Basin Integrated Water Resource Management Plan

1 Introduction

The Washington State Growth Management Act (GMA), adopted by the state legislature in 1990, requires local governments to develop comprehensive plans to address local and statewide planning issues. "*The legislature finds that uncoordinated and unplanned growth, together with a lack of common goals expressing the public's interest in the conservation and wise use of our lands, pose a threat to the environment, sustainable economic development, and the health and safety, and high quality of life enjoyed by residents of this state*" (Revised Code of Washington [RCW] 36.70A.010).

The Benton County Comprehensive Plan Update (Comprehensive Plan) was developed to reflect the County's values and plan for future growth consistent with the GMA and guide County decisions on land use, transportation, infrastructure, housing, economic development, and the environment.

1.1 Purpose and Intent of the Benton County Comprehensive Plan

The County's Comprehensive Plan was originally developed in 1985 and amended in 1998 and 2006. The Comprehensive Plan's purpose and intent is to provide for local needs relating to the use of land and infrastructure, including the protection of property and water rights, and in so doing, to meet the State's minimum planning law requirements. This Comprehensive Plan builds on the last update completed by the County in 2006, the amended Hanford Comprehensive Land Use plan, and includes updates to all plan elements. These updates address citizen input during visioning, refine goals and policies, incorporate recent analyses and findings in applicable plan elements, and reflect changes to more fully address the latest GMA requirements.

Benton County

This Comprehensive Plan seeks to preserve the natural environment, local customs, culture, and quality of life for County residents. Simultaneously, it seeks to facilitate and encourage economically productive use of the land and resources base to enable economic growth, prosperity, and enjoyment of a quality life.

Cities in Benton County have developed individual city comprehensive plans for urban area planning. These comprehensive plans implement the specific city's and community's vision and goals for the future. The Benton County Comprehensive Plan largely addresses planning in the unincorporated and urban areas that are not yet annexed to the cities. However, the Countywide Planning Policies (CWPP; see Section 1.5.1) address regional planning issues and coordinate growth among all jurisdictions.

1.1.1 Managing Growth: Plan, Prepare, and Facilitate

The Comprehensive Plan and adopted Land Use Designations Map (Appendix A: Map Folio, Figure 5 – Future/Proposed Land Use Designations Map) provides a predictable and certain system upon which citizens, various business interests, special districts, and public entities can plan and invest their resources. The Plan and maps also support the rural and urban citizen's and stakeholders' desired goals for growth and development.

The Comprehensive Plan coordinates land use, transportation, and capital facilities by focusing planning, scheduling, financing, and construction provisions to provide the identified levels of service (LOS) in advance of development, or upon demand. The County must have the financial ability to provide these services as planned.

1.1.2 Goals and Required Elements

The GMA has planning goals and mandatory plan "elements" to guide the development of plans and regulations. The 14 GMA goals per RCW 36.70A.020 are as follows:

1. Urban Growth - Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
2. Reduce Sprawl - Reduce inappropriate conversion of undeveloped land into sprawling, low-density development.
3. Transportation - Encourage efficient multi-modal transportation systems based on regional priorities and coordinated with county and city comprehensive plans.
4. Housing - Encourage the availability of affordable housing to all economic segments of the population of the state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.
5. Economic Development - Encourage economic development throughout the state consistent with adopted comprehensive plans, promote economic opportunity for all citizens of the state,

especially for the unemployed and the disadvantaged, and encourage growth in areas experiencing insufficient economic growth, all within the capacity of the state's natural resources, public services, and public facilities.

6. Property Rights - Private property shall not be taken for public use without just compensation. The property rights of landowners shall be protected from arbitrary and discriminatory action.
7. Permits - Application for state and local government permits should be processed in a timely and fair manner.
8. 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.
9. Open Space and Recreation - Encourage the retention of open space and development of recreation opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.
10. Environment - Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
11. Citizen Participation and Coordination - Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to resolve conflicts.
12. Public Facilities and Service - Ensure that public facilities and services necessary to support development are adequate to serve the development at the time the development is available for occupancy and use, without decreasing the current service levels below locally established minimum standards.
13. Historic Preservation - Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.
14. Shoreline Management – Develop a Shoreline Master Program (SMP) pursuant to the Shoreline Management Act. The goals and policies of a SMP for a county or city approved under chapter 90.58 RCW shall be considered a part of the county or city's comprehensive plan.

County Comprehensive Plans must include the following required elements (RCW 36.70A.070):

- **Land Use Element** with designated land uses and intensities that all other elements must serve. Citizens and private and public-sector service providers can use this element to plan future uses of their properties and to project and meet future locational demands;
- **Rural Element** that shows rural land use and densities for unincorporated lands outside of urban growth areas (UGAs) and agricultural lands designations;
- **Housing Element** that integrates the rural housing supply with the housing type and locational needs of rural land uses including agriculture.
- **Transportation Element** that provides public transportation facilities appropriately matched to the County's land use and density—as defined in the Land Use Element. This element must be monitored and maintained over time;

- **Capital Facilities Element** that identifies capital facilities project planning as well as funding mechanisms to construct necessary public services to meet the demands of the Land Use Designations Map as it builds-out;
- **Utilities Element** that enables utility providers to assess with certainty the location and intensity of future land use so that they may cost effectively plan, schedule, capitalize, and construct sufficient utility capacity;

1.2 Planning Under the Growth Management Act

1.2.1 Growth Management and the State Environmental Policy Act

The GMA requires compliance with both the State Environmental Policy Act (SEPA) and GMA in the comprehensive planning process. Due to their similarities, integration of SEPA with GMA eliminates duplication of effort and assures consistency between them.

The Comprehensive Plan Environmental Impact Assessment Addendum (Appendix B) provides an environmental analysis of two alternatives to support the Comprehensive Plan: a "No Action" alternative and a "Proposed Action" alternative. Alternative 1, the "No Action" alternative, calls for keeping the County's existing Comprehensive Plan without modifications. Alternative 2, the "Proposed Action" alternative, allows for changes in the Comprehensive Plan to land use designations and other plan elements consistent with public input received during visioning, updated analyses for the plan, and development trends.

1.2.2 Public Involvement

The County updated its Public Participation Plan in 2015 (Appendix C). Cities and counties planning under the GMA must establish "…procedures providing for early and continuous public participation in the development and amendment of comprehensive land use plans and development regulations implementing such plans."

In 2016 and 2017, the County conducted multiple opportunities for public involvement in the form of public workshops, group discussions, open houses, and citizen surveys. The County established a Comprehensive Plan webpage to disseminate information to, and gather input from, the public. The County also held Planning Commission and County Commissioners' workshops. Planning Commission and County Commissioners' hearings were held on December 12, 2017, and February 13, 2018, with published notices. The Comprehensive Plan's goals and policies directly reflect the input received from the public.

1.2.3 Community Vision

The County conducted two open houses in September 2016 to gather public input. An online survey was also conducted from August 30, 2016 to October 11, 2016 (Appendix D). County priorities based

on the public input include preservation of rural character; protection of natural resources, hillsides, and open spaces; an increase in the number of quality parks; improved access to rivers; opportunities for more hiking and biking trails; improvements of rural facilities; maintenance of public safety; and opportunities for affordable housing. The public input also prioritizes limiting sprawl and protecting farmland.

1.3 Benton County Profile

Benton County is located in southeastern Washington and is bounded by the Columbia River on three sides (north, east, and south). The County is bordered to the west by Klickitat and Yakima counties. Benton County consists of a total of 1,115,673 acres, or 1,743 square miles. Of this, 416 square miles of its northern portion, or 24 percent of Benton County, is occupied by the U.S. Department of Energy's Hanford Reservation (see Appendix A: Map Folio, Figure 1 – Vicinity Map and Figure 2 – Publicly Owned Lands Map).

The County is predominantly rural and agricultural in nature, with unincorporated areas making up most of the County territory. There are unincorporated communities with housing and industry in areas such as Plymouth, Paterson, and Finley. Incorporated cities include Benton City, Kennewick, Prosser, Richland, and West Richland. Each city has an assigned UGA in which the County retains governance until the area is annexed. The County coordinates planning in the UGAs with each city. The current population of Benton County, based on Washington State Office of Financial Management's (OFM) 2017 estimate, is 193,500. Population in the unincorporated portions of Benton County constitutes 35,085 persons, while 158,415 persons live in the incorporated areas.

The County is located at the confluence of three rivers: the Columbia, Yakima, and Snake rivers. The Yakima River runs through the middle of the County, to its confluence with the Columbia River at Richland. The County also consists of mountains and ridges such as Horse Heaven Hills, Rattlesnake Mountain, Badger Mountain, and Candy Mountain.

Rural and agricultural lands in Benton County

Columbia River – Lake Wallula
Source: Washington State Department of Ecology

The U.S. Bureau of Reclamation's Yakima Basin Project serves a portion of the agricultural economy of the County. In addition, Lake Wallula was created when the U.S. Army Corps of Engineers' McNary Dam was completed in 1954. As a result, irrigation now extends across a large portion of Benton County, helping the Tri-Cities region, which includes the cities of Richland and Kennewick in Benton County and the city of Pasco in Franklin County, grow as an agricultural center. The County economy was also enhanced by the Hanford Nuclear Reservation's operation, established in 1943 during World War II. Environmental restoration and cleanup of the Hanford site, which began in the late 1980s and continues today. Research and development at the Pacific Northwest National Laboratory and other facilities in the Hanford Reservation comprise a major employment source in the County.

1.4 Plan Framework

This Comprehensive Plan consists of 8 plan elements and several appendices that address the vision, goals, policies, and analysis for plan elements.

Plan Elements

Land Use
Natural Resources*
Economics
Housing
Transportation
Parks and Recreation
Capital Facilities
Utilities
* non-mandatory element

The progression of each chapter generally flows in the following order:

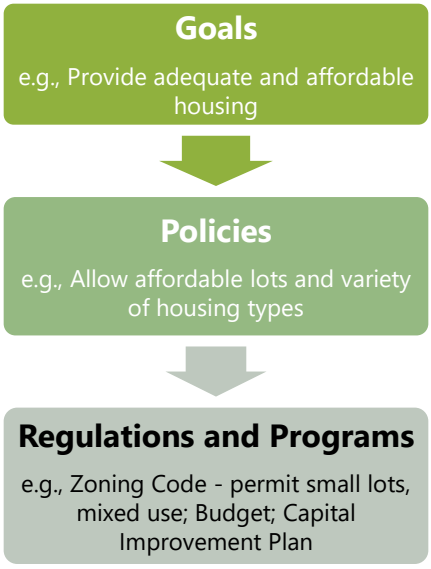
- Introduction
- Existing Conditions
- Current Trends
- Future Considerations

This Comprehensive Plan is designed to be user-friendly and includes maps, figures, and an introductory outline of the County's goals and policies (Chapter 2).

1.4.1 Definition of Terms

In concert with the Future Land Use Designation Map (Appendix A: Map Folio, Figure 5 – Future/Proposed Land Use Designations Map), the vision, goals, and policies within the Comprehensive Plan are the primary directives for land use decision-making and long-range planning and guide the development of regulations. These terms are generally defined as:

- **Vision** is a collective value and target of a county, it is what a county wants to become.
- **Goals** are broad statements of intent and philosophy expressing countywide values and attitudes. Goals are used as a general guide for action by the County. A goal may never be completely attained but is a target towards which to strive over time.
- **Policies** provide the basis for decision-making and specific courses of action, which move the County toward the attainment of its adopted goals. Policies have major influence because decisions, actions, and programs should neither conflict, nor be inconsistent with adopted policy. Policies should be operable on a continuous basis and applied consistently over time.
- **Regulations**, codes, and ordinances implement policies.



Vision, goals, and policies are also the principal directives to County decision-makers and staff relative to what planning and public works actions, studies, and other projects should be undertaken

during the plan's 20 year "horizon" to address current and future growth and development and resource issues.

1.5 Consistency and Relationship of the Plan to Other Documents

The GMA requires that the Comprehensive Plan be internally consistent across objectives, goals, policies, text, and maps. At the same time, the comprehensive plans of adjacent jurisdictions must also be consistent and capital budget decisions must conform to each jurisdiction's adopted comprehensive plan.

Consistency progresses from the broad goal, through its policies, and then to specific actions. The maps of the Comprehensive Plan augment the text, goals, and policies.

1.5.1 Countywide Planning Policies

Managing growth can be ineffective if it is carried out in a patchwork fashion. Therefore, the GMA provides a framework for regional coordination. Counties planning under the GMA prepare CWPP and establish UGAs. Cities and Counties are required to be consistent with the CWPP in their comprehensive planning. Benton County and the cities in the County coordinate their planning to avoid conflicts and ensure that infrastructures that cross jurisdictional boundaries are functionally integrated.

The Benton County Board of Commissioners adopted the *Benton Countywide Planning Policies* in 2016 (Appendix E). This Comprehensive Plan, with associated goals and policies, maintains consistency with Benton County's adopted CWPP.

1.5.2 Shoreline Master Program

The County adopted an SMP update in 2014 pursuant to the Shoreline Management Act. The goals and policies of the SMP are considered a part of the Comprehensive Plan's goals and policies included in Chapter 2 and along with the rest of the SMP are adopted by reference (Appendix F). The Policy Chapter provides the framework for future decision-making and is a guide for future development of lands within the County's shoreline jurisdiction boundaries. Detailed regulations are also included in the SMP.

1.5.3 Voluntary Stewardship Program

Benton County is in the process of developing a work plan under the Voluntary Stewardship Program (VSP), a new, non-regulatory, incentive-based approach that balances the protection of critical areas on agricultural lands, while promoting agricultural viability, as an alternative to managing agricultural activities in the County under the Critical Areas Ordinance (CAO). The VSP Work Plan under development intends to protect critical areas, maintain and enhance agricultural viability, and

promote voluntary enhancement of critical areas through the promotion of incentive-based measures.

1.5.4 Hanford Comprehensive Land Use Plan and Environmental Impact Statement

Although planning in the Hanford area is not under the County's jurisdiction, this federally funded and operated area largely influences the local economy and land use. A Comprehensive Land Use Plan and Environmental Impact Statement for the Hanford Site was prepared and adopted by the U.S Department of Energy in 1999, with participation by the County, state agencies, tribes, and other stakeholders. Several supplemental analyses and amendments have been approved since 1999, with the most recent in 2015. The plan includes Industrial-Exclusive, Industrial, Research and Development, High-Intensity Recreation, Low-Intensity Recreation, Conservation (Mining), and Preservation land uses. These land uses were identified by the public, cooperating agencies, and consulting Tribal governments as being important to the region (DOE 1999). The land use indicates Preservation lands on the north and south sides, Conservation lands and Industrial Exclusive lands at the center. Industrial and Research lands are located on the southern edge of the Hanford Site.

1.5.5 Yakima River Basin Integrated Water Resource Management Plan

The Yakima River Basin Integrated Water Resource Management Plan (Yakima Integrated Plan) was developed by the U.S. Bureau of Reclamation and the Washington State Department of Ecology (Ecology) in conjunction with the Yakima Basin stakeholders and the Yakama Nation in 2011. The Yakima Integrated Plan addresses a variety of water resource and ecosystem concerns affecting fish passage and habitat and agricultural, municipal, and domestic water supplies within the Yakima Basin, which contains Benton County. See Section 4.5.5.2 for additional discussion on the relationship of Benton County water resources with the Yakima Integrated Plan elements.

1.5.6 Other Planning Documents in the County

The Benton County Comprehensive Plan maintains consistency with other planning and facilities documents and relies on the data and resources of some of these documents. These include the County's Biennial Budget document and other utilities and facilities inventories and plans.

County planning and facilities documents adopted by reference include:

- Red Mountain American Viticultural Area (AVA) Master Site Plan, 2012 (Appendix G)
- Benton County Road Program, 2016 – 2021 (Appendix H-1) and the most recently adopted Six-Year Transportation Improvement Programs[1]
- Benton County Comprehensive Parks Plan (Parks Plan), 2014 – 2020 (Appendix I)

[1] Available at: http://www.co.benton.wa.us/pview.aspx?id=10589&catid=0

- Benton County Capital Improvement Plan (CIP), 2017 – 2022 (Appendix J) and future amendments
- 2013 Benton County Comprehensive Solid Waste Management and Moderate Risk Waste Management Plan (Appendix K)

Additionally, as referenced in Section 1.5.2 and Chapter 2, the goals and policies of the County's SMP are included as part of the Comprehensive Plan goals and policies.

1.5.7 Development Regulations

All development regulations within the County are required to be consistent with the Comprehensive Plan. These include, but are not limited to the zoning code, subdivision code, CAO, SMP, and permit review process. All codes related to traffic and utilities also implement the Comprehensive Plan goals and policies.

1.6 Concurrency

The GMA defines concurrency to mean that needed improvements for water, sewer, and transportation are in place at the time of development; or in the case of transportation, that a financial commitment exists to complete the improvements within 6 years.

There must be a baseline standard established to use when evaluating the anticipated impacts of new development to determine if concurrency can be met. The minimum acceptable performance level has been chosen as the baseline and is defined as the LOS. LOS should be realistic. Setting them too high could result in little or no growth and would be contrary to the GMA. Setting them too low could cause unmanaged growth without optimum service.

Based upon variables, including the projected levels of traffic from build-out of the Land Use Map, the County has designated LOS on its major traffic routes and programs its capital expenditures to maintain that LOS as traffic demand on those routes increases. LOS has also been established for County parks and recreation facilities, recognizing these standards serve more as guidelines than strict standards to meet.

1.7 Amendments to this Comprehensive Plan

Amendments to the Comprehensive Plan are legislative actions requiring County Commissioners' approval. Amendments must be approved as prescribed by the GMA. With a few exceptions, they cannot be considered more often than once per year and in accordance with specific procedures. Major updates occur by legislative action on an 8-year cycle as established by RCW 36.70A.130 (4)(c).

Amendments can be requested by the County or by private individuals. Multiple applications for amendments will be considered in a single legislative review process in order to evaluate the

potential cumulative effect of the requests. All amendment requests require a public hearing with the Planning Commission, which then makes a recommendation to the County Commission. The County Commission will approve or deny the amendments in a public hearing. Public involvement with this process is required and encouraged through direction of the County Public Participation Plan.

Annual amendments will address the issues of major or minor land use classification changes; changes to the goals, policies, and text of the Comprehensive Plan; changes to supporting data and implementation; changes to the Land Use Maps; and changes to the inventories and technical documents.

Every 8 years, the annual amendment review may be combined with the required review of the UGAs to determine the next 20-years' anticipated growth. This review will use the County and individual City comprehensive plans and the permitted densities of the incorporated and unincorporated areas pursuant to RCW 36.70A.130(3).

Exceptions to the annual amendment limitation, according to RCW 36.70A.130, include the adoption of a subarea plan; the development of an initial subarea plan for economic development located outside of the 100-year floodplain in a county that has completed a state-funded pilot project that is based on watershed characterization and local habitat assessment; SMPs; or the amendment of the capital facilities element occurring concurrently with the adoption or amendment of the County's budget.

Counties are allowed under RCW 36.70A.130(2)(b) to consider emergency amendments that conform with Chapter 36.70A, after appropriate public participation has been observed, whenever an emergency exists. During the 2006 Comprehensive Plan Update, the Board of Commissioners adopted a definition of emergency as, "The declaration by the Board of County Commissioners, based upon circumstances and facts at hand, that there is an eminent or expectant threat to one or more of: life, property, public health and safety, air or water resources, or the realization of economic objectives evident in the County Comprehensive Plan, and for which immediate action is necessary to end the threat."

2 Goals and Policies

2.1 Planning Process

PP Goal 1: Develop a Comprehensive Plan that reflects the community's vision and objectives, is consistent with the State's planning laws, and is implemented through various local development regulations.

Policy 1: Use zoning and subdivision ordinances, performance standards, and related measures to implement the plan.

Policy 2: Use and maintain County-wide resource inventories to assist in determining the suitability and capability of the land and its resources to support future development.

Policy 3: Make land use decisions consistent with the Land Use Map and with the inherent capability of the land to sustain uses without creating problems that require a publicly funded solution (e.g., flooding, landslides).

Policy 4: Coordinate the County's plans and programs with those at local, regional, and state levels.

PP Goal 2: Develop and maintain a Comprehensive Plan responsive to growth and economic trends which can be readily adapted to changing conditions.

Policy 1: Base amendments to the Comprehensive Plan on facts and findings that respond to public needs, are beneficial to the public interest, and are consistent with the vision and goals of the County.

Policy 2: Review and update the Comprehensive Plan according to the GMA.

PP Goal 3: Continue citizen involvement that insures full citizen participation in public decision-making according to the County's adopted Public Participation Plan.

Policy 1: Maintain opportunities for citizen involvement and input on issues in advance of making land use decisions.

Policy 2: Provide information to citizens through the news media and other outreach processes as indicated in the Public Participation Plan to allow maximum citizen involvement.

2.2 Land Use

LU Goal 1: Ensure that land uses are compatible with surrounding uses that maintain public health, safety, and general welfare.

Policy 1: Maintain a mix of land uses that supports the character of each rural community.

Policy 2: Promote compatible mixed uses of urban intensity that are appropriate in UGAs where community sewer and water are available or provided, and outside of UGAs within designated Rural Community Center areas and Commercial zones, and Planned Developments (PDs).

Policy 3: Maximize the opportunities for compatible development within land use designations to serve a multitude of compatible uses and activities.

Policy 4: Establish regulations for site planning and design to avoid or reduce potential impacts associated with "land use incompatibility" of proposed non-farm developments on parcels adjacent to lands designated GMA Agriculture, Rural Resource, or adjacent to lands being farmed commercially within other rural designations.

Policy 5: Encourage multi-modal connectivity between land uses that enhances community access and promotes healthier and more active lifestyles for residents.

Policy 6: Encourage compact development within UGAs.

Policy 7: Encourage "green infrastructure" in new developments and redevelopments to address flooding and storm water runoff.

LU Goal 2: Follow controlling law and constitutional requirements, both state and federal, to ensure the appropriate protection of private property rights.

Policy 1: Prevent regulations that create undue adverse economic impacts, or unnecessarily restrict the use of private property.

Policy 2: Monitor evolving state and federal statutory amendments and judicial precedent so that timely amendments or changes can be made in implementing Comprehensive Plan policies and development regulations.

2.2.1 Urban Growth

LU Goal 3: Concentrate urban development in and adjacent to existing urban areas.

Policy 1: Promote urban growth within the UGA and incorporated areas where urban services are available.

Policy 2: Encourage well-designed, compact development in UGAs to save taxpayers and ratepayers money, conserve water, reduce water pollution, and support transit use.

LU Goal 4: Establish UGAs adjacent to incorporated areas, within which an orderly and cost-effective transition from rural to urban land uses and authority can be coordinated within the next 10 to 20 years.

Policy 1: Consider UGA expansions according to the process identified in the Benton CWPP.

Policy 2: Facilitate the realization of regional transportation and other infrastructure and public facilities plans.

Policy 3: Designate zoning and promote development on unincorporated lands within the UGAs consistent with the cities' Comprehensive Plan land use designations.

Policy 4: Promote outreach to established citizen interest groups regarding significant developments proposed within or adjacent to their communities.

2.2.2 Communities Outside UGAs

LU Goal 5: Identify the location, site planning, and density of new non-farm development outside of UGAs to protect existing agriculture from incompatible adjacent land uses.

Policy 1: Establish compatible land uses adjacent to areas designated as GMA Agriculture to minimize conflicts associated with farm activities such as spray, dust, noise, odors, and liability.

2.2.3 Rural Lands

LU Goal 6: Preserve rural lifestyles outside UGAs and incorporated areas while accommodating new population growth consistent with the protection of rural character.

Policy 1: Maintain overall residential densities within rural residential areas that reflect rural character as defined by the GMA and are low enough to perpetuate rural lifestyles, which are typically characterized locally by a predominantly open landscape inhabited by households engaged in diverse and recreational land use activities related to livestock and crop production; protect surface and ground water; and that can be supported by available public services.

Policy 2: Development in rural areas is typified by large lots and less dense development. Favoring development that is less dense and has larger lots helps maintain the rural character of designated rural areas and supports the protection of ground and surface water.

Policy 3: Designated rural areas will be utilized to reduce the inappropriate conversion of agricultural lands, prevent sprawling low-density development and assure that rural development is compatible with surrounding rural and agricultural areas.

Policy 4: Encourage low impact recreational uses and protect open spaces that preserve rural character.

Policy 5: Provide public services consistent with rural character. Rural developments will not impact existing public facilities/services to the extent that the level of service for that facility is reduced below the adopted threshold and/or acceptable operation capacity. Rural developments should occur where adequate access to transportation systems, and rural levels of utilities and facilities, such as domestic water, power, and fire and police protection are available.

Policy 6: Rural development shall minimize potential adverse impacts to water quality, slope stability, vegetation, wildlife and aquatic life as implemented through the County's critical area regulations, shoreline master program, and hydrology manual.

Policy 7: Support the availability of sufficient water to maintain the agricultural industry and agricultural processing and value-added manufacturing.

Policy 8: Encourage long-term conservation, adequate water supply, and the wise stewardship of natural resources within Benton County for the benefit of current and future residents.

Policy 9: Encourage the continued communication with irrigation districts, legislature, and other responsible entities to ensure that adequate irrigation water is available for agricultural uses.

Policy 10: Limit impervious surface in rural lands by implementing maximum lot coverage in the development regulations.

Policy 11: Encourage the use of low-impact development (LID) measures in the Eastern Washington Low Impact Development Guidance Manual and their application to urban development, urban and rural subdivisions, and large rural developments in Benton County.

Policy 12: Support on-site infiltration in rural areas for new lots, subdivisions and developments by promoting storm water best management practices. Promote the retention of existing native vegetative cover in landscaping plans for areas zoned Rural Lands One Acre (RL-1), Rural Lands Five Acre (RL-5), Rural Lands Twenty Acre (RL-20), and Planned Development (PD) zones applied to any of these zones. Where the proposed development will not be precluded, limit impervious surfaces that are not infiltrated on-site for all new development in the zoning districts listed above to no more than ten percent and require the retention of 45 percent vegetative cover, which may include native or non-native species, provided soil infiltration/filtration properties are maintained.

Policy 13: Encourage the reduction of fire risk and urban/wildland interface through fire-wise principles, prevention measures, and other programs.

Policy 14: Support and encourage the use of and application of Firewise principles and other fire risk reduction measures consistent with the Benton County Natural Hazard Mitigation Plan and Community Wildfire Protection Plan to reduce fire risk for urban development, urban subdivisions, rural subdivisions and large rural developments susceptible to wildfires. Encourage the implementation of the Firewise principles, or similar best management measures, applicable to individual lots on all lots at risk from wildfires.

Policy 15: Encourage new rural development away from the 100-year floodplain, and as guided in the County's Flood Damage Prevention Ordinance, CAO, and SMP.

2.2.4 Master Plan Resorts and Small-scale Recreational or Tourist Use

LU Goal 7: Provide opportunities for Master Planned Resorts (MPRs) and Small-scale Recreational or Tourist (SSRT) uses consistent with the GMA.

Policy 1: Provide MPR and SSRT development regulations that are consistent with provisions of RCW 36.70A.360, the Comprehensive Plan, and County regulations.

Policy 2: Locate MPR and SSRT Uses outside the vicinity of UGAs according to the provisions of the GMA.

Policy 3: Develop a master site plan that functionally integrates various land uses with motorized and non-motorized circulation systems that are accessible to public transportation where available and connect with open spaces for public use.

Policy 4: Ensure that infrastructure, such as roads, water supply, and utility standards are consistent with rural densities and uses.

Policy 5: Prepare a capital facilities plan. Necessary capital facilities, utilities, and services may be provided to a MPR by service providers from outside the boundary of the MPR, including municipalities and special service districts, provided that all costs associated with service extensions and capacity increases directly attributable to the MPR are fully borne by the resort.

Policy 6: Ensure that developments contain open space and open space amenities (paths, trails, scenic overlooks, and viewpoints) that are open to the public.

2.3 Natural Resource Lands

NR Goal 1: Conserve and maintain agricultural land of long-term commercial significance as the local natural resource most essential for sustaining the County's agricultural economy.

Policy 1: Conserve areas designated "GMA Agriculture" in the Comprehensive Plan for a broad range of agricultural uses to the maximum extent possible and protect these areas from the encroachment of incompatible uses.

Policy 2: In the event of a conflict between residential uses and normal and routine practices of commercial agriculture on lands designated as GMA Agriculture, support the agricultural use where it is evident that the agricultural practice is consistent with or equivalent to recognized Best Management Practices.

Policy 3: Recognize that only uses related or ancillary to, supportive of, complimentary to, and/or not in conflict with agricultural activities are appropriate in areas designated GMA Agriculture.

Policy 4: Apply development standards that conserve water resources when reviewing proposed new non-agricultural developments to sustain the ability of the regional agricultural economy to expand and respond to new market conditions and opportunities.

NR Goal 2: Identify and protect mineral resource lands of commercial significance and from being significantly compromised by encroaching land uses that are incompatible with mining activity uses.

Policy 1: Protect mineral and aggregate resources of commercial significance from compromise by applying the County's Mineral Resources Protective Ordinance and BCC Title 15, Mineral Resource Lands when the owner of the resource requests such protection and use of the site has not already been compromised by incompatible adjacent land uses or development.

Policy 2: Discourage incompatible uses from encroaching upon and compromising the exploitation of protected mineral and aggregate resources.

Policy 3: Reclaim sites used for the extraction of mineral and aggregate resources in a manner consistent with applicable laws and ordinances.

2.4 Water Resources

WR Goal 1: Conserve, maintain, and manage existing ground and surface water resources to meet existing and future water supply needs for cities, farms, industry, and rural growth.

2.4.1 General Policies

Policy 1: Support efforts to secure long-term, sustainable water supplies that are consistent with the Benton County Comprehensive Land Use Plan or the Comprehensive Land Use Plans of the municipalities within Benton County.

Policy 2: Encourage water reuse, conservation, and responsible stewardship through the development of voluntary conservation programs, educational outreach, and alterations to current water policy that provide incentives for common sense approaches to stewarding water resources.

Policy 3 Support increasing water storage by increasing capacity in existing reservoirs, developing new above ground water storage capacity, and the development of storage capacity through aquifer storage and recovery, enhanced water recharge, and other groundwater management strategies.

Policy 4 Support ground water management strategies that permit the responsible development of ground water resources, while protecting the long-term sustainability of aquifers.

Policy 5: Encourage water management practices that will allow and provide incentives for reclaiming water resources that retain economic and recreational resources. Such practices include reclaiming waters used for food processing to irrigate crops or reclaiming wastewater to support developed open spaces, such as parks or golf courses.

Policy 6: Encourage voluntary conservation of water resources through xeriscape (low water use landscape plantings) and other low water use methods.

Policy 7: Encourage water marketing, the trading of water rights as commodities, providing there are sufficient controls in place to protect the basic needs of Benton County citizens and industries.

Policy 8: Support the formation and utilization of Water Conservancy Boards to review water rights transfer applications.

Policy 9: Support selective continued issuance of new water rights from groundwater sources where new water rights will not impair existing rights and are consistent with the long-term sustainability of aquifers.

2.4.2 Municipal Water Supply Policies

Policy 1: Endorse responsible stewardship of municipal water supplies.

Policy 2: Work to identify opportunities for water conservation on County property and at County facilities.

Policy 3: Encourage the use of irrigation water for non-potable uses in housing units, parks, and other developed lands within water service areas.

Policy 4: Acknowledge that municipal governments and other water utilities, as applicable, are the best long-term water supply service providers within designated UGAs.

Policy 5: Consider existing public or private water purveyors first when the need arises for a rural domestic water supplier.

Policy 6: Look to Satellite Management Agencies (SMA) first for assistance with operations and management of failing or troubled water systems throughout the County. Encourage an increase in the number of approved SMAs in the County.

2.4.3 Rural Domestic Water Policies

Policy 1: Public and private purveyors, along with exempt wells operated by individual households, adequately provide for water needs in rural areas of the County. The County will not seek to become a residential water purveyor except where mandated by the state under RCW 43.70.195.

Policy 2: Recognize that new rural water right permit exempt wells are junior to senior surface and ground water rights and may have the potential to impair these water rights. Support the implementation of water management and mitigation strategies to avoid or offset impacts from exempt wells, as applicable, that allow for continued growth and development consistent with the land use plan.

Policy 3: Rural development shall provide adequate water for domestic use. When feasible, rural developments will be encouraged to utilize existing community systems with adequate availability for domestic water and sewage disposal.

Policy 4: New groundwater uses must provide evidence that the proposed water source is physically and legally available. Groundwater uses and withdrawals, including the issuance of building permits and the approval of land divisions, must be consistent with RCW 90.44.050, and with applicable rules adopted pursuant to RCW 90.22 and 90.54.

2.4.4 Industrial Policy

Policy 1: Support efforts to secure long-term sustainable water supplies sufficient to provide for industrial activity on the Hanford site, in the Finley area, and in other industrial designated areas.

2.4.5 Agriculture Policies

Policy 1: Encourage efforts to secure long-term water supplies to support the County's strong and diverse agriculture economy.

Policy 2: Support the withdrawal of additional water from the John Day and McNary pools, under reserved and new water rights, and water right changes and transfers, to service additional agricultural needs, including direct irrigation, food processing, and related ag-industrial needs.

Policy 3: Encourage the continued development of water transfers and changes to meet changing agricultural production needs.

Policy 4: Support strategies that improve water supply during drought conditions for irrigation districts and other water right holders on the Yakima River consistent with the Yakima Integrated Plan (Ecology and USBR 2011).

WR Goal 2: Protect and enhance surface and groundwater water quality for human health, drinking water supply, and to meet water quality standards.

Policy 1: Prohibit developments which have the potential for significant individual or cumulative impacts on ground and surface water quality; or alternatively, site and design developments to avoid or mitigate such impacts.

Policy 2: Protect surface and groundwater quality as a resource essential to the public health, safety and welfare, economic growth, and prosperity of Benton County.

Policy 3: Support development and management of County-owned storm water systems that protect surface and ground water quality consistent with local conditions.

Policy 4: Support the Benton-Franklin Health District to develop and implement septic tank and drain field standards that protect surface and ground water quality and human health.

Policy 5: Encourage educational programs and voluntary efforts of agricultural producers, processors, irrigation districts, and municipal users to responsibly manage return flows to improve surface and ground water quality.

Policy 6: Support application of state standards in a manner that reflects climate differences in Benton County compared to other regions of Washington State.

WR Goal 3: Support continued multi-purpose uses of the Columbia River.

Policy 1: Encourage use of the Columbia River and its reservoirs as a key element in ensuring long-term availability of water supply, barge transportation, power generation, and flood control and support for population growth, agricultural production, industry, fisheries, and economic development. Pursuant to the U.S. Army Corps of Engineers John Day reservoir drawdown study, the reservoirs should also be maintained to protect wildlife habitat.

Policy 2: Support the designation and allocation of reserved water for municipal, commercial, industrial, and irrigation use from the John Day and McNary pools as per the authority under the RCW (90.54) and Washington Administrative Code ([WAC]173-531A.040) to allocate Columbia River water resources.

Policy 3: Support water resource policy decisions based on defensible science to meet the needs of people and fish and wildlife. Evaluate strategies for challenging policies that may not be scientifically defensible.

Policy 4: Support off-stream reservoirs to augment river flows.

WR Goal 4: Protect and enhance surface water resources to support rivers, streams, and wetlands that support fish and wildlife species and associated habitats.

Policy 1: Support strategies that improve flows for anadromous fish and other fish and wildlife during all types of water years on the Columbia and Yakima rivers, and for the Yakima River ensure actions are consistent with the Yakima Integrated Plan (Ecology and USBR 2011).

Policy 2: Promote a balanced response to listings of threatened and endangered species that provides improved conditions for species maintenance and recovery, while maintaining and allowing sustainable development of water resources for economic growth.

Policy 3: Equitably apply the Endangered Species Act by establishing specific, measurable recovery goals and addressing human factors, economic costs, and opportunity costs when preparing science-based species recovery and species protection plans.

Policy 4: Protect and enhance water quality to improve habitat conditions for salmonids.

2.5 Critical Areas

CA Goal 1: Protect the functions and values of critical areas within the county with land use decision-making and development review.

Policy 1: Apply standards, regulations, and mitigation strategies to development during the permitting and development approval process that protects critical areas functions and values.

Policy 2: Encourage new development and redevelopment in UGAs and large developments outside of UGAs to comply with low impact development standards as applicable.

CA Goal 2: Protect life and property and avoid or mitigate significant risks to public and private property and to public health and safety that are posed by frequently flooded and geologic hazard areas.

Policy 1: Limit developments in areas with higher risk for natural disaster or geologic hazard unless it can be demonstrated by the project proponent that the development is sited, designed, and engineered for long term structural integrity and that life and property on- and off-site are not subject to increased risk as a result of the development.

Policy 2: Prevent developments within floodways and inherently unstable slopes as they are not suitable for developments.

Policy 3: Locate and designate lands subject to natural disasters and hazards for uses which avoid or minimize exposure of life and property to risk.

CA Goal 3: Protect the County's natural areas, shorelines, and critical areas as unique assets to the community.

Policy 1: Use the CAO, SMP, SEPA, and other ordinances, as applicable, to designate and protect critical areas and the natural environment.

Policy 2: Identify and protect river, stream, wetlands, and fish and wildlife habitat conservation area functions and values.

Policy 3: Encourage development of water-oriented recreational, cultural, and commercial facilities in certain shoreline locations, consistent with SMP goals and policies and its criteria of no net loss of ecological functions, to enhance and diversify community recreational resources and its attractiveness to tourists.

Policy 4: Ensure public access to shorelines on public land, subject to regulations protecting public safety, sensitive habitat areas, and wildlife.

Policy 5: Encourage public agency acquisition of natural areas of scientific, research and educational significance for public benefit.

Policy 6: Identify and designate habitats of local importance to protect locally important habitats and species under the County CAO.

Policy 7: Any developments, uses, and/or activities in the channel migration zone should be consistent with the standards in the SMP.

Policy 8: Protections associated with landslide areas should be maintained according to the standards in the County CAO and SMP.

CA Goal 4: Sustain a diverse, productive, and high-quality natural environment for the use, health, and enjoyment of County residents.

Policy 1: Work with private and public property owners during development to ensure protection and appropriate use of the County's natural resources.

Policy 2: Integrate natural resources and critical areas such as rivers, creeks, ridges, and slopes into a linked pattern of open lands where feasible, to serve multiple open space functions such as buffers, visual resources, recreation, and wildlife habitat/corridors.

Policy 3: Provide necessary trails or linkages between natural features when feasible.

CA Goal 5: Achieve balance among economic uses of land and critical areas protection.

Policy 1: Work with state, federal, and local agencies and other County stakeholders regarding the application of environmental protection laws and regulations.

Policy 2: Maintain and enhance the viability of agriculture while voluntarily protecting and enhancing critical areas through the County VSP on agricultural lands.

Policy 3: Apply Best Management Practices and the conservation practices outlined in the County VSP Work Plan to lands historically and currently used for the production of food, agricultural products, and grazing of livestock.

Policy 4: Continue to consistently apply Best Management Practices to lands used for the extraction of minerals.

2.6 Economic Development

ED Goal 1: Create a balanced and diverse economy that provides an opportunity to make economic and lifestyle choices for Benton County residents.

Policy 1: Promote industries that are diverse and support an agriculture-based economy.

Policy 2: Promote and protect tourism related to viticulture and other agricultural activities.

Policy 3: Provide adequate, accessible commercial areas while minimizing impact on surrounding uses.

Policy 4: Facilitate economic growth and prosperity while preserving the existing rural quality of life and character, as it is defined by rural residents.

ED Goal 2: Expand employment opportunities in unincorporated Benton County.

Policy 1: Maintain and protect the agricultural economic base of Benton County.

Policy 2: Locate commercial retail and service activities serving urban and regional markets within UGAs. Commercial development serving rural communities is appropriate on commercially designated lands within or adjacent to the communities of Finley, Plymouth, Paterson, and Whitstran. Evaluate MPRs and tourist-oriented visitor destinations for appropriate siting countywide.

Policy 3: Develop commercial activities in “nodes” or clusters as opposed to strip-type configurations.

Policy 4: Designate uses within "Rural Commercial" areas as those which either serve interstate freeway traffic or are located at the center of rural communities to serve their needs.

Policy 5: Plan, construct, and landscape commercial developments to be visually and physically compatible with surrounding areas and uses.

ED Goal 3: Provide areas for the location of light and environmentally acceptable heavy industrial uses, while minimizing impacts on surrounding rural uses.

Policy 1: Establish industrial sites on lands designated for industrial use to protect from incompatible uses by using performance and/or site design criteria.

Policy 2: Do not locate non-agricultural related industry on "GMA Agriculture" designated land.

Policy 3: Identify diverse industrial land uses in the Plan and locate these uses where minimal environmental impact occurs.

Policy 4: Encourage light and heavy industrial uses to locate in areas where:

1. Access can be provided by major transportation networks such as road, rail, air, and water
2. Existing development is characterized by and/or compatible with industrial activity
3. Utilities, including electric, gas, water, and sewer, can be adequately provided, either as extensions of municipal facilities (e.g., by service contract) or by on-site facilities

2.7 Housing

HE Goal 1: Provide for a variety of residential uses and densities consistent with the rural character and lifestyles and a choice of housing types for people of all income levels.

Policy 1: Include a variety of dwelling unit types and densities within the rural housing stock.

Policy 2: Allow and regulate manufactured homes in the same way as site-built homes.

Policy 3: Work with Cities to provide housing for all economic segments of the population and seek to create the conditions necessary for the construction of affordable housing at appropriate densities within each of the jurisdiction types (i.e., rural and urban).

Policy 4: Follow RCW 36.70A.350 with regard to approving urban densities located outside of urban growth boundaries and outside of existing Rural Community Center areas, unless they are encompassed by the expansion of an existing UGA.

Policy 5: Locate higher than rural densities in appropriate areas within the Rural Community Center areas, Rural Transition Areas, or adjacent to the communities of Finley, Plymouth, Paterson, and Whitstran, per the adopted Land Use Map.

Policy 6: Keep plan provisions for the location of rural residential development consistent with preserving agricultural lands and maintaining the rural lifestyles of the County while also minimizing conflicts with commercial agricultural activities.

Policy 7: Consider accessory dwelling units as an affordable housing option and look for flexible and innovative ways of integrating accessory dwelling units into single family residential zones.

HE Goal 2: Adequate housing should be available to meet the housing needs for the existing and projected population.

Policy 1: Preserve existing, viable, rural residential areas and protect single-family residential areas from incompatible land uses.

Policy 2: Allow new housing in the unincorporated County consistent with densities maintained in the Land Use Element and map.

2.8 Transportation Element

TE Goal 1: Provide safe, convenient, efficient, economic, and multi-modal transportation networks compatible with the rural character and which serve the transportation demands consistent with the Land Use Element, and all other relevant provisions of the Comprehensive Plan.

Policy 1: Provide adequate roads that safely handle anticipated traffic and serve a diversified area of industrial, agricultural, and residential uses.

Policy 2: Encourage transportation planning and projects that:

1. Conform with and serve the Land Use Element of the Comprehensive Plan
2. Facilitate the flow of people, goods, local products, and services to strengthen and assist the expansion of the local and regional economy
3. Enable the conservation of energy

Policy 3: Improve the cost effectiveness of capital spending by coordinating new road construction with all jurisdictions and service districts/providers.

Policy 4: Minimize the segmentation, loss, and compromising of agricultural lands and productivity resulting from new road construction.

Policy 5: Plan for the need to expand the existing road system to accommodate future growth in farm to market and industrial transport and overall traffic.

Policy 6: Use a frontage road or a circulation system, where practical, for commercial development to prevent the occurrence of numerous driveways opening onto arterial roadways.

Policy 7: Plan to expand transportation capacity by using existing facilities and rights-of-way, where practical and feasible.

Policy 8: Minimize the number of railroad crossings for public safety by using frontage roads, underpass installation, or signals.

Policy 9: Create an integrated network of safe pedestrian ways and/or bicycle routes along arterial and other roadways.

Policy 10: Construct pedestrian ways and bicycle routes in conformance with uniform design standards for trails and paths as described in the Washington State Department of Transportation (WSDOT) Design Manual or standards developed and adopted by Benton County.

Policy 11: Review new development under the County's designated LOS on County owned roads.

Policy 12: Support the development of a complete streets policy that would make accommodations for pedestrian, bicycle, and transit users on appropriate roadways.

Policy 13: Maintain location and alignment of all proposed streets within a subdivision compatible with existing and planned streets, topographical conditions, public convenience and safety,

and the proposed uses of the land to be served by such streets. Limit dead-end streets to 600 feet in maximum length as a means of protection to property, owners, residents, and emergency personnel.

Policy 14: Encourage short-range local vehicular trips to use the local street system to assist in preserving the functionality of state highways.

TE Goal 2: Provide an integrated network of trails and paths for non-motorized circulation throughout rural areas connecting to urban trails and paths to promote active lifestyles.

Policy 1: Provide safe pedestrian ways and bicycle routes, separate from vehicle roadways where feasible.

Policy 2: Provide County road rights-of-way wide enough for off-road walking, jogging, bicycling, and horseback riding where feasible.

Policy 3: Include local resident needs for pedestrian, bicycle, and recreational, and equestrian travel when those needs are identified in the Comprehensive Plan.

TE Goal 3: Maintain the integrity of the transportation system while minimizing environmental and other impacts.

Policy 1: Avoid and/or minimize adverse social, economic, and environmental impacts and costs.

Policy 2: Avoid or mitigate conflicts and adverse impacts to rural character that may occur due to the transportation network and its improvements.

TE Goal 4: Coordinate the transportation system with neighboring cities and other transportation providers.

Policy 1: Promote regional transportation plans.

Policy 2: Work with transit, rail, port authorities, and other transportation agencies to promote a coordinated transportation system.

TE Goal 5: Protect public safety and property by establishing development regulations that discourage the siting of incompatible uses and airspace obstructions adjacent to general aviation airports that serve the public.

Policy 1: Preserve, maintain, and develop air, barge, and railway transportation facilities which serve the County.

2.9 Parks, Recreation, Open Space, and Historic Preservation

PL Goal 1: Develop and maintain a park system for Benton County residents and visitors that provides a variety of recreational opportunities in regional and local parks and open space.

Policy 1: Develop and maintain a regional park and trail system integrated with city recreational resources.

Policy 2: Encourage the development of a system of bicycling, hiking, recreational, and equestrian trails in the County that coordinates with existing and/or proposed city systems.

Policy 3: Encourage developers of low density, large lot subdivisions and plats to provide access easements for bicycle and horse riding within and between contiguous developments, connecting to regional trails and to establish a means of maintaining such easements through coordination between the County, developers, and homeowners.

Policy 4: Offer a broad range of recreational opportunities for various abilities and needs of County residents (e.g., fishing, hiking, playfields).

PL Goal 2: Work with cities and agencies to protect greenways and open spaces along the riverine corridor of the lower Yakima River.

Policy 1: Identify and consider acquisition of natural open space preserves, wildlife corridors, and critical areas as part of the park system.

Policy 2: Work with cities to promote the protection of natural resources and open spaces.

PL Goal 3: Conserve visually prominent naturally vegetated steep slopes and elevated ridges that define the Columbia Basin landscape and are uniquely a product of the ice age floods.

Policy 1: Identify and preserve historically significant structures and sites whenever feasible.

Policy 2: Encourage the public and/or private acquisition of the prominent ridges within unincorporated Benton County as Open Space Conservation, in order to preserve views, protect native habitat, and provide for public access and recreation associated with these landscapes.

Policy 3: Pursue a variety of means and mechanisms such as the preparation of specific and area plans, conservation easements, clustered developments, land acquisitions and trades, statutory requirements to protect the natural landform and vegetative cover of the Rattlesnake uplift formation, notably Rattlesnake, Red, Candy, and Badger mountains and the Horse Heaven Hills.

Policy 4: Consider the preservation of the ridges and hillside areas through various development regulations.

PL Goal 4: Preserve significant historic structures, districts, and cultural resources that are unique to Benton County.

Policy 1: Coordinate with local tribes to protect historic and cultural resources.

Policy 2: Preserve archaeologically significant sites by siting and designing development to avoid or mitigate impacts.

PL Goal 5: Identify, preserve, and protect historic, cultural, and archaeological resources found to be significant by recognized local, state, tribal or federal processes.

Policy 1: Identify known, recorded archaeological, cultural, and historic resources.

Policy 2: Update and refine the local process for evaluating the significance of historic, cultural, and archaeological resources.

Policy 3: Preserve areas that contain valuable historical or archaeological sites of federal, state, tribal, or local significance including those maintained in the Department of Archaeology and Historic Preservation's database, areas known only to tribes and areas of higher risk potential. Maintain and enforce development code provisions that require conditioning of project approval on findings made by a professional archaeologist for development activities on sites of known cultural, historical, or archaeological significance.

Policy 4: Prior to demolition, moving, or alteration to any designated historic, cultural, and archaeological landmark, ensure that due consideration is given to its preservation or, at a minimum, documentation of its historic, cultural, or archaeological value.

2.10 Capital Facilities and Public Services

CF Goal 1: Anticipate the need and location of and plan for the timely and cost-effective provision of public facilities and services based upon the Land Use Element,

Policy 1: Expand and diversify the rural economy and employment base by constructing public facility capacity to serve as a framework and incentive for rural development consistent with land use designations.

Policy 2: Plan for the location and protection of anticipated and existing public uses such as parks, playgrounds, schools, essential public facilities, and other public, state, or federal activities or facilities owned and operated for the benefit of the public.

Policy 3: Eliminate existing service level deficiencies in existing facilities before expending capital funds for new uses. Capital facilities planning should integrate all of the County's capital project resources (grants, bonds, general County funds, donations, real estate excise tax, conservation futures property tax, fees and rates for public utility services, and any other available funding).

Policy 4: Prioritize and evaluate public capital facilities annually for funding for capital projects that are necessary to accommodate existing and projected demands of the Land Use Element of the Comprehensive Plan.

Policy 5: Prioritize capital facilities planning and expenditures consistent with this Comprehensive Plan for projects that accomplish one or more of the following:

1. Are essential for public health, safety, and welfare
2. Address and/or improve the quality and level of regional government services
3. Maintain designated transportation LOS
4. Improve public and private sector productivity
5. Facilitate the maintenance and growth of the rural/agricultural economy

Policy 6: Explore public facilities and infrastructure investment options that use Hanford site resources and benefit the region beyond the Hanford area.

Policy 7: Promote compatible development of land adjacent to existing and proposed school and other public facilities.

CF Goal 2: Provide for the siting of "Essential Public Facilities" using siting criteria that are consistent with statutory requirements applicable to these facilities and within appropriate land use designations,

Policy 1: Locate capital facilities identified as essential public facilities in a manner that will provide necessary service to intended users while minimizing the impact to surrounding land uses.

2.11 Utilities

UE Goal 1: Ensure utilities support the land use and economic development goals of the County.

Policy 1: Siting of proposed public facilities should be consistent with adopted land use policies.

UE Goal 2: Maintain public and private household water and sewer systems that are consistent with the rural character of the County.

Policy 1: Develop joint service agreements between special districts, counties, and cities for lands within UGAs.

UE Goal 3: Facilitate efficiency in utility land use and development.

Policy 1: Support development regulations that are flexible and receptive to innovations and advances in cellular technology and act upon the knowledge that moving information rather than people yields benefits of conservation and cost efficiencies.

Policy 2: Encourage multiple uses, including passive recreational use, in utility corridors where practical.

Policy 3: Facilitate maintenance and rehabilitation of existing utility systems and facilities and encourage the use of existing transmission/distribution corridors.

UE Goal 4: Develop and adopt provisions as necessary that support future demand for alternative energy vehicles.

Policy 1: Permit electric vehicle charging stations equipped with slow and medium speed charging equipment as an accessory or ancillary use to any principal use in all zoning districts.

Policy 2: Allow electric vehicle "rapid charging stations" designation in commercial, industrial, and agricultural zones as regulated in the zoning code and exclude in areas identified as critical resource areas.

3 Land Use Element

3.1 Introduction

This Chapter contains the GMA required land use element to create a framework upon which future growth and development will occur consistent with community objectives and the requirements of law. Consistent with GMA requirements, the land use element designates the proposed general distribution, location, and extent of land uses for agriculture, timber production, housing, commerce, industry, recreation, open spaces, general aviation airports, public utilities, public facilities, and other functions, as applicable, and describes development densities and projections for future population growth.

Within all elements of the Comprehensive Plan, project planning, scheduling, and financing are targeted to provide the basic infrastructure services that enable the public to realize designated land use. The relationship between elements is one of functional interdependence and internal consistency where the Comprehensive Plan Elements and land use designations are:

- Consistent with and carry forth the Comprehensive Plan's policies
- Depict scale and densities consistent with the carrying capacity of the land, surrounding area, and infrastructure
- Cost effective relative to the expenditure of public revenues to construct and maintain public infrastructure/service
- Reflect the suitability of the land for the designated land uses in terms of capacity, compatibility, and availability of services

The land use element should undergo a major review every 8 years to reaffirm both the legitimacy of the "Vision" and to make necessary adjustments in response to new conditions or changing attitudes. Annual review enables the County to monitor the progress of meeting objectives and to keep objectives current relative to emerging issues and needs.

The purpose of the land use element in conjunction with the rural element, is to:

- Provide a description of the outcomes the community expects from growth and development
- Provide certainty and predictability for development and financial interests, residents, and service providers
- Serve as the policy and regulatory framework which ensures that through the passage of time and successive political administrations the cumulative outcome of growth and development consistently moves toward that chosen by the rural community
- Demonstrate how local interests meet the mandates of state planning law and other requirements consistent with local needs and preferences

3.2 Existing Land Uses in the County

Benton County consists of over 1,715 square miles. The U.S. Department of Energy's Hanford Reservation occupies 416 miles, or 24 percent, of Benton County's northern area (see Appendix A: Map Folio, Figure 2 – Publicly Owned Lands Map). An additional 93,299 acres are owned or managed by other public entities (port districts, state, federal, and local government lands). Total public ownership represents 33 percent of the acreage in Benton County.

The existing land use activities within unincorporated Benton County are principally agriculture, agricultural related industry, rural residential, rangeland, open space, and Hanford industrial uses (see Appendix A: Map Folio, Figure 3 – Existing Land Use Activities Map). The current allocation of land use within the County is presented in Table 3-1.

Dryland agriculture in Benton County

Table 3-1 indicates that GMA agriculture (irrigated and dryland) is the largest single land use within the County. It occupies approximately 59 percent of the total land area. Next largest is Hanford, which accounts for approximately 25 percent, followed by rural land uses (approximately 7 percent). The five cities and their UGAs occupy 72,245.37 acres (113 square miles), or over 6 percent of the total land area. See Appendix A: Map Folio, Figure 4 – Existing Land Use Designations Map.

Table 3-1
Current Land Use in Benton County (City annexations updated 2016)

Land Use Type	Acres	Square Miles	Percent
Cities and Urban Growth Areas	72,245	113	6.58
Hanford	266,351	416	24.27

Land Use Type	Acres	Square Miles	Percent
Hanford Reach	12,443	19	1.13
Unincorporated Area			
Growth Management Act Agriculture	647,107	1,011	58.96
Open Space Conservation	2,108	3	0.19
Public	15,163	24	1.38
Rural Lands 1	1,182	2	0.11
Rural Lands 1-3	318	0	0.03
Rural Lands 5	74,039	116	6.75
Rural Lands 20	1,813	3	0.17
Community Center	500	1	0.05
Community Commercial	26	0	0.00
Interchange Commercial	325	1	0.03
General Commercial	202	0	0.02
Light Industrial	1,333	2	0.12
Heavy Industrial	2,344	4	0.21
Total Unincorporated Area	746,460	1,166	68.01
Total County Area	1,097,499	1,715	100

Source: Benton County GIS data

3.2.1 Land Use Pattern and Compatibility

Rural residential area in Benton County

Benton County's land use can be described in broad categories: urban, rural, agricultural, industrial, public, and open space. Agriculture is the predominant land use in Benton County. Much of the urban land is concentrated in the eastern portion of the County which comprises the Tri-Cities area—Kennewick, Richland, and West Richland—with Benton City and Prosser comprising the urban land in central and western Benton County. The rural residential lands are mostly along the Interstate-82 corridor and in the urban fringes with some located in the Patterson and Plymouth areas. Industrial lands are minimal in the unincorporated County, located near Finley and Prosser. Other industrial lands are mostly located within the Hanford area or within the UGAs. Public and open space lands are located throughout the County.

Compatibility is based on the intensity of land uses. Generally speaking, the most intense use is industrial due its operational impacts (e.g., noise, light, dust), supporting facility needs, and overall land impact. Natural areas are considered the least intense as there are no developments or improvements on such areas. Therefore, a low density residential area next to a heavy industrial land use would be considered incompatible because of the negative impacts industrial uses may have on the residential areas. Appropriately designed buffers, landscaping, and transition areas between uses should be considered between incompatible land uses.

3.2.1.1 Military Training Routes

When planning for new development within Benton County, it is important to consider the critical role of military training areas in support of national defense. Within Benton County there are several military training routes that function as 'highways in the sky' used by military aircraft to practice high- and low-altitude training exercises and to traverse between military installations. Any development or new construction that seriously impacts or hinders the military training routes' function and viability is considered incompatible land use. Future land use compatibility planning must be an overarching goal of the Comprehensive Plan.

The GMA requires the County to provide notice to the military when it intends to amend its "comprehensive plan or development regulations to address lands adjacent to military installations to ensure those lands are protected from incompatible development." Per the RCW 36.70A.530:

1. Military installations are of particular importance to the economic health of the state of Washington. It is a priority of the state to protect the land surrounding military installations from incompatible development.
2. A comprehensive plan, amendment to a comprehensive plan, a development regulation, or amendment to a development regulation, should not allow development in the vicinity of a military installation that is incompatible with the installation's ability to carry out its mission requirements.

3.2.2 Population and Land Use Trends

Beginning in the 1990s there has been a condition of sustained population and economic growth in eastern Washington. For the present, the cyclic booms and busts in the local economy characteristic of the 1960s through late 1980s have been replaced with a seemingly steady and prolonged period of population growth and conversion of raw land to agriculture and related industries, urban uses, and rural residential development.

Locally, since the early 1990s both the farm and construction/development sector of the non-farm economy have enjoyed relatively favorable market conditions. The economy was less impacted by the recession in 2008 than the rest of the nation due to the increase in employment at the Hanford Site as part of the American Recovery and Reinvestment Act (ARRA) investment in expedited cleanup

activities in 2009 and beyond. Table 3-2 indicates the historic population growth in Benton County by decades.

Table 3-2
Historic Population Growth in Benton County

Year	Benton County	% Change Benton County
1970	67,540	8.81%
1980	105,800	56.65%
1990	112,560	6.39%
2000	142,475	26.58%
2010	175,177	22.95%

Benton County's current population, based on the 2017 OFM data, is 193,500. The unincorporated County population constitutes 35,085 persons, or approximately 18 percent of the total County population. At present, the agricultural sector is experiencing significant economic growth in the County, as the global markets for eastern Washington farm products continue to expand. At the local level, the commercial retail sector within the Tri-Cities has reached a scale of regional significance with new retail stores being constructed regularly and serving an area within an approximate 100-mile circumference of the Tri-Cities. Hanford Cleanup budgets continue to play a major role in supporting local economic and population growth, and this is expected to continue into the future.

The land use trend on the Hanford Site can be broadly described as the gradual reintegration of major portions of Hanford's resources (land, water, and infrastructure) into the economy, custom and culture, and regulatory authority of local jurisdictions within which the Hanford Site lies. Today, the Hanford Site is being cleaned up for future uses that, in addition to federal missions, will likely include non-defense related private and public sector uses.

Recently, 1,641 acres of Hanford land was transferred from the U.S. Department of Energy to the City of Richland, the Port of Benton, and Energy Northwest for industrial uses. The Hanford Reach National Monument, created by President Clinton in 1999, has also generated additional visitors and tourists to the site and the surrounding communities.

3.2.3 Future Considerations

Accommodating land needs of both agricultural and non-agricultural uses, while maintaining the potential of all economic sectors, is important for Benton County. Key considerations for land use in the County are to preserve and protect agricultural and resource lands, allow rural lifestyle in rural lands, and allow growth where services are available, primarily in the urban areas. With the County

situated at the confluence of three rivers and its mountainous and ridged geological characteristics, protection of the County's environmental resources is also an important aspect for future planning.

As the agriculture economy continues to grow in Benton County, properly locating sites and providing basic services for agriculture related industries, facilitating the growth of "agri-tourism" and "value-added" processing sectors will be important.

3.3 Land Use Categories

As noted above, land use in Benton County is organized into designation categories: urban, rural, agriculture, industrial, public, and open space lands. Some of these designations also have sub-categories. Table 3-3 indicates the proposed land uses and distribution of lands within Benton County (see Appendix A: Map Folio, Figure 5 – Future/Proposed Land Use Designations Map).

Table 3-3
Proposed Land Uses and Land Distribution in Benton County

Land Use Type	Acres	Square Miles	Percent
Cities and Urban Growth Areas	72,245	111	6.58
Hanford Site	265,576	415	24.19
Hanford Reach	12,443	19	1.13
Unincorporated Area			
Growth Management Act Agriculture	649,153	1,014	59.12
Open Space Conservation	2,169	3	0.20
Public	15,563	24	1.42
Rural Transition	3,507	5	0.32
Rural Remote	66,402	104	6.05
Rural Resource	7,214	11	0.66
Rural Community Center	448	1	0.04
Rural Commercial	423	1	0.04
Rural Industrial	2,870	4	0.26
Total Unincorporated Area	747,749	1,168	
Total County Area	1,098,013	1,716	100

Benton County implements its various land uses through zoning designations as shown in Table 3-4 below.

Table 3-4
Land Use Implementation by Zoning

Land Use	Zoning
Urban	Urban Growth Area Residential
Hanford	Unclassified
Hanford Reach	Unclassified
Growth Management Act Agriculture	Growth Management Act Agriculture
Open Space Conservation	Open Space Conservation
Public	Park District
Rural Transition	Rural Lands 1
Rural Remote	Rural Lands 5
Rural Resource	Rural Lands 20
Rural Community Center	Community Center Residential, Community Commercial
Rural Commercial	Interchange Commercial, General Commercial
Rural Industrial	Light Industrial, Heavy Industrial

Designations under each category are further discussed below.

3.3.1 Urban Lands

Urban lands are lands located within, adjacent to, or as in the case of existing unincorporated islands, surrounded by existing city limits.

A key component of the GMA and the Comprehensive Plan is to allow growth within the UGAs. These areas include cities and other areas characterized by urban growth or adjacent to such areas, and are designed to accommodate the projected population growth for 20 years. The GMA further specifies that urban growth should first be located in areas that already have adequate existing public facilities and service capacity and second, be located in areas where such services if not already available, can be served adequately by a combination of both existing and future public and private sector facilities and services.

The CWPP establish a process between the County and cities to manage development within the cities and their UGAs, and a process of annexation of UGAs into the cities.

3.3.1.1 Urban Land Use Designation

Urban lands in Benton County include land within the city limits and the UGAs. There are five designated and approved urban growth areas (UGA's) in Benton County: Benton City (Appendix A-Figure 18), Kennewick (Appendix A-Figure 19), Prosser (Appendix A-Figure 20), Richland (Appendix A-Figure 21), and West Richland (Appendix A-Figure 22). The densities, uses, and development

provisions allowed within this land use assure that development patterns are consistent with city comprehensive plans.

3.3.2 Rural Lands and Element

The GMA requires counties to include a rural element in their comprehensive plans to permit appropriate land uses that are compatible with the rural character of such lands and provide for a variety of rural densities. This element has been incorporated as a part of the land use element of the County's plan.

Rural lands are those areas outside of UGAs, excluding agricultural, public, open space, and other specifically designated lands in this Comprehensive Plan. Land uses in rural areas include a variety of densities for rural, commercial, and industrial use consistent with the rural character. Rural areas are traditionally used for small-acreage farms, orchards, agricultural crops, livestock, mineral extraction and processing, and low-density residential development. The low intensity use of rural land also provides fish and wildlife habitat, open space, and other environmental benefits. Recreational uses which preserve open space and protect the natural environment are encouraged in rural lands. The County's goals and policies, through the rural element in this Comprehensive Plan and associated development regulations, aim to identify and guide land use designation of rural lands in a manner t [Grab your reader's attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]
hat preserves rural character.

Rural lands in Benton County

3.3.2.1 Rural Character

The rural areas of Benton County are places where open space, the natural environment, and vegetation dominate over the built environment. The rural area is a place where one can find wildlife habitats and a historic heritage characterized by low-intensity land uses that include small farms or

scattered homesteads. Rural areas vary in Benton County and differ based on physical characteristics and community preferences based on their customs, culture, outlook, and living environments.

Rural character embodies a quality of life based upon traditional rural landscapes, activities, lifestyles, and aesthetic values. This includes more open landscapes where the setting is quiet, peaceful, and natural. The residents may enjoy a slower paced lifestyle, closeness with nature, and access to recreational opportunities, acknowledging that larger acreage areas may also require more time for maintenance and management of the land, animals, and other responsibilities often associated with a more rural lifestyle. Rural areas are typically separated from urban areas.

3.3.2.2 Rural Communities

Rural communities, such as Paterson, Plymouth, Whitstran, and Finley are designated as Rural Community Centers to reflect a localized pattern of residences on less than 5-acre lots and a variety of small-scale local commercial service areas such as: grocery stores, service stations, eateries, taverns, post offices, and auto repair, that serve the surrounding rural population. The Comprehensive Plan Rural Community Center designation reflects this pattern and equals 1 to 3 dwelling units per acre (Du/acre). Rural Community Centers are "limited areas of more intensive rural development" (LAMIRDs) authorized by RCW36.70A.070 (5)(d). The County's RL-1 "Rural Lands One Acre District" lands are not LAMIRDs but may developed at an intensity similar to a LAMIRD based on historical development patterns and plats approved prior to the GMA. The size of the Rural Community Centers in Paterson, Plymouth, and Finley are 36, 89, and 189 acres, respectively. Whitstran Rural Community Center contains 67 acres.

Other areas that are considered the equivalent of limited areas of more intense rural development are pre-existing urban/suburban areas designated rural lands one acre (RL-1). These RL-1 areas are located throughout the County and are characterized by locations adjacent to major travel corridors (e.g., state routes); smaller parcel sizes relative to the GMA "rural" designation; cultures associated with "neighborhoods" or landowner associations; and densities that allow for infill that would not negatively impact adjacent rural or agriculturally designated lands.

3.3.2.3 Rural Land Use Designations

Rural lands designations are based upon a required "minimum" lot size. A larger than minimum lot size may be required, when necessary, to satisfy Washington State Department of Health requirements for water and domestic waste disposal and code requirements (e.g., setbacks, easements).

Rural Transition is designated to areas that are in close proximity to UGAs and have experienced steady growth in the last decade. The intent of the Rural Transition designation is to enable rural residential living in conjunction with providing a transition area between the rural and urban

environments, and potentially suitable for future inclusion into UGAs. Maximum allowable density in this land use category is 1 DU/acre.

There are currently six areas in the County designated as Rural Transition. One is surrounded by Richland urban areas on all sides near the Columbia Park Trail. All other Rural Transition areas abut Kennewick, Richland, and Prosser UGAs on at least one side or adjoin a higher intensity land use between a UGA and the Rural Transition land use. A significant portion of the future population growth within the County is anticipated to occur in these areas.

Rural Remote is the predominant rural land use in the County. This land is located mostly between the agricultural lands (GMA Agriculture), Rural Transition, and the UGAs. Rural Remote land use is intended to enhance and preserve the County's rural character, which includes rural open space, low densities, wildlife habitat, public open space for outdoor recreational activities, and rural home sites on which a limited range of agricultural activities may be conducted. Allowable density in Rural Remote land use is 1Du/5acres.

Rural Resource is designated in areas where existing topography or geological conditions can be protected and where a very low density of residential or other uses may be allowed. It is designed to enhance and preserve Benton County’s rural character, which includes rural open space, low densities, wildlife habitat, public open space for outdoor recreational activities; ridges, slopes, and bluffs; and rural home sites on which a range of agricultural activities may be conducted. Allowable density in Rural Resource 1DU/20acres.

Rural Community Center – see discussion above in Section 3.3.2.2.

Master Planned Resorts per RCW 36.70A.360, MPRs are developments with urban characteristics that may be located outside of UGAs. A MPR is a fully integrated, self-contained planned unit development in a setting of significant natural amenities, with its primary focus on destination resort facilities consisting of short term visitor accommodations and a range of developed on-site indoor and/or outdoor recreational facilities. Capital facilities, utilities, and services, including those related to sewer, water, security, fire suppression, and emergency medicine provided on-site shall be limited to meet the needs of the MPR.

The primary purpose of MPRs is to provide for carefully planned, self-contained, and integrated destination resort facilities and amenities that are centered upon unique and commanding natural resource settings. MPRs may be amended to the Comprehensive Plan as Sub Area Plans.

Small-scale Recreation or Tourist Use per RCW 36.70A.070 (5) (d) (ii) can be an intensification of recreation or tourist uses on existing lots, or new development of SSRT uses, including commercial facilities to serve those recreational or tourist activities that rely on a rural location and setting, but

that do not include new residential development and are not intended to principally serve the existing or projected rural population.

Significant differences between the MPR and the SSRT uses are: scale, the MPR is perceived as a destination resort of potentially very large size whereas the SSRT is relatively small and concentrated; residents, the MPR can have them as a secondary use, but the SSRT cannot; municipal services, although MPRs can be outside of a UGA, at the developer's expense, a MPR can connect to city services, whereas the SSRT cannot.

Rural Commercial encompasses all commercial lands in Benton County. This includes general commercial uses and commercial areas primarily along Interstate 82. The purpose of this land use is to provide retail goods and services to regional trade areas, serve highway travelers, and provide convenience services to residents. Uses include motels, truck stops, service stations, restaurants, and fast food.

Rural Industrial includes both heavy and light industrial uses in the County. The primary purpose of this land use to provide land for industrial and supporting uses that will not present unmanageable conflicts with other land uses, that have access to necessary utilities and public facilities, and that have less environmental constraints. Some of the heavy industrial uses function at the fundamental economic level: rail transport and facilities operations, chemical products manufacturing and shipment for agriculture, sand and gravel operations for construction, raw products processing, and waste products recycling.

Wind turbines and dryland wheat

3.3.2.4 Agricultural Lands

Agricultural land is defined as land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production (RCW 36.70A.030(2)). Long-term commercial significance includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of the land. GMA requires each county to designate appropriate agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products (RCW 36.70A.170(1)(a)). Table 3-5 summarizes agricultural lands in the County by dryland, irrigated and rangeland.

Table 3-5
Agricultural Lands by Land Type

GMA Agriculture Land Type	Acres
Dry land	304,839
Irrigated	296,432
Rangeland	112,190

Source: BERK Consulting 2016

Dryland agricultural activities primarily consist of dryland wheat production, principally in the Horse Heaven and Rattlesnake Hills. Dryland production has an economy of scale requiring large operations, typically in the thousands of acres.

Crops grown in Benton County includes "specialty" berries and orchard crops, mint, hops, and juice and wine grapes. Corporate acreages of asparagus, potatoes, wine grapes, and corn are grown in large operations under "circle" irrigation systems found throughout the County, but most notably on the south slope of the Horse Heaven Hills above the Columbia River. Significant acreages of hillside orchards are found in the Red Mountain/Badger Canyon and Kennewick/Finley areas.

Benton County designates agricultural land as GMA Agriculture based on primary factors below, as well as other factors discussed in Appendix L:

- Urban Growth. The land is not already characterized by urban growth.
- Production Capability. The land is used or capable of being used for agricultural production.
- Long-Term Commercial Significance. This is determined by classification of prime and unique farmland soils, availability of public facilities including roads used in transporting agricultural products, tax status, public service availability, proximity to UGAs, predominant parcel size,

land use settlement patterns, intensity of nearby land uses, history of nearby land development permits, land values under alternative uses, and proximity to markets.

Irrigated agriculture in Benton County

3.3.2.5 Agricultural Land Use Designation

GMA Agriculture (GMA AG) includes agricultural land (such as dryland and irrigated land) identified by the County based on the criteria established by the GMA. A GMA Agricultural District zone conserves agricultural lands by establishing a 20-acre minimum parcel size and (with exceptions e.g., resort destinations, wineries) limits the range of other land uses to those which are dependent upon, supportive of, ancillary to, or compatible with, agricultural production as the principal land use. This land constitutes about 59 percent of the total land in Benton County as shown in Table 3-3.

The county-wide review and designation of these lands was updated in this Comprehensive Plan, as described below and in more detail in Appendix L.

WAC 365-190-050(3) states that "lands should be considered for designation as agricultural resource lands based on three factors:" 1) specifically is not characterized by urban growth; 2) is used or is capable of being used for agricultural production; and 3) has long-term commercial significance for agriculture.

Per the first factor, the urban and UGAs mapped in the County were excluded from the agricultural resource lands analysis as by their definitions, these are areas characterized by urban growth.

Agricultural land production capability (factor two) was evaluated based on physical and geographic characteristics of resource lands in Benton County, using the land-capability classification system of the U.S. Department of Agriculture Natural Resources Conservation Service as defined in relevant Field Office Technical Guides consistent with WAC 365-190-050(3)(b)(ii).

The Natural Resources Conservation Service land-capability classification was applied to Benton County lands, splitting eight soil type classes into suitable, suitable with management, and non-suitable land for cultivation. Strictly applied, both the suitable and suitable with management lands have the potential for remaining as GMA Agriculture lands, while non-suitable areas would not. However, many non-suitable areas are often adjacent to or surrounded by suitable or suitable with management lands often in existing agricultural production. Adjusting the designation of some these non-suitable areas from GMA Agriculture – primarily draws and canyons – was determined not to be necessary at this time, but a change of designation could be possible in the future, as other considerations come into play. Additionally, many of the areas near the fringe of the current areas designated as agricultural land and nearer to population centers that may be classified as suitable or suitable with management may also have the possibility of more intense land uses in the long-term. In some instances, these are also the more marginal lands, particularly when considering dryland production areas in concert with factor 3 considerations, i.e., lands of long-term commercial significance.

Long-term commercial significance for agriculture was evaluated by applying several different considerations determined to be most applicable to Benton County resource lands, and generally consistent with guidance provided in (WAC 365-190-050(3)(c), but also supplemented by information important to local conditions such as precipitation patterns. These considerations included:

- Water availability/precipitation
- Parcel size
- Nearby UGAs, settlement patterns, land use, land values, and development permits
- Land in the Conservation Reserve Program or conservation land
- Prime farmlands
- Pesticide restrictions
- Public facilities and proximity to markets
- Tax status

Each of these considerations was reviewed on a county-wide, comprehensive basis of both existing GMA Agriculture and other lands to determine their relevance or contribution to long-term commercial significance of agriculture. Through this evaluation, multiple areas in the County were considered for reclassification.

In general, it was deemed important to maintain continuity in agricultural resource land designation; unless there are sufficient reasons that the agricultural resource land should be de-designated, land should remain as agricultural resource land to protect the resource. Additionally, there are many areas that had potential to be removed from designation through some analysis considerations but not others. For example, there are several areas north of Prosser that have small parcel sizes but are currently designated as agricultural resource land. However, these areas are irrigated lands with suitable soils, so it would not be appropriate to remove them from the agricultural resource land designation.

The areas that were removed from agricultural resource land designation are areas south of Richland, Kennewick, and West Richland. These areas are near population centers, adjacent to growing areas, proximate to utilities and roads, have low precipitation without irrigation, are outside of AVAs, and follow the recent settlement pattern of the County. Some of these areas also have more restrictive pesticide regulations, making it more expensive to treat agricultural lands. Together these considerations threaten or have already reduced the viability for the long-term commercial significance of the land as agricultural land, which fits the considerations noted in *Lewis County v Western Washington Growth Management Hearings Board* (2006).

Areas that should be added to agricultural resource land designation are areas south of Finley, west of Benton City, and near Prosser. These areas are currently farmed, are irrigated and often have permanent crops in place, are large parcels, exist outside of UGAs, and are near existing land that is already designated as agricultural resource land and other rural uses.

Agricultural lands above Lake Wallula (Columbia River)

Additionally, approximately 7,130 acres are proposed to be changed from higher density rural residential designations to a lower density Rural Resource designation. This change in designation will preserve these lands for rangeland uses and agricultural production opportunity areas, such as vineyards and orchards. This can be considered an innovative zoning technique that fits RCW 36.70A.177(1) as being designed to conserve agricultural lands and encourage the agricultural economy.

In addition to the re-designation of lands described above, the comprehensive agricultural lands analysis resulted in 6,051 acres to be added to the GMA Agriculture designation and 4,565 acres removed from the agricultural land designation.

3.3.3 Industrial Lands

Outside of the Hanford Site, there are currently 3,312 acres of industrially designated land within unincorporated Benton County. Though a broad range of industrial uses is appropriate for these lands, the principle current use is for agriculturally related industries such as chemicals processing and shipping, cold storage, and fruit and vegetable processing and shipping.

Industrial development in Benton County

The Hanford Site has land suitable for industrial development. A percentage of this land will be developed to federally "programmed" industrial uses, including the Hanford industrial land recently transferred to the City of Richland, the Port of Benton, and Energy Northwest, as noted previously. The City of Richland and Port plan to market the property to industrial developers as “mega-sites” of 200 acres or larger (Oneza & Associates 2017). The proximity of this land to highways, rail, and utility services together with the large acreages available provide development opportunities for industries that exist in very few places throughout the Pacific Northwest. As a result, 901 acres of Hanford land is in the process of being added to the Richland UGA. This and other industrial lands within the cities augment the County's supply of industrial designated lands.

Current industrial lands in unincorporated Benton County are located in the vicinities of Paterson and Plymouth, east and north of the City of Prosser on County Route 12, within the Community Center of Whitstran, and in the south Finley area.

Development of industrial land requires careful consideration of environmental constraints and associated mitigation strategies, availability of infrastructure and utility services and their capacity; access to rail, roads, and navigable water; proximity to the market, supplies, labor pool and other considerations.

Port Districts are major players in the industrial land base of Benton County. The industrially zoned acreage is predominantly owned by the Benton and Kennewick port districts, which are taxing districts under Washington State Law. Port districts are authorized to purchase lands for marketing, development, lease, and eventual sale to commercial interests with the objective of improving the

local economy. Port district holdings include lands in the rural areas of Paterson, Plymouth, and Finley, and in or adjacent to the cities of Richland, Kennewick, Prosser, and Benton City.

Typical port enterprises include the construction of industrial and office space for start-up businesses; the lease of land or buildings to commercial enterprises, which may in turn purchase the real property from the Port; and facilitating the assemblage of major industrial/commercial projects requiring collaboration by numerous interests such as utilities, local and regional governments, and private enterprise.

Descriptions of the County's industrial land resources can be found in Chapter 5 (Economic Element).

3.3.3.1 Industrial Land Use Designation

Rural Industrial is intended for a wide range of industrial land uses including light and heavy industrial uses. These lands require access and infrastructure for heavy industrial uses; rail and waterborne transportation access are critical. Other important criteria include separation of such land from residential and commercial uses and availability of large acreages for outside storage and maneuvering of trucks and rail equipment. Industrial lands play a key role in the local and regional economy by offering manufacturing and various other types of jobs.

3.3.4 Public Lands Designation

The Public Lands (PL) designation is found throughout the County, but most generally along the Columbia River corridor. PL designated lands are intended for public uses such as parks, playgrounds, greenways, open spaces, and wildlife habitats owned and operated by a local, state, or federal government. Although approximately 15,563 acres of land are currently designated PL in the Land Use Map, there are about 93,299 acres of additional land in Benton County currently owned by public entities, including the Washington Department of Fish and Wildlife, Bureau of Land Management, Department of Natural Resources, and U.S. Army Corps of Engineers.

3.3.5 Open Space Conservation

Open Space Conservation lands are recognized as areas having critical resources and ecosystems with unique characteristics that support significant habitats for migratory birds, fish, and wildlife; natural riverine functions and aquatic environments; botanical inventory; water quality and flood retention. Open Space Conservation designated areas provide significant natural functions and benefits to natural resources and the public and should be protected from destruction, conversion, and encroachment by incompatible uses. These areas may also provide limited recreational and educational opportunities for the public. Open Space Conservation lands can be public or private property, and must be held under conservation easements with local, state, or federal agencies or land trusts. Open Space Conservation designations are voluntary in nature for property owners.

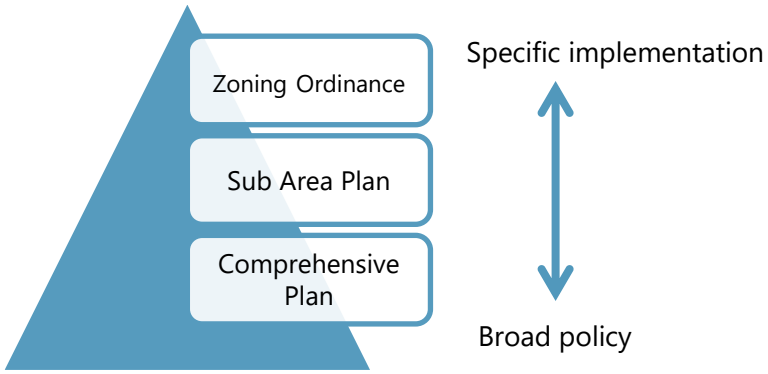
3.4 Sub Area Plans

The purpose of a sub area plan is to provide a framework for future decision-making for select and unique geographical areas within Benton County. These plans may regard areas with special features, such as shorelines that provide important functions and values or lands with exceptional soils and climate characteristics suitable for prime agricultural production, as valuable or unique for preservation, protection, or certain development. Sub area plans contain statements of guiding principles to be followed, recommendations for strategies to achieve desired goals and objectives, and a plan of action to guide future land use development decisions in the area. Sub area plans are prepared with substantial public involvement.

3.4.1 Hierarchy of a Sub Area Plan Document

The sub area plan document fits between the broad policies of the Benton County Comprehensive Plan and the Benton County Zoning Ordinance with specific implementation tools as shown in Figure 3-1 below.

Figure 3-1
Sub Area Plan



The following sub area plans are listed by their adopted title as found in the corresponding Benton County Planning Department files and are adopted by reference and incorporated as if fully set forth within.

3.4.2 Red Mountain American Viticultural Area Master Site Plan

The provisions of the Red Mountain AVA Master Site Plan (RM MSP; Appendix G) represent many hours of effort by the Red Mountain Alliance and interested citizens who live and work or have a vested interest in the development of the area described by the RM MSP. Red Mountain's topography, soils, and solar aspect have made it suitable for viticulture, an important economic resource for the region.

The purpose of the RM MSP is to provide a "viticultural park" concept that reinforces the existing and future qualities of the Red Mountain AVA. The RM MSP and its provisions are advisory in nature and intended to guide future development of the Red Mountain site plan area.

3.4.2.1 How the Plan Is Organized

The RM MSP is divided into seven chapters that reflect the fundamental components of this Sub Area Plan. The chapters are as follows:

1. Introduction
2. Master Site Plan Elements
3. Visitor Projections
4. Design Guidelines
5. Steps toward Sustainability
6. Zoning
7. Next Steps

Each chapter refers to items and issues related to that category only. Endnotes and references are provided in Chapter 8, and an appendix follows.

The Red Mountain AVA Master Site Plan Map (RM MSP Map Figure 4-14) shows the boundaries of the RM MSP, the Red Mountain AVA boundary, existing vineyards and wineries, potential vineyards and wineries, existing roads, and other proposed infrastructure.

3.4.2.2 Land Use Designations

The land use designation in the current Comprehensive Plan shows the area designated as GMA Agriculture, with the land bordering south of State Route 225 and land adjacent to the east side of Demoss Road designated for Rural Remote. Land characteristics include suitable soils, farmable topography, un-platted acreages of significant size, and existing or potential availability of water, suitable slope exposure, and the absence of existing land uses that are known to be incompatible with agricultural operations.

3.4.2.3 Proposed Uses

3.4.2.3.1 Red Mountain GMA Agricultural District

The area is planned to conserve and protect agricultural lands of long-term commercial significance as required by the GMA (RCW 36.70A) and more particularly to protect the unique agricultural character and attributes of these lands on Red Mountain. This area is within the federally designated Red Mountain Viticulture Wine Appellation. Vineyards and wineries are the predominant uses within this area.

3.4.2.3.2 The Wine Village

Red Mountain's "Wine Village" will provide an interpretive center with welcoming, educational, recreation, and support functions. The Wine Village is designed to both welcome and introduce visitors to Red Mountain and prepare them for what they will see, experience, and enjoy, as well as offering other tourist-related support services. Allowed uses within the Wine Village include a visitor interpretive center, small restaurants, bistros, casual food shops, art studios and galleries, wine retail, antique shops, demonstration vineyards, wineries, gardens, and small lodging facilities. Under current planning law these uses will most likely occur via an MPR designation.

3.4.2.3.3 Tourist Serving Area

In the southeast corner of the Red Mountain AVA, outside the AVA boundary and within the Rural Lands Five designation, the RM MSP identifies an important future entry way into the Red Mountain AVA area. A coordinated site-specific planning effort in this area is needed to provide a development plan that allows for a limited range of short-term "visitor serving" activities, recreational, commercial, and wine related conveniences for tourists and visitors to the vineyards and wineries of the Red Mountain AVA.

3.5 Countywide Planning Policies

Benton County and the five cities within it have jointly adopted a set of CWPPs (Appendix E), which form the framework for the preparation, implementation, and amendment of their comprehensive plans in a manner that provides for integration and consistency among the County and city plans in terms of services, designations, and other elements as applicable.

Included within the CWPPs are a uniform methodology to calculate the amounts of additional land needed by each city to accommodate the population growth projections provided by the OFM. Other CWPPs establish standards for selecting additional lands to be included within the UGAs and for joint county and city planning on lands within UGAs.

3.6 Expansion of Urban Growth Areas

Two aspects are important for UGA expansion: meeting the required need for future land in urban areas and maintaining low density land outside the UGA to enable logical and cost-effective expansion.

Currently, the County is updating the UGA boundary in two areas as follows:

1. City of Richland UGA expansion. As discussed before, 1,641 acres of Hanford land was transferred from the U.S. Department of Energy to the City of Richland, the Port of Benton, and Energy Northwest. As a result, the City has applied for an UGA expansion to add 1,184 acres of

Hanford land to its UGA and remove 283 acres from the Richland UGA (for a net increase of 901 acres). This request has been incorporated into the County's Comprehensive Plan update.

2. City of Prosser UGA amendment. Based on the City of Prosser's OFM population projection and land needed to accommodate this population, a reduction of 483.96 acres of UGA land and an addition of 100.44 acres of industrial land (for a net reduction of 383.52 acres) has been applied for and is incorporated into this Comprehensive Plan update.

Within the Comprehensive Plan, four principal factors apply to future connections between cities and the County relative to the build-out of and expansion of UGAs. These include the availability of vacant lands in the municipalities; urban densities within the cities and UGAs; appropriate sizing of UGAs compared to future population growth; and consideration of site planning that preserves rural lands outside of UGAs for future expansion.

3.6.1 Total Vacant Land Within Benton County's Metropolitan Planning Area

The cities of West Richland, Richland, and Kennewick are contiguous. Some of the cities already have annexed unincorporated lands that are adequate to meet future demand. For instance, the City of Richland had placed significant amount of land within its UGA under the Urban Reserve land use category. Each City assesses their own land use demand based on vacant land and developable land to identify future needs before any UGA expansion is proposed.

The adoption of the County's Comprehensive Plan, and the adoption of each of the cities' plans, require that the expansion of urbanization, with its conversion of rural lands to urban uses be an orderly, cost-efficient process, based on population projections and protection of rural neighborhoods and natural resource lands. The UGA process is intended to, and has, influenced a reduction of urban sprawl, increased annexation of unincorporated islands with the cities, and achieved greater cost effectiveness for development within UGAs.

3.6.2 Urban Densities within Cities and Their Urban Growth Areas

In response to market demands, the development of urban densities within UGAs is essential if the UGA is to function as a tool to achieve cost effective provision of urban services, and to protect agricultural lands and the rural community outside of the UGAs. To achieve this, densities within the UGAs should be high enough and encourage infill of existing UGAs.

3.6.3 Objective Criteria for Determining When and How to Expand Urban Growth Areas

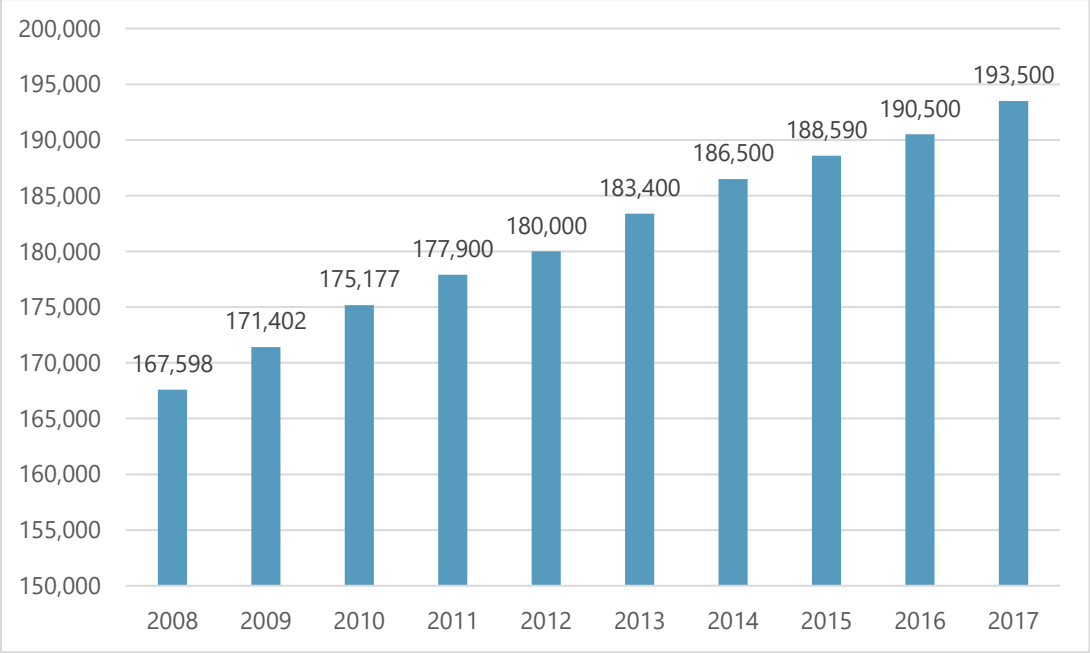
The CWPPs sets forth uniform criteria and methodology for calculating the amounts of land necessary in a UGA to accommodate projected population growth. The policies reflect

methodologies identified in current planning literature (as well as recent GMA Regional Hearings Board decisions) for identifying the appropriate size of UGAs relative to population projections. Other CWPPs direct how locations of new UGAs are to be selected to avoid rural communities and agricultural lands.

3.7 Population Projections for Benton County

Population growth in Benton County from 2011 to 2016 grew at a rate reflective of the slow growth in the nation's economy, the improved national economy of 2017 has provided a rebound in growth reminiscent of the growth in 2009. Figure 3-2 reflects the population trend in the last 10 years in Benton County.

Figure 3-2
Ten Year Population in Benton County



The latest population projections from OFM, using the "high" series estimates, indicate that Benton County can expect a population increase of 86,609 over the next 20 years. This will result in a year 2037 population of 280,109, which is an increase of 45 percent over the current population of 193,500. The County will review the future growth trends and adjust population projections if necessary.

Approximately 18 percent of the total County population, or 35,085 people (OFM 2017), reside in the unincorporated area of Benton County. The 20-year OFM projection also indicates the unincorporated County population will grow to 53,220 persons in 2037. This will add 18,135

additional people in the next 20 years who are projected to seek housing in unincorporated areas of the County between now and the year 2037. This growth represents a 52 percent increase over the current rural population. Table 3-6 indicates the population estimates in Benton County and the unincorporated areas of the County.

Table 3-6
Population Estimates in Benton County

Year	Population in Unincorporated Benton County	Population in All Benton County
2017	35,085	193,500
2037 Projection	53,220	280,109
20 Year increase	18,135	86,609

Source: Washington State Office of Financial Management and U.S. Census Bureau

3.8 New Housing Units Needed for Projected Rural Population Growth

At an estimated 2.7 residents per household, the increased population in unincorporated Benton County would require approximately 6,716 new homes in the next 20 years. This growth will be accommodated mostly in the Urban lands of the UGAs, Rural Transition areas, and Rural Remote areas. Some growth will also take place in the Rural Community Centers and Rural Resource areas.

There are currently 78,952 acres designated for the rural residential uses within the four rural land use designations of Benton County (outside of Hanford and the agricultural areas).

A land capacity analysis on vacant and existing units in the Rural Transition land (1 du/acre) and Rural Remote land (1 du/5 acre) indicates adequate land supply to accommodate future housing demand. However, additional growth is also anticipated to occur in the Rural Community Centers and Urban areas. Table 3-7 indicates potential allocation of future population in these two land use categories:

Table 3-7
Potential Allocation of Future Population Per Land Use Category

Land Use	New Units	
Urban	134	
Rural Transition	1,142	
Rural Remote	5,652	
Rural Community Centers	34	
Total	**6,961**	

Notes:

1. Does not include UGAs
2. Lot size is determined by minimum lot size requirements; i.e., how many units are allowed per given acreage.

4 Natural Resources Element

4.1 Introduction

This Chapter describes the physical and biological setting of the County. Critical resources within the County are identified, including their "functions and values," and the current trends associated with regulatory protections for those resources. This Chapter also presents Benton County's approach for the protection of critical resources.

4.2 Natural Setting of Benton County

The natural setting of Benton County typifies that of the larger Columbia Basin area. The County is located in southeastern Washington and encompasses approximately 1,715 square miles. The Columbia River borders the north, east, and south sides of the County and the Yakima River intersects the middle of the County, flowing from Prosser to its confluence with the Columbia River at Richland. The County contains portions of three Water Resource Inventory Areas (WRIAs), including the eastern portion of the Lower Yakima Watershed (WRIA 37), the Rock-Glade Watershed (WRIA 31), and the Alkali-Squilchuck Watershed (WRIA 40).

4.2.1 Climate

Benton County is located in the central part of the Columbia Basin, which is surrounded by the Cascade and Rocky mountain ranges to the west and east, respectively. These ranges have a pronounced effect on the region's climate, which is dry and arid. The growing season in the region is approximately 185 days from mid-April to mid-October, with high temperatures exceeding 90 °F during the summer months and as low as 6 °F or colder during the winter months. Mean annual precipitation in the area ranges from 5 to 10 inches, with mean annual precipitation levels ranging from 10 inches or greater in discrete areas in Horse Heaven and Rattlesnake Hills (see Appendix A: Map Folio, Figure 6 – Precipitation Map). Approximately 70 percent of the precipitation in the region occurs between November and April with intermittent thunderstorms and other precipitation events occurring between March and October. Winter season snowfall accumulation ranges between 4 to 21 inches during the winter months, with snow melt and/or river icing during the winter and spring seasons occasionally causing flooding of the Yakima River.

4.2.2 Topography

The topography of Benton County is characterized by basin and valley lowlands, separated by the upland plateaus and ridges of the Yakima Folds Belt. The landscape is the product of seismic upheavals, volcanic eruptions, magmatic flows, glacial epochs, and cataclysmic floods. The legacy of this history is the present geologic landscape that includes the Hanford area, productive soils on the

flanks of anticlinal ridges, the Horse Heaven plateau, Rattlesnake Hills, Saddle Mountain, water resources of three major rivers, and the basaltic vertical columns and outcrops.

A thin layer of biology has adapted to the area's geologic base. The layer is relatively sparse and fragile on the dry uplands of shrub-steppe and bunch grasses, but diverse and resilient along reaches of rivers, tributaries, and creeks that flow throughout the County. From north to south, the major topographic features of Benton County are as follows:

Pasco Basin. A basal plane that comprises most of what is now the Hanford Site. Topography is flat to hilly, with elevations ranging from around 300 feet in the east to nearly 1,000 feet at the base of Rattlesnake Mountain.

Rattlesnake Hills. This segment of the Yakima Folds separates the Pasco Basin from the Yakima Valley. The ridge extends in a southeasterly-northwesterly alignment from its beginning in eastern Yakima County to a point where it merges with the Horse Heaven Hills south of Finley. Rattlesnake Ridge is discontinuous through the middle of the County where it has been perforated by the Yakima River (resulting in Red, Candy, and Badger mountains) and contains Rattlesnake Mountain, the highest unforested "peak" in Washington State. At 3,629 feet, Rattlesnake Mountain is also the highest point in Benton County.

Yakima River. The river bisects the County into north and south portions and is responsible for much of the varied topography of central Benton County. The river has been cutting the valley sediments in this syncline that separates Rattlesnake Ridge from the Horse Heaven Hills for tens of thousands of years. The present valley floor ranges from about 300 feet above sea level, at its confluence with the Columbia River at the City of Richland, to around 700 feet at the Yakima County line.

Horse Heaven Hills. This plateau constitutes the southern half of Benton County. The elevations of the Horse Heaven Hills rise from the County's low point of 265 feet near Crow Butte to 1,600 to 2,200 feet along the ridgeline which overlooks the Yakima Valley and the Badger Coulee. The Horse Heaven Hills are unique among the Yakima Folds: it is the southern-most and longest running ridge in the system at some 60 miles; it is the most severely "lop-sided" of the ridges, becoming more of a monocline than an anticline in areas; and it takes a definitive, 90 degree turn to the south at Kiona, which is the geographic center of the County. The ridgeline is highest at Jump Off Joe Butte south of Kennewick, and the plateau slides southward toward the Columbia River.

Horse Heaven Hills

4.3 Soils and Agricultural Resources

Benton County has highly productive agricultural soils with over $900 million generated by Benton County crops and livestock per year (BERK Consulting 2017). Designated agricultural resource lands make up a majority of the County. (See Appendix A: Map Folio, Figure 4 and 5 for existing and proposed Land Use Designations Maps and Appendix L Agricultural Resource Land Reclassification Memo.) The soils in Benton County are generally suitable for both agriculture and structural development, with localized constraints relating to slope, geo-hydrology, and pockets of sandy soils and fines. Soils in the region are very susceptible to wind and water erosion once stripped of their natural cover. However, in undisturbed condition, the indigenous shrub-steppe and bunch grass vegetative cover has adapted to hold basin soils in place. When stripped of natural cover, prevention of erosion requires the application of deliberate and aggressive management techniques.

4.3.1 Agricultural Soils

Agricultural lands in Benton County are primarily used for dryland agriculture (47 percent), with the remaining areas used for irrigated agriculture (40 percent) and rangelands (13 percent; BERK Consulting 2017). The primary crop grown in Benton County is wheat and wheat fallow (BERK Consulting 2017). Generally, but with some notable localized exceptions, the addition of water and fertilizer to soils in Benton County will result in productive agriculture. The principal exceptions are on steep erosive slopes, in pockets of very sandy soils, or where near surface basalt formations are accompanied by thin soils and poor hydrologic conditions.

Agricultural lands of long-term commercial significance are located throughout Benton County. These lands are characterized in RCW 36.70A.030(10) as land that "includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration

with the land's proximity to population areas, and the possibility of more intense uses of the lands." As described in Appendix L, these lands are determined by assessing a variety of factors including, but not limited to, classification of prime and unique farmland soils, proximity to urban areas, proximity to markets, and other factors. Areas containing soils of long-term commercial significance are described in more detail in Section 3: Land Use Element. Appendix A: Map Folio, Figure 7 – General Soils Map provides a generalized depiction of the soils types and their locations within Benton County. Figure 9 in Appendix L shows lands having a Prime Farmland designation, including farmland of statewide importance, farmland of unique importance, and prime farmland if irrigated.

Shrub-steppe and agricultural land

4.3.2 Soil Construction Limitations

Development in Benton County is generally not constrained by soil types, with few exceptions. For the purposes of structural development, soil limitations and development in geologically hazardous areas are addressed in the County's CAO (BCC Title 15). The ordinance requires that developments avoid or maintain setbacks from potentially unstable areas or adequately assess the degree of instability and locate, design, and engineer the development to address the level of hazard.

Soil ratings developed by the Natural Resources Conservation Service are used to indicate the potential degree of limitations for different types of development on different soil types. For example, a soil type might be rated as having slight, moderate, or severe limitations for the development of roads or dwellings. A variety of criteria are used in making such determinations, including such factors as depth to bedrock, shrink-swell potential, permeability, and slope.

It should be noted that even a "severe" rating does not preclude construction from occurring. Rather, it means that the potential limitation should be recognized and that the construction techniques employed may have to take the special soil conditions into consideration. In all cases, Natural

Resources Conservation Service emphasizes that an on-site inspection or soil survey would be necessary before it can be determined for certain if such soil characteristics are present.

4.3.3 Current Trends

Agricultural production is expected to continue to be a major activity and to play a vital role in the Benton County and Washington State economies. Population growth in the region will require proper management of soils and agricultural resources to protect them from development-induced erosion, contamination, and other impacts.

4.3.4 Future Considerations

Benton County currently requires a 150-foot setback for residential dwellings from agricultural districts to protect agricultural lands of long-term commercial significance and to avoid future land use conflicts. Because of their importance to the local and state economy, agricultural lands of long-term commercial significance should continue to be protected from future development. Additionally, the implementation of the VSP, a new, non-regulatory, incentive-based approach that balances the protection of critical areas on agricultural lands, while promoting agricultural viability, will encourage conservation practices such as erosion control measures that will protect and enhance agricultural soils.

4.4 Mineral Resources

4.4.1 Existing Conditions

In Benton County, mineral resources are aggregates (i.e., sand and gravel deposits and crushed quarry rock). Mineral resource areas in Benton County include lands with commercially viable mineral resource deposits. Most of the mineral resource areas in Benton County are located along the Columbia and Yakima rivers. Mineral resource lands are required to be protected under provisions of GMA. Constraints for the extraction of these resources typically include incompatible land uses (e.g., residential or commercial) on adjacent lands or biologically sensitive areas.

The major use of aggregate resources is for urban and rural residential developments. Construction of both dwellings and road networks consumes substantial amounts of sand and gravel as well as quarried and crushed basalt, which is used in local landscaping. The Mineral Resource lands scattered throughout the County represent an important economic opportunity because sourcing these materials locally is more cost effective than importing them from other regions.

At the Hanford site, active borrow pits provide mineral resources used for remediation, restoration, and closure activities (DOE 2015). State law requires that such mineral resources of long-term commercial significance be protected from having their future exploitation affected by adjacent

developments that may be incompatible with the mining and processing activities associated with these resources on the site.

4.4.2 Current Trends

Mineral resources in Benton County will continue to be responsibly extracted from commercially viable sites to support local business and development. Mineral resources at the Hanford site will continue to be used to support ongoing remediation, restoration, and closure activities.

4.4.3 Future Considerations

The principal considerations for the future use of these resources are: i) the identification of additional sites; and ii) providing the owners of known commercially viable sites the opportunity to apply the provisions of the County's Mineral Resources Protection Ordinance in BCC Title 15 to the sites. Such protection can prevent the sites from having their future exploitation compromised by the location of incompatible land uses on adjacent lands. Mineral resource extraction on the Hanford Site will follow the U.S. Department of Energy *Draft Hanford Industrial Mineral Resource Management Plan* (2001).

4.5 Water Resources

4.5.1 Introduction

Benton County includes portions of three major WRIAs: Rock-Glade Watershed (WRIA 31), Lower Yakima Watershed (WRIA 37), and Alkali-Squilchuck Watershed (WRIA 40). Water resources are a key component to maintaining a vibrant and growing county. As with much of the West, water in Benton County serves competing, and at times, conflicting uses. Securing certainty in the water supply is a major issue for the County for the foreseeable future. See Appendix A: Map Folio, Figure 8 – Water Resources Map.

Water is one of Benton County's most valuable natural resources. Reliable access to surface and ground water is necessary for household uses, irrigated agriculture, recreation, commercial and industrial development, and for fish and wildlife. Today, irrigated agriculture is the biggest user of water in the County, with supplies coming from the Columbia and Yakima rivers as well as from groundwater. The County's water resources also provide benefits for the natural environment and aesthetic amenities that contribute to the ambiance and lifestyle of the area. Water is a limited resource under numerous competing and changing demands, but improved management of the water resource system will allow for managed growth.

Irrigated agriculture in Benton County
Source: Washington State Department of Ecology

4.5.2 Existing Conditions

4.5.2.1 Surface Water

Benton County is located where the Snake and Yakima rivers flow into the Columbia River. Vast quantities of water, approximately 191,000 cubic feet per second or over 100 billion gallons each day, flow past Benton County on the way to the Pacific Ocean. This river system serves multiple uses, including power generation, fisheries, endangered species habitat, agriculture, and recreation. The system is culturally relevant for and connected to native and non-native Americans of the Pacific Northwest. The purpose of the following policies, however, is to focus on the needs of Benton County residents specifically.

Within the County, approximately 330 miles of shorelines meet the jurisdiction criteria of the Benton County SMP. The total acreage of upland shoreline area regulated by the SMP is approximately 15 square miles (The Watershed Company and BERK Consulting 2012). Critical areas within shoreline jurisdictions are also protected under the Benton County SMP (Appendix F).

The Columbia and Yakima rivers and their tributaries and creeks are the most prominent water resources within Benton County. Both rivers are classified as Shorelines of Statewide Significance by Washington State. The Columbia and Yakima rivers are directly related to critical area functions throughout the County as a water source for critical aquifer recharge areas and provide floodplain, wetland, and fish and wildlife habitat. Within the central Columbia Basin's desert environment, it is estimated that up to 75 percent of indigenous wildlife species depend upon these riverine corridors for cover and other sustenance essential to their lifecycles.

A major overriding issue for both the Columbia and Yakima rivers is the survival of salmon and steelhead. The principal impacts to salmonids are:

- Water quality and habitat conditions within watersheds and estuaries
- Passage conditions and predation concerns at diversion dams
- Hydroelectric dams and pools on the Columbia which have an impact on out-migrating smolt mortality
- Fishing pressures in the ocean as well as the local river system

Pressures on salmon and other aquatic species may be further exacerbated as increased variation in both ocean and freshwater hydrologic conditions occurs from changes in climactic conditions.

Several anadromous species within the river system are listed as threatened, endangered, or candidates under the federal Endangered Species Act. Recovery efforts are ongoing to help reverse these trends, with many projects being implemented in both the Yakima and Columbia rivers to help improve passage, flow, and habitat conditions.

4.5.2.1.1 Columbia River

Columbia River
Source: Washington State Department of Ecology

The Columbia River bounds the north, east, and south sides of Benton County, flowing through the Alkali-Squilchuck and Rock-Glade watersheds. Besides the Yakima River, tributaries within the County are primarily small, ephemeral streams that flow through confined canyons. In the mid-Columbia region, the Columbia River hydrology is regulated by dams, with the highest flows occurring between April and June. The McNary Dam, located along the County's southern boundary, is operated by the U.S. Army Corps of Engineers for navigation, hydroelectric power generation, recreation, and irrigation (The Watershed Company and BERK Consulting 2012).

4.5.2.1.2 Yakima River

The Yakima River within the County flows east to west from the City of Prosser to its confluence with the Columbia River located on the southeast side of the City of Richland. Most of the streams within the Yakima River watershed originate at elevations where annual precipitation is higher. Five major reservoirs and one smaller reservoir (Clear Creek) operated by the U.S. Bureau of Reclamation are located upstream of Benton County in the upper Yakima and Naches watersheds. These reservoirs

contribute to recent higher summer flows in the Yakima River compared to historical conditions, particularly in the upper Yakima. Lower Yakima flows are often lower in the summer than historical conditions, primarily due to irrigation diversions. Backwater effects from the McNary Dam on the Columbia River limit channel migration on the Yakima River within Benton County (The Watershed Company and BERK Consulting 2012).

The current condition of the Yakima River, especially in its lower reaches in Benton County, is degraded and poor due to high ambient air temperatures, lower summer flows, non-point source pollution, and areas of high water temperatures, all of which are functionally related. This condition jeopardizes both the native and anadromous fisheries, it threatens the long-term survival of the agricultural economy, reduces recreational opportunities, may lower real estate values of river front property, and limits the utility of the river for municipal and industrial uses.

4.5.2.2 Groundwater

Benton County is located in the central portion of the Columbia River flood basalt area, which includes basalt flow layers such as the Saddle Mountain, Wanapum, and Grande Ronde basalt layers (EA West 2017). The Columbia River basalts of the Columbia Plateau provide a locally important aquifer system, along with the unconfined, alluvial aquifers primarily along rivers and streams in the County, but also in sediments on top of the upper basalt layers. Groundwater production occurs in the sediments and the upper and lower basalt layers, which can often extend several hundred feet below ground.

Today, the reduction in flood frequency and floodplain connectivity resulting from reservoir management and diversion of irrigation water has altered the timing and character of streamflow and groundwater recharge through the Yakima watershed (The Watershed Company and BERK Consulting 2012). Additionally, nitrate groundwater contamination is a documented public health issue in Benton County (EA West 2017). The potential contaminant sources and pathways on the County's groundwater supply have not historically been well characterized nor have their effects been fully understood. As a result, the Benton Conservation District has developed the *Benton County Groundwater Nitrate Monitoring Study* "to help develop an essential foundation for groundwater quality restoration in Benton County with regard to elevated nitrates" (Benton Conservation District 2015). This study was followed up with the 2017 *Groundwater Nitrate Characterization Report* (EA West), which includes a description of geology, hydrogeology, and elevated nitrate risk areas throughout Benton County, along with potential sources and suggested management and mitigation actions.

4.5.3 Current Trends

4.5.3.1 Surface Water

Current trends regarding protection of rivers and creeks continue to improve. Regulatory requirements such as the GMA, Shoreline Management Act, and federal and state water quality laws require protection of these resources. Problems are recognized as essentially "watershed-wide," cumulative, and more complex than can be dealt with by the State unilaterally, or by individual jurisdictions, even if they "coordinate" efforts. Efforts continue both for the Columbia and Yakima river basins to address water management to meet in and out of stream needs and manage hydropower operation. The Columbia River Treaty renegotiations may further modify operations on the Columbia River, and this could impact river uses and how flow is managed for fisheries and out of stream water uses. Additionally, climatic variation could affect the levels of snowpack in the upper Columbia River and, in particular, in the lower elevation mountains of the Yakima River, and the associated timing of runoff, further potentially impacting the amount of water available for fish, farms and cities in the spring and summer months, and existing and future drought resiliency.

What is required in the Yakima River Basin is an integrated plan covering all aspects of water and land use that potentially impact water quantity and quality. In 2013, the U.S. Bureau of Reclamation signed a Record of Decision for the Yakima Integrated Plan, a 30-year, $3.8 billion program to restore the Yakima River System and accommodate agricultural, municipal, and domestic needs (USBR 2013). The Yakima River Basin occupies portions of Benton, Kittitas, Klickitat, and Yakima counties. Since that time, state and federal funding has been obtained to implement several projects to improve conditions within the Yakima River Basin under the Yakima Integrated Plan.

4.5.3.2 Groundwater

Regionally, the trend is one of declining ground water levels in lower aquifers and declining water quality in both the upper and some of the lower aquifers. This regional phenomenon is largely attributed to expansions in the amount of acreage under irrigated agricultural production, along with other anthropogenic factors. Specific areas are identified and evaluated in the 2017 study by EA West on groundwater conditions in Benton County.

4.5.4 Future Considerations and Water Resource Management

The protection and management of water resources is expected to continue under the County's CAO, SMP, and the VSP, along with regional management plans including the Yakima Integrated Plan and various salmon recovery plans. Implementation of watershed-level management programs such as the Yakima Integrated Plan will help to address water supply issues in the region, particularly during drought conditions, and improve flows and habitat conditions for fish.

The purpose of the water resource guiding principles, goals, and policies in this Comprehensive Plan are to guide Benton County as it interacts with the federal government, Washington State, external local government agencies, and residents throughout Benton County. The principles and policies herein will provide a guide for Benton County elected officials and staff in addressing water and water-related responsibilities and issues affecting Benton County.

It is the intent of Benton County to protect the quantity and quality of water resources for the many uses that make Benton County a desirable place to live, now and in the future.

4.5.4.1 Guiding Principles

Following are the guiding principles and beliefs the County will consider in addressing water resource issues:

1. Support and promote sustainable water resource management. Sustainable water resource management will allow for the preservation of current economies, population growth with improved quality of life, and future economic expansion and diversification, all while protecting the quality and quantity of water necessary to support and enhance native fish and wildlife.
2. Use water resources to promote economic and social wellbeing in concert with reasonable environmental objectives. There must exist a realistic balance among water use benefits and economic costs.
3. Focus on improving water resource management at all jurisdictional levels by supporting the efforts of municipal and special purpose governments within Benton County and a legislative agenda at the federal and state level. Though limited in some geographical areas, water resources physically exist within most areas in Benton County to meet current and future needs. Effective water management and innovative strategies are required to allow beneficial use of these water resources.
4. Intervene in state and federal decision-making processes as required to promote the best interests of the citizens of Benton County. This intervention may include policy, planning, administrative, and legal processes.
5. Support sustainable water resource management in rural and municipal areas and take a leadership role in unincorporated areas. Work with municipalities to develop joint standards in unincorporated UGAs.
6. Maintain policies that support the belief that a water right is a property right.
7. Develop county regulations and policies in full consultation with local governments that support federal and state regulations where they meet the needs of the local population and municipalities.
8. Support securing long-term, sustainable water supplies sufficient to realize the build out of the land uses designated in the Comprehensive Plan as well as the Hanford Comprehensive Land Use Plan.

9. Maintain good working relationships with water users upstream and downstream from Benton County.

4.5.5 Focus on the Yakima River Basin

4.5.5.1 Yakima River Basin Water Rights

A large portion of the Benton County irrigated agriculture within the Yakima River Basin, including both the Kennewick (KID) and Roza (Roza) irrigation districts, receives irrigation surface water through the U.S. Bureau of Reclamation's Yakima Project. Roza and KID have 1905 water rights that are junior and subject to pro-rationing in droughts and other low water years. In years of drought these supplies are curtailed to an amount that is based upon total water supply available. Roza only received 47 percent of its supply in the 2015 drought, and KID also had a reduced supply. These reduced supplies can have significant impacts on crops and the regional economy.

The Yakima River Basin has been involved in a water rights adjudication process for more than 40 years. The adjudication and other state and federal court decisions have determined that water supply in the Yakima River Basin is over appropriated. Ecology settled with the U.S. Bureau of Reclamation and the Yakama Nation in the late 1990s over proposed groundwater permits in the Blackrock area and Rattlesnake Ridge. In September 2011, the U. S. Geological Survey released the final report of a 12-year, multi-million-dollar study confirming that some groundwater and surface water are directly connected, which means some groundwater withdrawals have the potential to impair senior surface water rights.

Ecology, in cooperation with the U.S. Bureau of Reclamation and the Yakama Nation, has determined that groundwater management in some areas may need to occur in order to protect senior water rights, flows for fish, and economic development. Ecology has stated they will seek solutions that address uncertainty and exposure faced by existing post-1905 groundwater users. In seeking water management solutions, Ecology will build upon the broad-based support for the Yakima Integrated Plan (Ecology 2017).

4.5.5.2 Yakima River Basin Integrated Water Resource Management Plan

The Yakima Integrated Plan (Ecology and USBR 2011) was developed by a diverse Work Group made up of tribal, federal, state, local, private, and nonprofit entities to address a variety of water resource and ecosystem problems affecting fish passage and habitat and agricultural, municipal, and domestic water supplies. The Yakima Integrated Plan provides a balanced approach to address water shortages through increased water storage, enhanced water conservation, water marketing, and better use of existing infrastructure. The Yakima Integrated Plan also improves the overall ecological integrity of the Yakima River Basin by protecting and enhancing riparian and headwaters habitat, providing fish passage at reservoirs, and making targeted land acquisitions on a willing-seller basis.

The Yakima Integrated Plan includes seven elements: reservoir fish passage, structural and operational changes to existing facilities, surface water storage, groundwater storage, habitat/watershed protection and enhancement, enhanced water conservation, and market reallocation. Benton County supports the seven elements of the Yakima Integrated Plan and efforts by Kennewick Irrigation District and Roza Irrigation District to secure water supply during drought conditions to reduce drought impacts. The County supports other efforts in the Yakima River Basin and in the lower Yakima River to improve water supply, flow, and habitat conditions, including improving water quality.

4.5.5.3 Addressing Exempt Wells to Meet Long-term Growth Needs

The County recognizes the need for developing and implementing a long-term strategy for addressing permit exempt wells needed to support rural development consistent with State law (RCW 19.27.097, RCW 58.17.110, and others), meet the goals of the Comprehensive Plan and Yakima Integrated Plan, and ensure future domestic water supplies (see Section 3.7 for Population Projections) are both physically and legally available for water withdrawal.

Demand for water to serve the County's growing urban and rural areas is projected to significantly increase. Since surface waters within the Yakima River Basin are over appropriated, dependence on groundwater for domestic uses is likely to continue. To sustain growth, residents of Benton County must meet the ongoing challenge of protecting and managing our water resources.

It is understood that some surface and ground water in the Yakima River Basin are hydrologically connected. Rural domestic water supply is generally provided from groundwater sources (i.e., private wells). The withdrawal of water from groundwater sources hydrologically connected to surface water may have an adverse impact on senior water rights established before and including 1905.

4.5.5.3.1 Exempt Wells Legal Framework

RCW 90.44.050 provides for the supply of rural domestic water through the use of "exempt wells," which can pump up to 5,000 gallons per day for residential use. The permit well exemption also allows pumping of 5,000 gallons per day for industrial use, 5,000 gallons per day for irrigation up to half an acre, and an unlimited amount for stock water purposes. Permit exempt groundwater withdrawals do not require a water right permit. However, to the extent the groundwater is beneficially used, the water user withdrawing groundwater under the exemption establishes a water right that enjoys the same privileges as a water right permit or certificate obtained directly from Ecology. Though such withdrawals are "permit exempt," they are still subject to Washington State law regarding the seniority of water withdrawals. Water use of any sort is subject to the "first in time, first in right" clause, originally established in historical western water law and now part of Washington State law. This means that a senior right cannot be impaired by a junior right. Seniority is established by priority date–the date an application was filed for a permitted or certificated water right or the

date that water was first put to beneficial use in the case of claims and exempt groundwater withdrawals. Although exempt groundwater withdrawals don't require a water right permit, they are subject to state water law.

In some instances, Ecology has had to regulate, stop, or reduce groundwater withdrawals when they interfere with prior or "senior" water rights, including instream flow rules. Recent state court decisions on the requirements of the GMA and County land use plans have resulted in a duty for Benton County to ensure that water for development is legally and physically available.

Closure of the portions of the Yakima River Basin to exempt well construction has already occurred in Kittitas County, which in turn has had effects on the development patterns and a large effect on the value and marketability of legal lots which can now only be developed with the use of a mitigation program for exempt wells operated by Kittitas County. Benton and Yakima counties face similar risks. Benton County is committed to taking the necessary steps to secure future domestic water supply and associated mitigation for projected rural population growth.

4.5.5.4 Developing a Yakima River Basin Rural Water Supply Program

Benton County understands that groundwater withdrawal may have effects on Yakima River Basin senior water rights, including the Yakama Nation Water right for protecting fish. Thus, the potential effects of future groundwater withdrawals within the Yakima drainage on senior water users and habitat conditions will be addressed in the next several years by the County. This work will include identifying mitigation strategies for providing water for rural development in the basin, while avoiding impacts to flows in mainstem reaches and the few Yakima River tributaries that exist in Benton County. The specific next steps planned for Benton County include:

1. Confirming baseline groundwater conditions
2. Developing future growth projections and water demands for future groundwater supply
3. Developing mitigation strategies
4. Formulating the County rural water supply program for areas that will be served through permit-exempt wells, including considering policy options and selecting elements for the establishment of the rural groundwater supply program in Benton County, to ensure water supply risks are mitigated for the next 20 to 50 years, and beyond if possible

The County will complete this work in coordination with Ecology, the Yakama Nation, the U.S. Bureau of Reclamation, and stakeholders in the County and Yakima River Basin.

4.5.6 Columbia River

The County will comply with the 2018 law passed by the Washington State Legislature addressing rural exempt well development for the portion of the County that drains to the Columbia River.

4.6 Critical Areas

Critical areas include ecosystems, landforms, or processes that are protected or enhanced under the GMA for the biological or physical functions and values that they provide. Critical areas are located throughout Benton County.

According to RCW 36.70A.030, the five critical areas protected by the GMA include:

- Wetlands
- Critical Aquifer Protection Areas
- Frequently Flooded Areas
- Geologically Hazardous Areas
- Fish and Wildlife Conservation Areas

Many critical areas provide habitat for species listed as threatened, endangered, sensitive, or candidates by the federal or state government. Figures 8 through 13 of Appendix A: Map Folio depict the general location of critical areas in Benton County. The key functions and values provided by the five critical areas in the County can be summarized into the following four major functions: 1) water quality; 2) hydrology; 3) soil; and 4) habitat. Each critical area provides one or more of these key functions and values, which are summarized in Table 4-1.

Table 4-1
Critical Area Functions

Critical Areas	Key Functions			
	Water Quality	Hydrology	Soil Health	Habitat
Wetlands	●	●		●
Critical Aquifer Recharge Areas	●	●		
Frequently Flooded Areas	●	●	●	●
Geologically Hazardous Areas (Erosion)	●	●	●	●
Fish and Wildlife Habitat Conservation Areas	●	●	●	●

The following includes a description, current trends, and future considerations for each of the critical areas. Section 4.6.6 includes additional information on the VSP and the intersection of critical areas with agricultural lands.

4.6.1 Wetlands

4.6.1.1 Existing Conditions

Wetlands in Benton County are concentrated within the floodplain of the Yakima and Columbia rivers. Similar to stream flows, irrigation drainage may contribute to wetland conditions in some

areas where wetland conditions did not historically occur. Many wetlands have formed adjacent to irrigation conveyance systems and in low-lying areas where irrigation occurs (see Appendix A: Map Folio, Figure 9 – Wetlands, River, and Streams). A wetland is considered artificial, and not subject to state or local regulation as a wetland, only if it meets both of the following characteristics:

- Intentionally created
- Formerly non-wetland (upland) site

In irrigated agricultural areas, wetlands can result from localized conditions (e.g., a leaking irrigation ditch) or from a region-wide rise in groundwater resulting from regional irrigation projects. These types of wetlands are regulated by state wetland law and cannot be filled or drained without appropriate permits and mitigation (Ecology 2010). However, if the irrigation practices that led to the incidental wetland creation are changed (for example through implementation of water conservation practices), and the wetland dries up and no longer performs wetland functions, then no mitigation is required (Ecology 2010).

4.6.1.2 Current Trends

The current regulatory trend is for the protection of wetlands as a resource vital to sustaining biological productivity and water quality.

Within Benton County, the most noticeable trend is the gradual loss of artificial wetlands resulting from water conservation projects by irrigation districts and more efficient irrigation practices by farmers. Though there is no clear evidence of it to date, if the result of these efforts is to leave more water in the rivers as instream flow, then the natural wetlands along the riverine corridor should benefit.

4.6.1.3 Future Considerations

By both policy and ordinance, the Comprehensive Plan protects natural wetlands from non-agricultural developments. It also protects previously unfarmed wetlands from new agriculture. It is expected that the database for wetlands within the County will be improved over time and that such resources will be protected consistent with the requirements of state law and local interest.

4.6.2 Critical Aquifer Recharge Areas

4.6.2.1 Existing Conditions

The Columbia River basalts of the Columbia Plateau provide a locally important aquifer system. Within the lower Yakima River Basin, from the western County border east to Horn Rapids, the mainstem channel of the river flows through a relatively narrow inner valley of basalt bedrock covered with an unknown thickness of coarse alluvium. Downstream from Horn Rapids, the river flows through the broad alluvial fill of the Columbia River.

Within Benton County, the majority of wells and wellhead protection areas (Appendix A: Map Folio, Figure 10 – Critical Aquifer Recharge Areas) are concentrated along the Yakima River Valley and in the incorporated cities of Richland and Kennewick. Other Group A water system wells are located near irrigated lands in the southern portion of the County near Paterson. Studies have found nitrate concentrations exceeding drinking water quality standards in shallow wells in eastern and southern Benton County (WSIGC 1996; Ecology 2016). Based on the number of wells and the percentage of wells exceeding 10 milligrams per liter of nitrate, Ecology identified eastern Benton County as one of the top ten nitrate priority area candidates for improved water management within Washington. Actions implemented under the VSP, along with other management measures can help to prevent further degradation and potentially improve conditions.

4.6.2.2 Current Trends

Nitrate contaminations occur principally in upper aquifer wells drilled in the lower lying areas of the County. The spatial correlation between elevated concentrations of nitrates in groundwater and irrigated lands indicates that the major source of contamination is applied fertilizers on irrigated lands including crops, lawns, golf courses, and parks.

A complicating factor in the nitrate picture is evidence that suggests currently seepage from irrigation district canals actually serves to dilute what would otherwise be higher nitrate levels within groundwater (USGS 1993). As federal and State sponsored conservation projects reduce or eliminate this seepage, nitrate concentrations in the upper aquifer may actually rise.

4.6.2.3 Future Considerations

The protection and management of critical aquifer recharge areas in and around Benton County should continue to reduce pollution and maintain water storage levels for future use.

Benton Conservation District is also leading efforts to improve groundwater conditions through additional management measures. The Conservation District has been collecting sampling data from approximately 200 groundwater wells throughout the County to identify the influence of potential nitrate sources or nitrate dilution sources, as well as seasonal fluctuations in nitrate levels (Benton Conservation District 2015). These efforts are helping the County to build a more effective and targeted management program, including developing a stakeholder group, supporting a public health campaign and outreach activities, and implementing groundwater quality improvement efforts countywide, as documented in a 2017 report (EA West) and described in Section 4.5: Water Resources.

4.6.3 Frequently Flooded Areas

4.6.3.1 Existing Conditions

There are several types of landforms in Benton County that are subject to flood hazards. Most notably, the low-lying lands along the Yakima River flood significantly under varying winter and spring conditions. However significant flooding and flood damage can occur off the river as well in the Yakima's tributary streams, "dry" canyons, and other natural drainage features throughout the County, which are susceptible to "flash floods" or heavy run-off from snow melt.

The entirety of the Yakima River is mapped as a floodplain and floodway. The floodplain of the Yakima River is widest downstream (east) of Benton City. Floodplains are also mapped along the Columbia River, particularly in the northwest corner of the County, along the southeast near Kennewick and Richland, and along the south side of the County. Designated floodplains are shown in Appendix A: Map Folio, Figure 11 – Frequently Flooded Areas.

Flood areas pose constraints to development because construction within them can put both life and property at risk and require frequent and recurring expenditures of public and/or private funds for the repair of public and private property.

The most damaging floods in Benton County are associated with the Yakima River. This is because Benton County is the most downstream county in the entire Yakima River drainage, which contains 6,155 square miles, or four million acres, and the basin has limited flood control facilities. Annually, the snowpack on the east side of the Cascade Range melts and passes through Benton County within a river channel ("floodway") that is in some places less than 60 feet across. Depending upon the size of the snowpack, the rate and timing of its melt, and the ground conditions within the watershed, the lower Yakima River floodway may or may not be sufficient to carry the flow. When it is insufficient to carry the flow, water leaves the floodway and moves overland onto the floodplain.

If the snowpack melts gradually over the spring months the river channel may be full, but not flood. However, if a warm Chinook wind melts a portion of the snowpack in January, while the river and ground in Benton County are still frozen, the melt water will reach its ice clogged channel and leave the river to spread overland; or if warm temperatures come suddenly in early spring the entire watershed may thaw simultaneously and inundate the lower river valley.

The areas along the lower Yakima in Benton County are especially vulnerable to flooding annually and extend from Benton City downstream through West Richland to the delta where the Yakima empties into the Columbia River. This area is characterized by low-lying river bottom lands and ancient river channels which are historically the river's natural floodway and floodplain.

4.6.3.2 Flood Management

One of the products of the Federal Emergency Management Agency's (FEMA) flood insurance program has been the mapping of flood hazard areas throughout the nation. The primary area of concern in this effort has been the 1% annual chance floodplain (formerly known as the 100-year flood hazard area). The 1% annual chance floodplain has been adopted by FEMA and, by extension, the County as the base flood for purposes of floodplain management measures.

Encroachment on floodplains, such as placing artificial fill, reduces the flood-carrying capacity and increases flood heights, thus expanding the area susceptible to flooding and increasing flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard.

For purposes of the National Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1% annual chance floodplain is divided into a "floodway" and a “floodway fringe.” The floodway is the channel of a river, plus any adjacent floodplain areas that must be kept free of encroachment to carry the 1% annual chance floodplain without substantial increases in flood heights. As a minimum standard, the Federal Insurance Administration limits such increases in flood heights to one foot, provided that hazardous velocities are not produced.

The area between the floodway and the boundary of the 1% annual chance floodplain is termed the "floodway fringe." The floodway fringe thus encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 1% annual chance floodplain more than one foot at any point.

4.6.3.3 Current Trends

The maximum known flood of the Yakima River occurred in December of 1933, with a depth of approximately 9.5 feet above the top of the riverbank at Benton City. Its estimated recurrence interval is approximately 170 years. Severe flooding of the Yakima River recently occurred in 1996, resulting in the largest and most devastating floods in recent history. More recently, flooding occurred in 2015 and 2017 in parts of Benton County. The likely trend is for the frequency and magnitude of floods within the lower reaches of the Yakima River to stabilize or even reduce as the upper watershed restores natural storage capacity through levee setbacks, watershed restoration, and other measures.

4.6.3.4 Future Considerations

Any new development located within the floodway will be reviewed by Benton County to meet current FEMA and BCC Title 15 development standards.

4.6.4 Geologically Hazardous Areas

4.6.4.1 Existing Conditions

Geologically hazardous areas encompass channel migration zones, steep slopes with moderate to severe erosion potential, landslide hazard areas, and seismic hazard areas. Channel migration in the Lower Yakima watershed is limited by a low gradient (average one percent gradient in the lower 47 miles of the river; BERK Consulting 2017) and geologic and structural controls in the eastern portion of Benton County. Similarly, the geology and topography of the Columbia River in Benton County, combined with dam regulations and shoreline stabilization measures, substantially limit channel migration.

Although the Department of Natural Resources identifies few landslide hazard areas within Benton County, steep slopes with erodible soils intersect agricultural areas along the northern face of the Horse Heaven Hills and eastern drainages within the Rock-Glade watershed, including along the Columbia River shoreline at Wallula Gap. Steep slopes with erodible soils are also mapped as intersecting rangelands in the northwestern (Blackrock) portion of the County. See Appendix A: Map Folio, Figure 12 – Geologically Hazardous Areas for steep slopes and erosion hazard areas mapped within Benton County.

Steep sloped areas have the potential for mass movement and slope erosion hazards. Mass movement is the movement of rock or soil material down slope in response to gravity. Slope erosion is the removal of soil or weathered bedrock that occurs as a result of sheet wash (no conspicuous channels), rill erosion (numerous small rivulets), or gully erosion (larger, more nearly permanent channels).

Steeply sloped and unstable geologic structures pose a constraint to development because associated developments require more expensive design and engineering work. Additionally, a much greater land area per structure is necessary on steep slopes. Left in their undeveloped condition, the opportunities provided by these resources range from aesthetic (visual), to open space (for recreation), and, for basalt outcroppings and steep canyons, important habitats (nesting areas for birds of prey).

Slopes of fifty percent can be found in both the Rattlesnake and Horse Heaven Hills. Due to the unique problems inherent in developing steeply sloping areas, special care must be exercised in the planning and development of such areas.

4.6.4.2 Current Trends

As land use intensifies over the landscape with agriculture and residential developments competing for ground, and as higher income households target view lots on slopes and ridges, new residential

developments will increasingly occupy the more geologically difficult terrain. These are the areas which present problems associated with geologic hazards.

4.6.4.3 Future Considerations

Future development should be consistent with the Benton County CAO in BCC Title 15.

4.6.5 Fish and Wildlife Conservation Areas

4.6.5.1 Existing Conditions

Shrub-steppe and riparian habitat

Due to the arid nature of Benton County, many streams classified by mapping as streams are dry washes that follow topographic lows and only transport water during large runoff events and therefore are not conducive to aquatic species habitat. Outside of irrigated areas, only streams modeled as greater than 7th order are likely to carry stream flow (even on an intermittent or ephemeral basis) and, in irrigated areas, streams that are greater than 3rd order are likely to carry at least ephemeral flows (BERK Consulting 2017). Often the source of water for flow in streams in the County is from irrigation as many otherwise dry washes are used for irrigation water conveyance as part of an irrigation district system. Per RCW 36.70A.030(5), fish and wildlife habitat conservation areas do not include artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company. Field evaluation would still be necessary to verify stream occurrence at the site scale. Additionally, anadromous fish in Benton County use the Yakima and Columbia rivers to migrate, spawn, and rear. Anadromous salmon spawning is documented in some tributaries to the Yakima and Columbia rivers. See Appendix A: Map Folio, Figure 9 for a map of streams and rivers within the County.

Shrub-steppe habitat is identified as a priority habitat in the County. The Blackrock area, which consists of a patchwork of private and publicly owned lands used predominantly for rangeland agricultural activities, is of significance for shrub-steppe habitat conservation. Additionally, State-threatened ferruginous hawk is of importance on agricultural lands. See Appendix A: Map Folio, Figure 13 for mapped priority habitats within the County.

Several managed and protected fish and wildlife habitat areas are located in the County as described below:

Umatilla National Wildlife Refuge. The Umatilla National Wildlife Refuge is intensively managed to provide habitat for migratory birds and resident wildlife. Management practices include restoration

of wetlands, manipulation of seasonal wetlands to encourage native food supplies, farming, prescribed burning, native planting in riparian areas, removal of exotic weed species, and planting native grasses in upland areas. Approximately 1,400 acres of refuge lands are irrigated croplands which provide food and cover for wildlife. Local farmers grow corn, wheat, alfalfa, and other crops under a cooperative agreement whereby the refuge's share of the crop is left in the field for wildlife.

McNary National Wildlife Refuge. Established in 1956, the McNary National Wildlife Refuge was created to replace wildlife habitat lost to construction of the McNary Dam downstream. The 15,000 acres of sloughs, ponds, streams, and islands include islands north of the City of Richland. Seasonal wetlands are managed to promote diverse wetland plant growth. Upland areas are managed with prescribed burning, removal of exotic weed species, and planting of native grasses. Native willows and cottonwoods are planted in riparian areas. Approximately 700 acres of refuge lands managed in agriculture specifically provide waterfowl with winter forage opportunities.

Barker Ranch. Barker Ranch is approximately 2,400 acres of alluvial and glacial floodway and floodplain with extensive riparian shoreline and wetlands that are a product of variously applied water, upwelling from subsurface hydrology, and seasonal river flooding. The ranch is located within the Yakima River migration zone primarily on the north side of the river extending up and down river from the Twin Bridges and the intersection of Snively and Twin Bridges roads. The north boundary is the Horn Rapids Ditch, the south boundary is the ordinary high-water line at the north side of the Yakima River. Today under the federal Wetland Reserve Program easement, approximately 1,865 acres of the ranch is under permanent conservation easement, with waterfowl and habitat production the primary management objectives. Limited grazing continues under a grazing management plan that is wildlife and habitat driven rather than cattle driven.

Hanford Reach National Monument. In 2000, the Hanford Reach National Monument was established by Presidential Proclamation to protect, preserve, and expand critical shrub-steppe habitat and other cultural and biological resources.

4.6.5.2 Current Trends

The current trends relative to sustainability of fish and wildlife resources in Benton County is a mix of success and failure. On the successful side, the Hanford site, occupying five percent of the County's land area is a large and functional habitat area of indigenous biological resources. Under federal ownership for the past 50 years, it has been left untouched by the far-reaching developments that have converted the off-site landscape. The shrub-steppe and wetlands complex of the Wahluke Slope to the north of the Columbia River and the U.S. Army's Yakima Training Facility to the west add hundreds of additional square miles of indigenous habitat, potentially "connectable" as a single unit.

Within the lower, flood prone reaches of the Yakima River, where private development is relatively sparse and large acreages are within local or federal ownership, a rich riverine environment of

islands, wetlands, braided channels, and back water provide lush habitat and breeding and nursery areas for aquatic species.

Additionally, shore lands owned by the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service in the south of the County along the Columbia river's hydroelectric pools provide significant fish and wildlife resources.

In contrast, biological resources generally found outside of the Hanford Site experience pressure from development, farming, recreation, and other activities, specifically, native shrub-steppe habitat that is being eliminated by the expansion of urban and agricultural developments. Additionally, the Yakima River's anadromous and resident fisheries are threatened by poor water quality due in large part to non-point source pollution combined with low summer flows. Overall, outside of publicly held lands, the current regional and local trend further threatens biological resources and wet environments as habitat through development and land conversion, including on Department of Natural Resources lands in eastern Washington.

The continuing loss of biological resources is evidenced by fragmentation of natural habitat, declining water quality, and the growing number of terrestrial and aquatic species listed as candidate, threatened, and endangered by the federal and state governments.

Within the larger watershed, there are also sub-trends. For example, there are projects for the conservation of surface water resources by irrigation districts under federal and state sponsored water conservation projects. The typical project is the lining or piping of antiquated irrigation water delivery infrastructure to reduce leakage loss. Additional programs seek to reduce the total of "applied" water. The impact of these programs is likely to be improved flow and water quality in river mainstems and tributaries, while eliminating the significant acreage of wetlands created by conveyed or applied water run-off.

4.6.5.3 Future Considerations

As the trend to convert raw land continues, fragmentation of natural habitats will further reduce biological productivity and diversity. Remaining productive terrestrial and aquatic habitats will be confined largely to floodways and floodplains, canyons, undevelopable terrain, undeveloped areas designated "Rural" on the Land Use Plan Map, and on lands in government ownership (other than Washington Department of Natural Resources).

Maintaining public holdings, because of their size and uncomplicated ownerships, holds promise for successfully protecting eastern Washington's natural wildlife heritage. The acreage of these holdings may be augmented by private lands protected and enhanced through the VSP and other programs.

Actions for protecting habitats on public lands should be pursued under a federal, state, and local partnership, with non-impactive recreational uses a goal secondary to wildlife protection:

- Conserve suitable acreages of existing public lands for habitat purposes, augmented where needed by additional purchases, exchanges, conservation easements to "connect" large tracts of habitat into functional systems.
- Apply and monitor for effectiveness regulatory provisions to protect and enhance near-shore riverine and wetland environments.
- Apply water conservation standards to non-farm developments.
- Increase upper watershed storage capacity to provide additional low season flows and reduce the competition between in- and out-of-stream uses for available water supplies.
- Encourage land use practices that eliminate or significantly reduce non-point source pollution.
- In concert with state resources agencies, undertake local educational outreach programs including grant monies for demonstration projects on private lands associated with sensitive resource issues.

4.6.6 Voluntary Stewardship Program

Cattle grazing below shrub-steppe and cliffs and bluff habitat

In 2011, the Legislature amended the GMA with the intent to protect and/or voluntarily enhance critical areas in places where agricultural activities are conducted, while maintaining and improving the long-term viability of agriculture. This amendment established the VSP, a new, non-regulatory, and incentive-based approach that balances the protection of critical areas on agricultural lands, while promoting agricultural viability, as an alternative to managing agricultural activities in the County under the Critical Areas and Resources Protection Ordinance.

Agricultural lands mostly have small intersections with critical areas in Benton County. Frequently flooded areas, geologically hazardous areas, and wetlands all have less than a 2 percent intersection with agricultural lands. Most critical aquifer recharge areas have small intersects with agricultural areas (less than 2.5 percent of agricultural lands); only areas with alluvial parent material or hydrologic soil group A have a moderate intersect (12.7 percent of agricultural lands). Fish and wildlife habitat conservation areas have the largest intersect (22.1 percent of agricultural lands). The Benton County VSP Work Plan (draft) provides additional information regarding the intersect of agricultural lands with critical areas (BERK Consulting 2017).

4.6.6.1 Future Considerations for Critical Areas Under the Voluntary Stewardship Program

Critical areas goals and protection benchmarks are included in the VSP Work Plan as measures that may be taken by agricultural producers to protect and/or enhance critical areas functions and values through voluntary, incentive-based measures. The plan is currently under development and the draft goals and protection benchmarks are provided as future considerations for each of the critical areas below. These goals and protection benchmarks may be updated as the Work Plan is finalized with the Work Group in coordination with Benton County.

- Wetlands
    - Manage runoff and erosion associated with agricultural activities through voluntary maintenance of conservation practices.
    - Maintain riparian vegetation to support biofiltration and bank stability in areas of agricultural intersect through voluntary practices, including managing livestock access to streams and wetlands.
    - Manage invasive species in and around wetlands, and maintain native species diversity.
    - Encourage voluntary enhancement of surface water quality in streams, wetlands, and agricultural drains in hydrologic study areas.
- Critical Aquifer Recharge Areas
    - Protect groundwater recharge in areas of declining water tables or where recharge can help maintain base flows for rivers and streams.
    - Maintain practices that limit leaching of nitrogen and other contaminants into groundwater.
    - Encourage implementation of groundwater recharge by passive infiltration or direct injection.
    - Promote voluntary on-farm water conservation practices, such as irrigation water management and efficient irrigation systems in areas with agricultural wells.
    - Promote voluntary conservation practices that minimize leaching of nitrogen and other contaminants into groundwater.
- Frequently Flooded Areas
    - Maintain floodplain connectivity in areas of agricultural intersect.
    - Maintain or reduce hazards to physical safety associated with flooding. New agriculture in floodplains should not require alterations that diminish floodplain functions or increase safety risks.
- Geologically Hazardous Areas
    - Maintain integrity of steep slopes in areas of agricultural intersect through the following:
        - Avoid increases in erosion
        - Avoid steep slopes or help to stabilize steep slopes where practical

        - Avoid irrigating unstable slopes
- Fish and Wildlife Conservation Areas
    - Maintain shrub-steppe habitat through voluntary management and protection measures, examples include, but are not limited to the following:
        - Timed/less intense grazing at appropriate times
        - Native vegetation propagation
        - Advanced fire protection strategies, including managed grazing and maintaining firebreaks
        - Voluntary protection of set-asides (e.g., easements, acquisition, federal conservation programs, and other strategies)
    - Manage invasive species on agricultural lands and maintain native species diversity.
    - Promote voluntary measures to enhance shrub-steppe habitat and shrub-steppe corridors with the first priority being basins where the benchmark of shrub-steppe protection of functions and values is at risk of degrading compared to baseline. Within basins, enhancement opportunities should first include current blocks and currently utilized corridors and then historical or likely suitable corridors that could be established or renewed.
    - Encourage diversity of native grasses in place of cheatgrass to promote resiliency.

5 Economics Element

5.1 Introduction and Purpose

The purpose of the Economic element is to synthesize the various components within the Comprehensive Plan that relate to current and emerging land use, growth, and economic issues into a summary from which deliberate and sustained action toward economic objectives can be formulated and pursued. A strong diversified economy provides a high quality of life for the citizens of Benton County and the region. This in turn, generates the resources through which local governments provide for the health, safety, and welfare of its citizens. The Economic element has been developed to provide direction and specific actions consistent with other plan elements, goals and policies (Section 2.6), and the *2017 Comprehensive Economic Development Strategy* for Benton and Franklin counties (BFCG 2017a). The *2017 Comprehensive Economic Development Strategy* is designed to create employment opportunities, improve local conditions, foster more stable and diversified local economies, and provide a mechanism for guiding and coordinating the efforts of local organizations and individuals concerned with the economic development of this area.

The economy in the region has been largely dependent on federal funding for Hanford projects. Employment in the Hanford area decreased in the last few years as part of federal spending cuts. This decrease was part of a region-wide decline in employment from 2012 and 2013 and the end of ARRA funding. However uncertain the employment in the Hanford area is, it still plays a vital role in the County's regional economy.

5.2 Hanford Nuclear Reservation

The establishment of the Hanford Reservation in 1943—just a decade or so after irrigation and reclamation district water began to make a difference in farming profitability—instantly transformed the local economy from uni-modal to bi-modal, i.e., agriculture outside the site and defense related construction and activities on the site.

At first glance, this instant transformation to a bi-modal economy in 1943 would appear to be a "pump primer" for the more complex and diversified urban economies that naturally grow out of resource based communities. However, the reality is that the circumstances of the development of the Hanford Reservation, such as the secret and hazardous nature of its federal projects, the non-exportability and limited marketability of its product, its transient work force, chaotically inflating and deflating funding cycles, and the high wage and benefits scale of Hanford workers relative to private sector employment, actually served to discourage local private sector investment (not dependent on Hanford), other than housing and retail/service.

Consequently, for the almost 50 years of Hanford's nuclear defense mission, the non-farm leg of the local economy did not grow much beyond its narrow beginnings as a federally funded public works

project with its off-site "bedroom" communities and a service sector. The typically gradual processes whereby urban communities weave a rich and stable socio-economic fabric did not occur in the non-farm sector during the Cold War years.

This situation remained until the end of the Cold War in the late 1980s, which enabled a new mission of cleanup of the Hanford Site. The current mission of waste cleanup is fundamentally different in scope, purpose, and effect, driving new science and technologies that are often marketable worldwide.

The local economy, however, is still largely dependent on Hanford, especially in the Tri-Cities area. For example, a Hanford work force of approximately 12,000 in 1990 ballooned to 18,100 workers in 1994. This accounted for 19.5 percent of Tri-Cities employment and 38 percent of all payroll income in the Tri-Cities (SWOT 1996). The local economy was less impacted by the recession in 2008 than the rest of the nation due to the increase in employment at Hanford and the Pacific Northwest National Laboratory as part of the ARRA of 2009. The total output declined from $10.3 billion in 2010 to $8.6 billion in 2014, partly due to the end of ARRA and partly reflecting the national recession trends. However, more recent data have indicated that economic conditions have continued to improve over the past two years (Oneza & Associates 2017).

There has been a gradual reduction in the Hanford work force over time. A Tri-Party Agreement was signed in 1989 by the State of Washington, the Environmental Protection Agency, and the U.S. Department of Energy. This document sets forth Site cleanup objectives, projects, and milestones, which if funded by congress annually, does extend but gradually reduces Hanford employment levels as cleanup is achieved over time.

The Hanford area's B Reactor, consisting of historic facilities at Hanford, was authorized by Congress in December 2014 to be included in the Manhattan Project National Historical Park. The Hanford area and the Vernita Bridge area's public access to recreational facilities attract Hanford based tourism in the region.

5.3 Existing Conditions

In large measure, current trends at the regional level indicate growth and resurgence of the region's historic economies (agriculture and food processing, water and rail transportation for commerce). Additional trends that are related to historic activities and the natural resource base of this area are agri-tourism, anchored by an emerging viticulture (wine) industry and specialty crop farming and retailing, and visitor-serving commercial and recreational activities, with the center attractions being the riverine environments at the confluence of the Snake, Columbia, and Yakima rivers in the Tri-Cities. The trend on the Hanford Site is as been to open the site for a much broader range of uses

and activities than what was permitted under the old Cold War mission of weapons grade plutonium production, which ended in 1989.

A presentation of the history of the County's economic foundations of natural resource trade and commerce as it has evolved, and as it may be applicable to emerging economic opportunities and trends in Benton County and the region, occurs in the Land Use element (Chapter 3).

5.3.1 State and Regional Growth

As required by state planning law, the focus within this Element is on "regional" and even global economic issues. The Pacific Northwest region of the country is experiencing rapid population and economic growth. The state of Washington has been growing at an average of over 70,000 persons per year in the last decade and is projected to continue that pace. A regional growth trend can be seen in the Benton and Franklin counties' cumulative population growth shown in Figure 3-2. Benton County also continues to experience high levels of growth. In unincorporated Benton County, the farm economy has been very strong, with steady increases in "farm gate" and "value added" dollars, as well as employment numbers. Table 5-1 presents population and economic indicators in Benton and Franklin counties.

Table 5-1
Population Growth and Economic Indicators

County	Population[1]		Civilian Labor Force[2] (% of total population)	
	2010	2015	2010	2015
Benton	175,177	188,590	67.1	62.9
Franklin	75,500	87,150	63.8	75.0

Notes:
1. Washington State Office of Financial Management
2. U.S. Census Bureau

Notwithstanding the local effects from the Hanford Site, the regional focus is a natural one for the County, which is a "regional service provider." The local and regional history (the custom and culture) has been one of resource based commodities trade (fisheries, fur, livestock, agriculture, minerals, and hydroelectric power), and related regional road, water, and rail transportation.

The custom and culture is largely the same today, except that some technologies have evolved into their own industries (e.g., irrigation systems and technology), and productivity has increased. The transportation systems that move these products have also undergone changes in technology and scale; they now serve global markets.

Within the last decade there have been local economic spin-offs (e.g., agri-tourism) from these traditional economic activities and new regional economies (visitor-serving commercial and recreation), which have expanded economic opportunities locally.

Agriculture grew rapidly in the 1960s and 1970s as the Columbia Basin Project was completed. The associated growth was not only in agricultural production, but also in value-added areas such as food processing and chemical fertilizer development. Over the past 10 years, the region has again seen more growth in agriculture than all other industries in terms of total job creation. Between 2005 to 2014, agricultural growth has outpaced all other industries in Benton and Franklin counties, at a 2.5 percent growth rate compared to a 1.8 percent growth rate in all other industries (Suljic 2016). During the same period, agricultural employment increased from 9,352 jobs to 12,029 jobs. Major contributors to this growth are agricultural support activities (8 percent) and crop production (0.9 percent) employment growth rates (Suljic 2016).

Agricultural lands in Benton County

5.3.2 Benton County Economic Conditions

Based on the 2015 American Community Survey, the median household income in Benton County is $60,251 (U.S. Census Bureau 2015). The Washington State Employment and Security Department is forecasting all industries in Benton and Franklin counties to have a positive growth rate between 2014 and 2024. Short term non-farm growth is projected at 1.9 percent between 2014 and 2019 and 1.31 percent between 2019 and 2024 (Anchor 2016).

New specialty crop plantings have increased, along with innovations in harvesting, storage, and transport. Viticulture and agri-tourism continue to grow in the agricultural economy. Value added processing plants, as well as cold storage and transport facilities have been constructed.

Vineyards in Benton County

Both the County and its farm products remain advantageously situated to serve expanding Asian markets.

Table 5-2
Fastest Growth in Employment

Major Growth Sectors	Growth Rate Short Term (2014 - 2019)	Growth Rate Long Term (2019 - 2024)
Construction	2.99	0.81
Financial, professional, and business occupations	2.58	2.13
Education and health care	2.26	1.8
Leisure and hospitality	1.9	1.6
Wholesale trade	2.31	1.06

Source: Washington State Employment and Security Department (Suljic 2016)

5.3.3 Economic Diversification

Despite the above optimistic outlook in the eastern Washington region, the need remains to reduce the local non-farm economy's dependence on federal funding of Hanford projects. This must be done before those projects begin to wind down as cleanup milestones are completed, or before congressional budgetary considerations negatively affect project outlays. Meaningful strides toward a diversified local economy, independent of federal budgets for Hanford, have been made and these efforts must continue.

5.4 Summary of Economic Development Priorities

Items 1 through 9 on the following pages are currently the highest priorities for the commitment of County resources toward the objective of economic growth and development.

Though the items are shown as discrete economic activities, many in fact are naturally interrelated. For example, agriculture, agri-tourism, and visitor-serving recreational and commercial activities are mutually supportive and related, especially when located in the same geographic area of the County (e.g., the Tapteal Greenway and Red Mountain Wineries). These symbiotic relationships should be identified, facilitated, and encouraged for economic growth.

Each of the priorities listed is a "regional" activity. For example, vineyards and wineries dot the regional landscape of Benton, Franklin, and Yakima counties. The recently constructed viticulture center, the Walter Clore Wine & Culinary Center, in Prosser which showcases regional wines and wineries would be an appropriate project for County involvement.

Columbia Crest Winery in Benton County

All the priorities listed below should be pursued simultaneously, with the overall level of effort allocated to each at any point in time being a reflection of its timeliness and cost/benefit outlook. For example, the local opportunities and demands of an expanding rail and waterborne transportation system for global commerce, and linked to area agricultural commodities, is currently significant and will likely continue to increase.

Where appropriate, partnering with local jurisdictions and other private, public, and governmental entities for planning, public processes, and financing capital improvements is preferred.

1. Commodities, Trade, and Transport

Engage other public entities (e.g., the State of Washington, the federal government regarding Hanford and the Columbia River, and local port and utility districts) in planning for the provision of land and infrastructure capacities that anticipate the expanding demands of commerce, trade, and transport.

Locations: Opportunities for enhancing local employment through this economic sector exist in:

- The Ports of Benton and Kennewick properties and other properties within both urban and rural areas of the County

- The area in north Richland, recently transferred from the U.S. Department of Energy to the City of Richland, the Port of Benton, and Energy Northwest for industrial use

2. Agriculture, Processing, and Value-Added Industries

Assure through coordination with other public entities (e.g., the State of Washington, the federal government regarding Hanford and the Columbia River, and local port and utility districts) that the complexity of land and infrastructure resources necessary to support the expanding demands for agricultural products and food processing and value-added industries exists. Essential components are all season farm to market roads, utilities service, and multi-modal transportation access to processing, shipping, and storage areas; water resources for irrigation and processing; and industrial waste disposal facilities.

Locations: Opportunities to meet these needs exist in:

- Prosser industrial area
- Rural areas of the County next to agriculture production areas

Locational requirements that can be integrated with those of Priority No. 1 above should be fully maximized.

3. Agri-tourism

Work with agricultural and related interests whose focus is on visitors and tourism (e.g., specialty retail, wineries, breweries, bed and breakfasts, farmers markets) to assure that zoning, development standards, and improved road access facilitate such activities.

Locations: Commercial agriculture in Benton County is ubiquitous over the landscape; any farmer or resident may seek to engage in agri-tourism enterprises. There are, however, locations that provide notable opportunities due to location and/or the stated intent of the farmers to engage in agri-tourism. These are:

- The Prosser area, Wine Country Road, and Wittkopf Loop
- East of Benton City, in the Red Mountain AVA vineyards and wineries
- South Finley vineyards and orchards
- Paterson area vineyards and wineries

4. Visitor-Serving Recreation and Commercial

Develop County owned recreational lands and facilities, and implement recreational plans of the Comprehensive Plan, which will improve the quality of life for local residents and "spin-off" economic benefits to the local community from the regional visitor-serving and recreational economic sectors.

Integrate and connect County facilities with those of the cities, e.g., Rivershore Enhancement and the Tapteal Greenway.

Locations: Along over 100 miles of shoreline extending from the Vernita Bridge on the Columbia River and Benton City on the Yakima River to Hover Park in south Finley and further down river to Plymouth in south Benton County:

- The Tapteal Greenway in the lower Yakima River has the potential to connect Columbia Point to Benton City and Red Mountain via West Richland and Horn Rapids County Park (see discussion of the Tapteal Greenway in Chapter 8)
- Hover Park in South Finley, with intertie access, brings visitors to south Finely orchards and vineyards
- Two Rivers Park in Finley
- Vernita Terrace and through the Hanford Reach (Hanford Reach National Monument) and B Reactor Museum
- The island area partially owned by the Port of Kennewick off the rural community of Plymouth in the southern area of the County

5. Industrial Development

Work with the port and utility districts, WSDOT, and owners of industrially zoned land to provide lands zoned for industrial uses with transportation access and power (gas and electric). Work with municipalities or the state and local health districts to provide water and waste treatment capabilities sufficient to render industrial zoned lands marketable for industrial uses.

Locations: Notable locations of such lands in the unincorporated County are:

- All Rural Industrial lands
- The area in north Richland, recently transferred from the U.S. Department of Energy to the City of Richland, the Port of Benton, and Energy Northwest for industrial use
- Approximately 85 acres of industrial zoned land at the Interstate 82 and Badger Road interchange
- Rural Industrial land at Plymouth in the south County
- Rural Industrial land at Paterson in the south County

6. Agricultural Water Resources

Maintain a primary support role in the implementation of the Yakima Integrated Plan, work with agricultural and other stakeholders to address future water needs, and work with the broad range of water using interests to identify and obtain additional supplies and improve water quality (see discussion on Water Resources, Section 4.5).

Locations: The geographic areas within which this effort should be pursued are as follows:

- Yakima River Basin in conjunction with Yakima and Kittitas counties
- Within Benton County for those water supply and quality objectives that can be accomplished unilaterally

7. Hanford Site Industrial

Energy, national defense, nuclear medicine, and more general industrial are among the opportunities on the Hanford Site:

Locations: Within the Industrial and Research & Development Zones of the Hanford Site, anchored by existing rail, road, energy, and nuclear infrastructure:

- Medical isotope production by the Fast Flux Test Facility in the Hanford Site's 400 Area
- Development of an industrial energy park in the recently transferred industrial land from the U.S. Department of Energy to the City of Richland, the Port of Benton, and Energy Northwest

8. Resource Use at Sustainable Levels

Coordinate with local jurisdictions and state and federal resource agencies to manage and conserve natural and biological resources at sustainable levels to sustain local economic growth. This requires that it be based on a broad array of sustained resources.

Locations: Generally within land features identified as "critical areas" (Chapter 4), but also relating to resource issues which transcend specific areas, such as ground and surface waters, air quality, and species survival:

- Along the mainstems and tributaries of the Yakima and Columbia rivers and their associated riverine wetlands and near-shore uplands
- Within the Hanford Reach and on the Hanford Site that combined represent a biological resources "bank" within Benton County
- Within Benton County's jurisdictional portion of the Yakima River watershed relative to conservation of ground and surface waters

9. Law and Justice

The quality of life and economic growth of an area are fundamentally influenced by the actual conditions and perception of public safety and welfare. These perceptions are held by residents, visitors, and prospective new business and industry. The expansion of public safety facilities is favorable to economic growth.

Locations: The County Justice Center in Kennewick

10. Education

Coordinate with educational institutions to maintain robust educational programs that are relevant to the regional economy. Although education constitutes a smaller share of the regional economy, this sector has seen more growth than other economic sectors in the region. Washington State University's research activities are also integrated with local economy, such as agriculture and wine based research.

Locations: The Washington State University Richland Campus and the following:

- Washington State University Extension's agricultural and natural resource based program unit, community and economic development program unit, and youth and family program unit
- Columbia Basin College's Richland campus expansion
- Other K-12 and vocational schools

5.5 The County's Role in Economic Development and Diversification

The County's role is identified in its vision and policy statements at the beginning of this Chapter; it promotes economic development by providing basic regional services and infrastructure, where such provisions will promote economic development, public health and welfare, and environmental quality.

Though the range of regional service responsibilities of the County is broad, within the context of economic development, the principal responsibilities are:

- long range planning
- productive coordination with other jurisdictions and interests
- the provision and/or operation and maintenance of infrastructure necessary to support the current economic base and provide competitive advantages to attract new economic growth

Depending upon the circumstance, the County may fulfill these responsibilities unilaterally, or in partnership with other entities such as the port districts, private industry and business, the state, or other local and regional political jurisdictions. For any given issue or project, the County's contribution may range from direct capital expenditures to in-kind services or coordination, integration, and/or facilitation.

6 Housing Element

6.1 Introduction

The Housing element is integrated with the other elements of the Comprehensive Plan. A full understanding of the County's housing policy and plans should include a study of these elements.

The GMA planning goals for housing are as follows:

- Encourage the availability of housing to all economic segments of the population
- Promote a variety of residential densities and housing types
- Encourage the preservation of existing housing stock

The Housing element includes an inventory and analysis of existing and projected housing needs within the County. Chapter 2 of the Comprehensive Plan identifies goals and policies for the preservation, improvement, and development of housing. Chapter 3: Land Use provides analysis to identify sufficient land for multiple housing choices to meet the projected needs of all economic segments of the County.

6.2 Existing Conditions

The 2015 American Community Survey data indicate 71,473 housing units currently exist in the entire Benton County, including cities (U.S. Census Bureau 2015). Unincorporated information is also provided below, along with a breakdown for cities. About 68 percent of the housing units are owner-occupied and 32 percent renter-occupied (Table 6-1).

Table 6-1
Benton County Housing Types and Occupancy

	Estimate in 2015	Percent
Total Housing units	71,473	100.00
Occupied housing units	67,430	94.00
Vacant housing units	4,043	6.00
Owner-occupied housing units	45,508	67.50
Renter-occupied housing units	21,922	32.50
Unit types		
1-unit, detached	44,599	62.40
1-unit, attached	1,953	2.70
2 units	2,889	4.00
3 or 4 units	2,776	3.90
5 to 9 units	3,479	4.90
10 to 19 units	3,431	4.80

	Estimate in 2015	Percent
20 or more units	4,509	6.30
Mobile home	7,648	10.70
Boat, RV, van, and other	189	0.30

Source: American Community Survey (U.S. Census Bureau 2015)

The average countywide household size in Benton County has slightly increased from 2.68 persons in 2000 to 2.72 in 2016. Table 6-2 below indicates the distribution of housing in the cities and unincorporated areas.

Table 6-2
Existing Housing Units

Jurisdiction	2000	2015
Benton County (total)	55,963	71,473
City of Kennewick	22,043	29,356
City of Richland	16,454	22,130
City of Prosser	1,781	2,301
City of West Richland	3,094	4,530
City of Benton City	1,022	1,194
Total Units Incorporated	**44,394 (79%)**	**59,511 (83%)**
Total Units Unincorporated	**11,569 (21%)**	**11,962 (17%)**

Source: U.S. Census Bureau (2000, 2015)

6.2.1 Affordability

The term affordable, when used with regard to housing, is usually relative to a specific economic segment of the population. According to the U.S. Department of Housing and Urban Development, families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation, and medical care. The 2015 Census data indicate approximately 22 percent of the County's housing units cost over 30 percent of the owner's monthly income. The 2015 Census data also indicate median income for Benton County is $60,251 (Table 6-3).

Table 6-3
Percentage of Households Per Income Range Groups

Income Range	Percentage of Households
Below $25,000	19.7
Between $25,000 and $49,999	22.0
Between $50,000 and $99,999	32.3
Above $100,000	26.0

Most of the new housing being built in the County's Metropolitan Planning Area is for the custom home market. Although the 2015 American Community Survey data indicate the median housing price being $184,200 for Benton County, this number is much higher for the Tri-Cities area (U.S. Census Bureau 2015). The average home selling price in 2017 is $242,300 (Tridec 2017). This indicates a higher percentage of the houses are being built for the above median income range in the Tri-City area. In 2017, the average rental price for a two-bedroom apartment is $971 in Kennewick and $1,132 in Richland (RentJungle 2017).

6.2.2 Special Needs Housing

Citizens with special needs living in the County include those who require some assistance in their day-to-day living, such as the physically or mentally disabled, senior citizens, and institutional and group home settings. Social service programs and assisted housing in Benton County all serve a portion of those with special needs.

6.3 Current Trends

Based on the OFM 20-year projection, Benton County's countywide population is estimated to be 280,109 in the year 2037. The unincorporated areas of the County maintain a 19 percent share of the total countywide population. The "high" series estimates indicate that Benton County can expect a population increase of 86,609 by the year 2037. The unincorporated County's 19 percent allocation of the countywide 2037 population projection is estimated to be 18,135 additional people. At an estimated unincorporated ratio of 2.7 residents per household, this increase in population would require up to 6,716 new homes in the next 20 years.

Single-family housing is the predominant type throughout the County. In 2015, 65 percent of all units were single family, 24 percent were multi-family dwellings, and 11 percent were Manufactured homes or Factory Assembled Structures (Table 6-4). In unincorporated Benton County, large lot single family homes in a rural setting with accessory structures continue to be the preferred housing type. These are mostly developed on 5-acre or larger lots. The 1 acre lots also include larger single-family homes compared to homes in the County's urban areas. The unincorporated County also has a large number of manufactured homes as shown in Table 6-4.

Table 6-4
Housing Mix, Cities in Benton County, 2015

Jurisdiction	Single family	Multi-family	Manufactured Homes	Total Dwellings[1]
Unincorporated	8,117	220	3,558	11,962
Kennewick	17,590	9,488	2,208	29,356
Richland	15,000	6,309	786	22,130
Prosser	1,431	580	290	2,301
West Richland	3,698	305	527	4,530
Benton City	716	182	279	1,194
Total	**46,552 (65%)**	**17,084 (24%)**	**7,648 (11%)**	**71,284 (100%)**

Notes:
[1]Does not include RV, Boats, and Vans
Source: American Community Survey (U.S. Census Bureau 2015)

6.4 Future Considerations

As discussed above, based on the population estimates, the County will need to add 6,716 new homes in the next 20 years. The Land Use element discusses potential areas for future developments and the County's land capacity to meet projected housing needs. The discussion below indicates multiple housing types in various densities to address housing needs and affordability.

6.4.1 Density

Residential development in Finley, Washington

A range of residential densities is provided within the unincorporated County to provide broad affordability related to land costs and construction. Within the Rural Community Center areas in Paterson, Whitstran, Plymouth, and Finley, densities of up to 3 DU/acre may occur, including duplexes. Densities of 1 DU/acre are designated in Rural Transition areas due to their proximity to UGAs and adequate road capacity. These designations are considered limited areas of more intensive rural development enabled by RCW36.70A.070 (5)(d). The density of 1 DU/5 acres is the dominant rural density in Rural Remote areas. Low density residential uses are allowed in Rural Resource areas at 1 DU/20 acres. Minimum lot sizes in each land use and zoning district are identified in the zoning code Chapter 11 of BCC.

6.4.2 Housing Types

Affordable Housing Types. Factory Assembled Structures and mobile homes offer housing alternatives suitable to low-income and moderate-income groups as well as senior citizens. Factory assembled structures are designed, made off site, and assembled on site. This process helps reduce building material and construction costs. Quality Factory Assembled Structures can be placed on a parcel for approximately 70 percent of the cost of a comparably sized site-built structure. As technology improves, factory assembled structures can be designed to closely resemble site-built homes. In addition, when placed in mobile home parks or subdivisions, Factory Assembled Structures can offer reduced land and infrastructure costs.

Factory Assembled Structures are a major source of affordable housing in Benton County. They meet Housing and Urban Development standards, which make it possible for buyers to get loans to purchase with little or no down payment. This is a very attractive option for those with little savings to buy site-built homes.

Accessory Dwelling Units. The zoning code permits the establishment of additional living quarters within single family residences to permit persons who, due to a disability or an infirmity, require the assistance of friends, relatives, or a professional nurse to remain in their home and for persons related to the occupant. These units help meet the needs of the disabled, infirm, or elderly in need of assisted care and are currently allowed by ordinance in all residential zones and the agricultural zoning district of Benton County.

The County plans to review its zoning code for provisions to allow accessory dwelling units in its single-family residential zones in addition to its current code provision of allowing accessory dwelling units for disabled, infirm, or elderly residents.

Farm Labor Housing.–Farm labor housing is available in all zoning districts that allow residential dwelling units, and, further, the County recognizes that RCW 70.114A provides additional opportunities for migrant and seasonal farm labor housing in Benton County.

Planned Developments. PD developers are offered flexibility in project design and site planning, which can allow for a higher quality development and improved affordability. PDs are generally characterized by flexible site requirements, which focus on overall project design rather than lot by lot design, efficiency in the provision of utilities, and common open space.

Multiple Detached Dwellings. Under the current BCC, the Planning Administrator may approve up to four detached dwellings on an individual lot provided the proposed use complies with all applicable Benton Franklin Health District, Department of Health and Social Services, and Ecology requirements, as well as the density requirements of the Comprehensive Plan. The multiple dwellings

provision allows for supervision of elderly or infirmed family members and other flexible living arrangements.

Temporary Dwellings. All residential and agricultural districts permit temporary dwellings. These types of housing are also approved with or without conditions by the Planning Administrator. They may be approved in cases of personal hardship and to suit the needs of the agricultural community on a temporary basis. Because such hardships or needs are personal and generally transitory, it is determined that the approval of temporary dwellings do not constitute a long-term land use commitment that would conflict with the County's Comprehensive Plan.

6.4.3 Development Review Process

In addition to land use policies, the County development review process will be periodically evaluated for efficiency and customer service improvement opportunities. Periodic reviews to improve efficiency and service can help reduce housing development costs and may also encourage developers to use the policy and regulatory features of the Comprehensive Plan which is designed to encourage affordable housing.

7 Transportation Element

7.1 Introduction

The Transportation element of the Comprehensive Plan describes the existing transportation network, LOS, planned improvements and financing, and intergovernmental coordination needs, as required under RCW 36.70A.070(6). Collectively, these items help functionally integrate the transportation network with the Land Use Map (see Appendix A: Map Folio, Figure 14 – Transportation – Existing Major Facilities Map).

Under current local farm and non-farm economic growth conditions, the trend to convert raw land for agriculture, residential, commercial, and industrial land uses will continue. These conversions engender new land uses which drive maintenance and expansion of road capacity for commuter, "farm to market," leisure, recreation, business, and other vehicle trips. Transportation related land use demands ultimately manifest themselves as capital projects in the County's Six-Year Road Program (Appendix H-1). Further information on the Washington State Highway System can be found in Appendix H-3 (Washington State Highway Inventory within Benton County) and Appendix H-4 (Washington State Highway Inventory and 2028 Forecast and Level of Service Analysis.

7.2 Existing Transportation System

Transportation systems in Benton County form a multi-modal network that provides for the movement of people and goods locally. The systems connect to regional, state, national, and international systems. Transportation systems which comprise the local network include road, rail, air, waterborne, and non-motorized (bicycle, pedestrian) transit.

Efficient transportation links to regional, state, national, and global markets are essential to the maintenance and growth of the County's economic base. Additionally, the ease with which people can move throughout the County is an important quality of life factor.

7.2.1 Benton County Road System

Within and around the Metropolitan Planning Area (Kennewick, Richland, West Richland), the road system within Benton County is well developed with interstates, state highways, collectors, and local access routes. Improvements have been made to several roads to improve access to some of the outlying rural areas, such as Finley and in areas in southern Benton County. Road access for rural and agricultural areas is good and continues to be improved.

Peak hour congestion problems do exist within the urban areas, notably on routes such as State Route 240 and George Washington Way used by Hanford Site commuters, and on Columbia Center Boulevard related to the Columbia Center Commercial Retail complex in Kennewick.

However, congestion problems are absent on County roads serving rural or agricultural areas. Generally, principal road concerns in rural areas are "all weather" access for agricultural product transport and more direct "farm to market" routes for agricultural products. Several road improvements have been made in recent years to improve the rural road system within the County.

Highway transportation facilities along Interstate 82 and Badger Road

Benton County uses the federal functional classification system for categorizing County roads, including rural and urban local access roads, minor and major collectors, and arterials.

Local access roads. Their primary function is to provide direct access to individual land holdings and uses, whether they be residential, industrial, or agricultural. Local roads generally lead to collectors that collect or merge traffic. Local roads do not have a designated LOS.

Minor Collectors. Their primary function is to conduct traffic "intra-county" from local roads to the major collectors and arterials. This function is often divided between movement and access to land uses. Minor collectors do not handle long thru-trips and are not continuous for any great length. Minor collectors do not have a designated LOS.

Major Collectors. Their primary function is to provide service to any county seat not on an arterial, or to towns or rural centers not served by an arterial, or to other traffic generators such as schools, shipping points, parks, or important agricultural areas. They collect large volumes of traffic from access roads and minor collectors and move it to major and minor arterials and between major activity centers and traffic generators. Major collectors serve the volumes of traffic within areas that

are not served by arterials. Major collectors have a designated LOS of "C" in the unincorporated portions of the County outside of UGAs.

Minor Arterials. These include state highways/routes and a few local routes, and their primary function is to serve as major carriers. They are woven through and fully integrated with local collectors and roads that reach beyond the local network to act as regional links and to bridge the distances between interstate corridors, to which they provide major connections for interstate travel.

Depending upon circumstances, access is provided in various configurations including at-grade intersections to local access roads and even private ingress and egress (with state granted encroachment permits). LOS are designated by WSDOT.

Major Arterials. These include the interstate and other highways with the primary function of moving large volumes of high-speed traffic for long distances. Access is generally provided only at spaced, grade-separated interchanges. Freeways are usually multi-lane, divided highways. They are the component of the road system which connects the regions within a state and across the states of the nation.

Figure 14 in Appendix A: Map Folio depicts the major collectors, arterials, and interstate highways in Benton County.

7.2.2 Regional Rail System

Freight rail service to the Tri-Cities and Benton County, as well as surrounding counties, is provided by Union Pacific and Burlington Northern & Santa Fe Railroads as shown on Appendix A: Map Folio, Figure 14 – Transportation – Existing Major Facilities Map.

The Tri-Cities area is one of the few areas between the Rockies and the Cascade Range to be linked by more than one carrier. Vast tonnages of export and import products associated with seaports on both the Pacific and Atlantic coasts are moved through the area. Major quantities of agricultural products from the Midwest and the Pacific Northwest are also transported to the Puget Sound and Portland area for transshipment to Pacific Rim countries.

Passenger Rail Service. Rail passenger service is at Amtrak facilities at Pasco in Franklin County. Connections from Pasco are Spokane and Portland.

Tri-City Railroad. A Union Pacific affiliated rail handling carrier serves the area in and around Richland, operating out of former U.S. Department of Energy facilities in north Richland (TCR 2017). Washington State outlined a set of rail service needs in 2013 (WSDOT) that are applicable to Benton County. These include:

- Need #1: Address constraints to ensure capacity meets future demand

- Need #2: Preserve existing rail capacity and infrastructure
- Need #3: Enhance the efficiency and reliability of existing services
- Need #4: Use the rail system to support economic development by providing access to people and industry
- Need #5: Preserve access to global markets by ensuring access to Washington's ports

The County will continue to support plans, projects, and other activities that help meet these needs for the rail systems serving areas in the County.

7.2.3 Air Transportation

Benton County (and the Tri-Cities) is served by three public airports as shown in Table 7-1.

Table 7-1
Public Airports Serving Benton County and the Tri-Cities

Name of Airport	Location	Classification (FAA)	Owner
Tri-Cities Airport	City of Pasco	"Air Carrier" (regional)	Port of Pasco
Richland Airport	City of Richland	"Commuter Service"	Port of Benton
Prosser Airport	City of Prosser	"General Aviation"	Port of Benton

The **Tri-Cities Airport** in Pasco serves as the major air carrier airport for both Benton and Franklin counties and the surrounding region in both Oregon and Washington. The airport has recently expanded and upgraded its terminal facilities and the number of carriers serving the region. Continued steady growth is expected, consistent with population growth in the region.

The **Richland Airport** provides most of the general aviation activities in the County, including recreation flying, flight training, charter flights, air taxi service, business flying, glider operations, and skydiving activities. Activities at the **Prosser Airport** include recreational flying, flight training, air charter, and agricultural application operations.

7.2.4 Water Transportation/The Columbia-Snake System

The Columbia and Snake rivers provide an inland commercial waterway consisting of navigational locks in eight dams over a length of 465 miles, extending from Astoria, Oregon, at the mouth to Lewiston, Idaho. Within this system, a navigational channel of 14 feet deep (minimum) is maintained for bulk commodity transportation by ocean-going barge. This inland waterway, which links the Pacific Ocean with the state's agricultural "Inland Empire," forms Benton County's eastern and southern boundaries. In addition to the Port of Benton facilities at Richland, barges can be loaded and unloaded at facilities in Kennewick and Finley.

The principal commodity shipped out of Benton County by barge is grain products. Grain shipments in 2014 above McNary Dam totaled 4,189,000 tons and 4,644,565 tons between McNary and the Dalles dams (Godlewski 2016).

Agricultural products are shipped from privately owned docking facilities located at grain storage and industrial sites. Occasionally, special shipments of former nuclear components, such as submarine reactor hulls, destined for disposal at Hanford, are barged to the Port of Benton dock in Richland.

The demand for waterborne transport fluctuates with markets, commodity supply, and in relationship to the economics of transport by rail and overland truck. However, over the long term, because of its inherent efficiencies, waterborne transport will likely remain an integral part of the Inland Empire transportation system and will continue to play a vital and expanding role as global trade expands, balanced with associated river management strategies supporting salmon recovery efforts. Maintaining the existing water transportation system is an important priority for the County.

7.2.5 Pipeline Transport

7.2.5.1 Existing Conditions

Benton County has two interstate natural gas pipelines: Pacific Gas and Transmission Company and Northwest Pipeline Company. The Pacific Gas and Transmission Company line crosses the southeast corner of the County as it extends from Walla Walla County into Oregon. The Northwest Pipeline Corporation line runs up the Columbia River Gorge from Vancouver, Washington, to Plymouth. There it branches into two lines, one to the Yakima Valley and Wenatchee, the other serves the Tri-Cities and Spokane. The system distributes natural gas to Washington's seven utility companies. The maximum pipe size is 30 inches.

7.2.5.2 Future Considerations

Gas energy from this distribution system directly serves the Plymouth and south Finley areas Industrial land use designations. Substantial undeveloped industrial designated land exists within these two areas. The presence of large acreages with gas energy and road, rail, and barge transport opportunities provides economic opportunities that should not be blocked by piece-meal developments. Proactive advanced planning should occur in these areas to preserve their future industrial/commerce values.

7.2.6 Public Transit Service, Park and Ride Lots, Bicycle Transport

Ben Franklin Transit (BFT). The Tri-Cities urban area, Prosser, and Benton City are served by several fixed routes operated by Ben Franklin Transit (BFT). BFT also provides a rideshare/vanpool program that operates throughout the region. A map of the BFT Service Area known as the Public Transit

Benefit Area (BFTA) is included in Appendix A. BFT route headways are set and adjusted periodically based on ridership demand and market potential, using load factors, productivity, and development growth to inform the planning process. BFT distributes bus service so that the majority of all residents within the service area are within a 1/2 mile walk of bus service. DAR paratransit service operates on an eligibility basis throughout the entire PTBA, at a regular rate when the origin and destination are within 3/4 of a mile of the service boundary, and at a premium rate when the origin or destination is beyond 3/4 of a mile from the service boundary.

Benton County sits on the Board for BFT and participates in their planning process as well. BFT regularly prepared a Transit Development Plan (TDP) which identifies improvements and expansions to the transit service provided in the region. Because of the nature of providing efficient transit service within budgetary limitations, transit service to unincorporated areas of Benton County are somewhat limited. However, coordination of appropriate services such as bus stops, park and rides and other services occurs with each update of the TDP. The current TDP is adopted by reference in the Comprehensive Plan and can be found at this weblink: https://www.bft.org/assets/1/6/draft-2019-2024-transit-development-plan-for-public-comment_06-13-191.pdf

Park and Ride Lots. There are currently nine park and ride lots in Benton County which are owned by WSDOT, BFT, and the City of Kennewick. BFT buses serve six of the sites in the urban area.

7.2.7 Non-Motorized Transport

Bicycle paths have increased in the past several years, with a bike path that forms a loop around the urban areas of the Tri-Cities and a path north and west of Prosser. In addition, roads with lower traffic use in the County are often used by cyclists for recreational riding.

Benton County is an active participant in the regional transportation planning process that is coordinated by the Benton Franklin Council of Governments (BFCG). As members, the County participates regularly on both the Technical Advisory Committee and the Policy Board to address numerous transportation issues in the region. The BFCG has prepared the Regional Active Management Plan which discusses bicycle and pedestrian facilities. As members of BFCG this document and its associated strategies, are adopted and incorporated into the Benton County Comprehensive Plan by reference. This document can be found at the following weblink: http://bfcog.us/wp-content/uploads/2017/03/FINAL-2016-Regional-Active-Transportation-Plan-3-28-16.pdf. A map from this document of the Benton County Active Transportation System is included in Appendix A Map Portfolio.

7.2.8 Transportation Demand Management Strategies

As discussed above, Benton County is an active participant in the BFCG. The Regional Transportation Plan, *Transition 2040*, includes a chapter on Transportation Management and Operations that discusses Transportation Demand Management Strategies. TDM strategies should be pursued before roadway LOS approaches or drops below adopted standards included in the Comprehensive

Plan. As members of BFCG all of these documents, and associated TDM strategies, are adopted and incorporated into the Benton County Comprehensive Plan by reference. These documents can be found at the following weblink: http://bfcog.us/transition2040/ http://bfcog.us/transition2040/.

7.3 Level of Service Analysis

Consistent with GMA, the County has adopted LOS as the standard of operating efficiency for the County-owned and maintained major collectors and arterials within the County transportation service system. Local roads and minor collectors do not have designated LOS. LOS for minor arterials are designated by WSDOT.

7.3.1 Benton County Level of Service

Benton County's designated LOS is "C" in rural areas and LOS "D" within Urban Growth Areas. When a roadway meets a LOS "C" standard, it means that the streams of traffic flow remain uninterrupted, even at peak hours, by congestion or delays related to traffic volume and road configuration.

County land uses are primarily rural and agricultural, and such uses typically generate new traffic demands gradually. An evaluation of LOS for all County major collectors and arterials was conducted by evaluating existing and future volume (through 2027) estimates.

On rural roads with relatively light traffic volumes where flow is uncomplicated by frequent entry points and signalized intersections, a simple comparison of existing traffic counts and projected traffic counts based upon assumed growth percentages by area in the County was applied to evaluate LOS. The LOS for each of the roads evaluated was determined for both existing and future volumes to be at a C level – efficient flow of traffic without delays. No new major increases in traffic generators from new localized sources were identified as part of this evaluation. Appendix H-2: Transportation Level of Service shows the current volumes of traffic over major collectors and the 10-year projected traffic volumes for each collector. The LOS for each of these roads has been determined to be acceptable, at a C level at least or higher.

7.3.1.1 Level of Service on State-owned Facilities

The LOS for regional highways, including state roadways, is set through a coordinated process through the Benton-Franklin Council of Government (BFCG), the County's regional transportation planning organization, along with state, regional, and local input. The LOS for highways of statewide significance is set by the State in consultation with local jurisdictions, with the State having final authority to establish LOS and associated state and federal expenditures on the system.

An analysis was performed to determine Level of Service on state owned facilities. The Washington State Highway Inventory Matrix shown in Appendix H-3, provides an inventory of state-owned facilities. Appendix H-4 provides details on the analysis of LOS for current conditions as well as for year 2028. All state highway segments will function with acceptable Levels of Service with all

segments anticipated to perform at LOS all, but two segments forecast to be LOS "A" or "B". Those two segments on SR 397 between Kennewick and Finley are forecast to be LOS "D" but are within the Urban Growth Area.

As mentioned in the Land Use and Housing Elements, much of the population growth within the unincorporated Benton County is anticipated to occur outside the city limits but within the Urban Growth Areas. The Level of Service analysis was conducted using the most recent traffic data available from WSDOT for the state highway system along with the BFCG regional traffic model. The regional model forecasts several different land uses throughout the region for the year 2040 to estimate future travel demand on functionally classified roadways. Benton County participates in the development of the model, including the preparation of population and employment forecasts for Transportation Analysis Zones supported by the modeling process. The land use assumptions of the model are included in the Appendix of the Regional Transportation Plan, are included here by reference, and found at this weblink: http://bfcog.us/wp-content/uploads/2018/01/Appendix-Jan-8.pdf. Maps representing the TAZ as well as the population and employment growth are included in Appendix H.4. For areas not covered by the regional model, a discussion was held with WSDOT and it was agreed that traffic forecasts for these areas would be fairly represented using 1% per year growth in current volumes.

7.3.2 Future Considerations

Improve the Utility of the Transportation Network. The utility and adaptability of an area's transportation network is one of the primary characteristics upon which the "quality of life" is based. By in large, the road transportation network within the County and the Tri-Cities is an excellent and efficient one, consisting of interstate highways, state routes, and local arterials, collectors, and local access routes; it has well-defined and institutionalized mechanisms for eliminating its deficiencies and maintaining its high level of performance.

However, the existing transportation network is almost singularly dedicated to the personal automobile. This is not a fault, but rather a limitation to the larger community's realization of other land uses, commercial enterprises, human activity, and socioeconomic diversity.

A truly multi-modal transportation system invites increased personal mobility (via pedestrian, bicycle, equestrian, and transit modes); it energizes existing and fosters the creation of new activity centers; it melds business, casual, tourism, and recreational activities into a richer and more resilient community fabric.

Policy needs - there should be bicycle, pedestrian, and equestrian trails which connect the major urban and rural activity centers of the County.

Action - the County should initiate a cooperative effort with adjacent jurisdictions, relevant state agencies, business, private interest groups, and citizens to pull together the various bikeway and trail plans from each jurisdiction, into an integrated trail plan.

This integrated trail plan should use open space corridors, public lands, special district rights-of-way, existing public roads, and new acquisitions, to connect urban and rural residential, business, governmental, visitor, and recreational activity centers and amenities via a network of non-motorized travel corridors. The integrated trail plan should integrate with existing transit and automobile system components.

There should be an adopted implementation program and construction schedules for integrated trail plan components.

Agreement should be sought from participating jurisdictions to annually fund, either jointly or unilaterally, depending upon the nature of the project component, the construction of the integrated trail plan. Where feasible, the funding should be targeted so that it integrates functionally with other parks and recreational facilities or trail construction projects in the County or in other jurisdictions.

7.4 Planned Improvements and Financing

7.4.1 County Six-year Road Program

The County Road Program (Appendix H) is the County's principal directive for "near term" capital expenditures to carry out the adopted Transportation element as it relates to the construction of new facilities and preservation of existing corridors. The Road Program is updated annually by the County Road Department with each update approved by the Board of Commissioners. The purpose of the Road Program is to correlate funding sources to needed improvements and identify projects for dedicated revenues. It enables long range decision-making, helps assure the continuity of Commissioner goals and objectives, and helps to identify the impacts in future years of decisions made currently. It also identifies existing and future revenues, revenue sources, maintenance and operating costs, expenditure categories, and improvements for the transportation system.

The Road Program and this Transportation element is coordinated with the transportation planning of other jurisdictions through the BFCG. The County Road Department and the BFCG cooperatively conduct traffic counts on the road network to record traffic volumes over time. The data from these recordings are factored into the annual update of the Six-year Road Program, which identifies capital projects to be carried out in the near term.

The "condition" of roadways is also monitored to assess their surface and bed condition and to indicate where the condition of a road is not sufficient to carry existing and projected volumes, as

well as the volumes that would occur at the designated LOS. These data are also factored into the Six-year Road Program.

Funding Sources – Projects included within the Road Program must have identified sources of funding. Under GMA, projects necessary to maintain designated LOS are a priority. A variety of local, state, and federal funding supports the Road Program, with a primary revenue source being the County Road Fund.

Bridge and powerlines in Benton County

7.4.2 Paths and Trails

In recent years, the County has placed increased emphasis on providing paths and trails as non-motorized travel routes for both commuting and recreation. There is growing citizen interest in bicycling, walking, running, and equestrian trails that connect activity centers.

Funding Sources – RCW 47.30 requires cities and counties to allocate one-half of one percent of the amount of funds received from the motor vehicle fund for trails and paths. In order to spend these funds on the construction of a trail or path, the trail or path must be included in a comprehensive trail plan adopted by the governing body. Additional planning and construction funds are available through various state and federal grants.

7.4.3 Concurrency - Pay As We Go

Under GMA, service capacity for a new project is supposed to be available "concurrent" with the approval of a new project, or when the project is occupied. This requirement for concurrency is intended to prevent existing residents from having to pay for new capital projects to serve new development. Concurrency is designed to prevent large deficits in capacity by adding capacity as growth occurs, instead of letting it build up.

Benton County reviews traffic volume information collected annually and incorporates this information into updates to the Six-year Road Program. This provides an ongoing assessment of the

traffic volume compared to capacity conditions on individual sections of road. In this way, planning and funding of capital projects necessary to meet projected demands can occur in advance, or "concurrently" with the demands. The Road Program is designed to make a variety of improvements to the road network during the planning period to address incremental growth and other needs, as described previously.

Additionally, the principal mechanism for the review and mitigation of new development impacts on designated LOS for local streets, roads, and state highways, is the County's Environmental Policy (SEPA Ordinance). Under BCC Chapter 6.35, those projects that are not "categorically exempt" from SEPA review will address traffic generation in the SEPA Checklist, wherein project related trip generation is identified. Under the ordinance, projects that are categorically exempt are generally de minimis relative to traffic generation.

7.5 Regional Transportation Plans

The BFCG is the lead agency for both the Tri-Cities Metropolitan Planning Organization and the Benton-Franklin Regional Transportation Planning Organization. As lead agency for the Regional Transportation Planning Organization, the BFCG reviews each local jurisdiction's Land Use and Transportation elements of their comprehensive plans to certify each plan is in conformity with the transportation provisions of the GMA and consistent with the regional transportation plan.

BFCG melds the Transportation elements of local government's comprehensive plans into an integrated and internally consistent Regional Transportation Plan for certification consistent with the State Transportation Plan and system requirements. BFCG provides a predictive Transportation Model to the County and other local jurisdictions that produces forecasted traffic demand/capacity analyses from which future transportation improvement planning and projects are identified for planning and funding. The Regional Transportation Plan, *Transition*2040 2017-2040, was adopted in May 2017 by the BFCG. *Transition*2040 is a long-range, multi-modal planning document that identifies transportation needs of the Benton-Franklin County region through 2040 (BFCG 2017b). It provides a regional framework and guide for the investment of anticipated federal, state, and local funds based on identified needs, goals, and objectives.

The five primary goals of the plan are:

1. To provide for and improve the safety and security of transportation users and the transportation system through design, operations, maintenance improvements, and public information
2. To maintain, preserve, and prolong the life and utility of prior investments in transportation systems and services
3. To improve the predictable movement of and access to goods and people throughout the region and improve quality of life

4. To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy
5. To make transportation decisions that protect the environment, promote sustainable development, and coordinate regional/community stakeholders

Benton County considers these goals and the associated objectives along with other information in planning for transportation system improvements to the County road system and in lending support to regional projects and programs.

7.5.1 Current and Future State Highway System Needs

Transportation elements of GMA comprehensive plans must include an identification of current and forecast needs and a financial analysis of how an identified need might be addressed concerning the regional transportation system, including state highways.

Appendix H-4 lists current and forecast 2028 peak hour traffic volumes for the state highway system in Benton County. The County is not responsible for traffic effects on highway segments in cities, and the WSDOT sets levels of service on Highways of Statewide Significance. When segments in cities and on the Highways of Statewide Significance are removed from that list a total of 56 segments on ten state highways: SR 14, 22, 24, 82, 182, 221, 224, 225, 240 and 397 remain and for which analysis was reported.

A source for identification of current and forecast need on the state highway system is Transition*2040*, the 2017-2040 Metropolitan/Regional Transportation Plan adopted on May 2017 by the BFCG. Transition*2040* is a long-range, multi-modal planning document which identifies the mobility needs of the region, comprising of both Benton and Franklin counties, through the year 2040. Chapter 5 of the Transition*2040*, Financial Analysis, includes programmed projects and available funds submitted by WSDOT for the period of 2017 through 2025 in Benton and Franklin counties.

The chapter identifies forecasted WSDOT cost for maintenance and operations and capital construction in Benton and Franklin counties. Maintenance and operations needs are forecast at about $28,000,000 and capital improvement costs at about $119,000,000. The Plan states revenues and expenditures balance out and there is no predicted new revenue. The only identified system capital improvements in the two-county area are those included in the Connecting Washington funding package.

Connecting Washington is a 16-year program, funded primarily by an 11.9-cent gas tax increase that was fully phased-in on July 1, 2016. Table 7-2 below shows the Connecting Washington projects listed in Transition*2040* and state costs associated with each project.

Table 7-2
Connecting Washington Projects in Benton and Franklin Counties

Connecting Washington Account	State Funds
Connell Rail Interchange	$10,000,000
I-82 West Richland – Red Mountain Interchange	$27,000,000
US 395/Ridgeline Intersection	$17,000,000
Duportail Bridge	$38,000,000
US 95/Safety Corridor Improvements	$15,000,000
Lewis Street Overpass	$26,000,000

Source: 2017 WSDOT Project Delivery Plan; Additional WSDOT documentation

In July 2019, WSDOT released the 2019 Project Delivery Plan, a detailed county-level 10-year list of capital improvement and preservation (maintenance and operations) projects and costs for the years 2020 through 2030. Funding decisions at WSDOT are the responsibility of the Department, as are decisions on releasing information on funding sources. A background document companion to the project list discusses funding assumptions, stating the Delivery Plan aligns with legislative direction provided in the 2019-2021 Transportation Budget and is consistent with overall legislative investment expectations.

Noteworthy improvements listed in Benton County are the Connecting Washington projects which, except for the Red Mountain Interchange are urban in nature. Rural improvement projects include the Red Mountain Interchange, the intersection of SR 224/SR 225 in Benton City, railroad crossing improvements in the vicinity of the SR 397/Piert Road intersection and rumble strips on SR 22.

Significant preservation projects listed in the Project Delivery Plan include painting the SR 24/Columbia River Bridge at Vernita and painting the Interstate-82/Columbia River Bridge at Umatilla. Multiple paving projects on Interstate-82 in rural Benton County are also listed.

7.5.2 2016 Regional Active Transportation Plan for Benton and Franklin Counties and Tri-Cities Urban Area

The *2016 Regional Active Transportation Plan for Benton and Franklin Counties and Tri-Cities Urban Area* was approved by BFCG in 2016 and is incorporated by reference in *Transition*2040. This document provides a status of bicycle and pedestrian planning and implementation, includes a review of bicycle and pedestrian policies and practices, and discusses active transportation safety issues. The plan notes that attention to bicycling and walking issues in Benton and Franklin counties has significantly increased in volume and importance in the last decade, with interconnected pedestrian and bike systems becoming a more critical component of the regional transportation network. Strong public support exists for improved bicycling and walking conditions through

increased planning, funding, and implementation of shared use paths, sidewalks, and on-street facilities (BFCG 2016).

In addition to these regional plans the Benton County Comprehensive Plan includes goals, policies, and actions relevant to the development of bicycle and pedestrian facilities within the County in Chapter Two Goals and Policies and Chapter 8 Parks and Recreation. These goals and polices endorse the development of bicycle and pedestrian facilities and provide a public participation program for public involvement in the process. Chapter 8 Parks and Recreation also contains a map of existing and proposed trails.

8 Parks and Recreation Element

8.1 Introduction

This Parks and Recreation element, including parks and recreation goals and policies (see Section 2.9) and the County's Parks Plan (Appendix I) are the long-range policy and planning documents for Benton County parks and recreation facilities and properties and future opportunities. The Parks Plan included in Appendix I is incorporated by reference as a part of the County's Comprehensive Plan and will guide future decisions related to the County's parks system and parks facilities, with input from the Benton County Park Board. The Park Board advises the County Commissioners on matters of policy, programs, and projects for the development and operation of Benton County's park system.

This Plan Element applies to a 20-year planning horizon, with major review for possible revisions occurring every 8 years as part of the overall review of the Comprehensive Plan. Review of the Parks Plan (Appendix I) occurs every 6 years.

Two Rivers Park

8.1.1 Park Planning, Management, and Maintenance

Park maintenance is the responsibility of the County Parks Department. Park planning, capital facilities, and operations and maintenance are overseen by the Sustainable Development Manager,

who provides administrative support to the seven-member Benton County Park Board that advises the Benton County Board of Commissioners.

After coordination with appropriate County departments, consultation user groups, partnering organizations, and the public, the Park Board submits its planning and capital projects to the County Board of Commissioners for adoption. Park budgets are the responsibility of the Board of Commissioners.

8.1.2 Washington State Requirements for Recreation Planning

The Washington State Recreation and Conservation Office is the state agency that manages grant programs for outdoor recreation opportunities. The County's Parks Plan (2014) was prepared in accordance with the requirements specified in the GMA (RCW 36.70A). Additionally, the Parks Plan must be updated every 6 years to remain eligible for funds requested through the Washington State Recreation and Conservation Office.

8.2 Existing Conditions

8.2.1 Inventory of County Park Facilities

Benton County currently owns, or operates under lease, ten park facilities on 2,384 acres providing outdoor recreational opportunities and amenities such as lawn activities and picnicking, water and swimming, natural open space and habitat conservation, boat launches, a model airplane facility, a recreational vehicle campground, an equestrian camp, developed shooting facility, and a pioneer cemetery. Benton County subleases all or portions of two parks to non-profit entities (see Appendix A: Map Folio, Figure 15 – Parks and Recreation Map). The parks and recreation facilities are organized into the following:

- **Regional Parks** are intended for more diffuse and passive outdoor uses and serve a large region including rural county residents. These parks are meant to preserve large areas of natural open space and support types of recreation that require large areas or uncommon amenities, such as horse riding or miniature aircraft flying.
- **Natural Parks (Preserves) and Trails** are undeveloped areas mostly in their natural conditions that are managed for educational or recreational purposes. These trails preserve native plant and wildlife habitat and promote passive recreation, with established low-intensity use trails developed on many of these properties and future opportunities to promote trails between existing holdings.
- **Special Use** areas include sites that are either smaller and have focused uses or are managed for specific uses and may be subleased and managed by other organizations.

8.2.1.1 Regional Parks

The County owns or operates two regional parks.

Horn Rapids Park is located 6 miles north of Benton City and along over 5 miles of the north shore of the Yakima River, with about 565 acres of transitional river-to-upland shrub-steppe habitat nestled among other adjoining public lands. The park has an improved campground with full recreational vehicle hookups, showers, restrooms, a horse camp, a model airplane facility, a boat launch, and several miles of multi-use trails. Horn Rapids Park is also used as an outdoor educational center by area schools and scouting organizations. Via trails that continue off-site, visitors can travel up-and-down the Yakima River and hike or ride up onto the Rattlesnake Slope. The park may also become a key location for a future potential recreational trail through the Hanford Site.

Two Rivers Park lies on property leased from the U.S. Army Corps of Engineers about 2 miles east of Kennewick near the community of Finley. The developed portion of the park is centered around two large sheltered lagoons on the west end, while the east end of the park features the 100-acre Rockwell Woods Natural Area consisting of beaver ponds, riparian woodlands, and marshes and bisected by a nearly mile-long nature trail. Two Rivers is home to the last downstream developed boat launch in the Tri-Cities area and is used heavily throughout the year. First developed in the late 1960s after the McNary Dam Project levees were built, the west end of the park features a playground, extensive picnicking areas, and a disc golf course that was added in 2009.

Two Rivers Park Playground

8.2.1.2 Natural Parks and Trails

The County owns three preserves, with its most recent acquisition of Candy Mountain Preserve in June 2016.

Badger Mountain Centennial Preserve is located on the upper ridges and slopes of Badger Mountain in the south Richland area. Shrub-steppe vegetation, primitive trails, expansive views of the Columbia River Basin, and steep slopes characterize the property. The preserve was purchased in partnership with public, private, and state funds with the goals to preserve views, protect upland habitat, and provide for hiking, biking, and horse riding opportunities. Per Resolution 05-27 that created the preserve in 2005, the acreage is also "banked" by Benton County for possible use as mitigation for shrub-steppe disturbances that may occur elsewhere in the County. Additionally, there is opportunity to potentially connect the Badger Mountain Preserve with the Candy Mountain Preserve.

Candy Mountain Preserve is located north of Badger Mountain in the Goose Gap and upper slopes of the Candy Mountain. Added to the park system in 2016, the preserve includes a 1.7-mile trail to the summit with a parking area at the trailhead.

Candy Mountain Preserve

Wallula Gap Preserve is located in eastern Benton County above Lake Wallula and across from the 'Twin Sisters' feature in Walla Walla County. The park unit consists of three disconnected parcels that are approximately 110 acres that have remained unchanged since the properties were deeded over to the County in 1984 by the U.S. Department of the Interior. The parcels are remote and generally inaccessible, with one parcel consisting primarily of sheer basalt cliffs. Current legal access to the property is by water only, although the railroad corridor limits that access. In order to access the property by land, an easement would have to cross about 5 miles of privately owned property. The properties are managed as part of the National Natural Landmarks program of the National Park Service, and Benton County provides regular reports to the Park Service on the status and condition of the site.

8.2.1.3 Special Use Parks

The County owns or operates five special use parks, including two vista parks and a shooting facility.

Horse Heaven Cemetery was developed south of Benton City in the Horse Heaven Hills as a private pioneer cemetery beginning in 1893. The last burials were in the 1940s, and Benton County took possession of the parcel through a property foreclosure in 1954. Recent improvements include a perimeter driveway and fence, an interpretive sign, and some sitting benches.

Horse Heaven Vista, first developed in 1964, is located southeast of Prosser along State Route 221 on the crest of the Horse Heaven Hills overlooking the Lower Yakima Valley. The site offers a sheltered view point, paved parking area, and restrooms.

Vista Park is located in the Tri-City Heights neighborhood of northwest Kennewick. It is a small neighborhood park with picnic tables and swing sets that was originally developed by the local Vista Junior Women's Club in 1970. County staff maintains the park including general repair of play equipment, irrigation, and general care of the park. It is the only small park owned by the County in an urban environment.

Rattlesnake Mountain Shooting Facility (RMSF) is located approximately 6 miles north of Benton City adjacent to Horn Road. RMSF is the County's largest park unit at about 740 acres. A portion of the property is owned by the State of Washington and used through an agreement with the Washington Department of Fish and Wildlife. The remainder of the property was formerly leased from the Bureau of Land Management but was purchased by the County in 2010. Benton County subleases the entire property to its concessionaire—the Tri-Cities Shooting Association (TCSA)—who has overseen maintenance, administration, and operations of the facility since the late 1980s. TCSA is responsible for all capital improvements, though the County occasionally assists financially with certain projects at the advisement of the Park Board. The RMSF is large enough to contain several discrete ranges designed and managed for different shooting disciplines. The facility is open to the public several days per week.

Hover Park is located approximately 10 miles southeast of Kennewick along the Columbia River and downstream of Two Rivers Park on property leased from the U.S. Army Corps of Engineers. Presently undeveloped, this park has good potential for future use. It has a pleasant beach area in a protected lagoon. The Burlington Northern Railroad bisects the property. The area also has historical significance. The first wagon train to the area, the Longmire Wagon Train, crossed the Columbia River on rafts near the park in 1853. The first major ferry crossing from Wallula was in the vicinity, and the park is in proximity of the original Hover town site, established in 1898.

8.2.2 Other Park and Recreation Opportunities

In addition to County provided parks facilities, there are other facilities provided by state and local agencies such as Crow Butte and Plymouth arks. Also, some park facilities are provided by the cities, but serve regionally, such as the Columbia Park located in Kennewick and Howard Amon Park in Richland.

Crow Butte Park is owned by the U.S. Army Corps of Engineers and operated by the Port of Benton. The park is located 15 miles west of Paterson on the historic Lewis & Clark Trail. It is also adjacent to the McNary National Wildlife Refuge, a wintering grounds for hundreds of thousands of migratory

waterfowl each year. The 275-acre park provides camping areas, recreational vehicle sites, a marina, boat ramps, swimming, fishing, a bath house, and hiking trails, among other amenities.

Plymouth Park is located 1.2 miles west of the Umatilla Bridge on a near-shore in the Columbia River near the Town of Plymouth. The park is owned and operated by the U.S. Army Corp of Engineers. The campground offers 32 sites with electric hookups. Amenities include flush and pit toilets, showers, drinking water, a dump station, and playground. The day use area has a swim beach, boat ramp, flush toilets, vault toilet, and courtesy dock (Recreation.gov 2017).

Other Public Lands Many of the County's rural residents recreate in natural areas suitable for hunting, fishing, and hiking. In the more remote planning areas of the County, such as Paterson, Plymouth, and Finley, recreational opportunities are often provided by the federally owned waterfront lands that lie along the hydroelectric pools behind each dam.

8.2.3 Greenway Connections

Improved public recreational trails are lacking throughout most of the rural County; however, the Tapteal Greenway currently offers connections as discussed below.

Tapteal Greenway is a 35-mile corridor along and including the Yakima River extending from Kiona Bend at Benton City to the mouth of the river at Bateman Island in Richland. Recognizing that the Yakima River provides an entirely different kind of recreational experience than the Columbia, the Greenway corridor features a mixture of ecological landscape types and a relatively high percentage of public lands and public river access locations (Table 8-1).

Table 8-1
Public Rivershore Land Ownership

Agency	Acres	Linear miles
U.S. Army Corps of Engineers	292	13.5
Richland	236	2
West Richland	N/A	1
Washington Department of Fish and Wildlife	10	25
Benton County	784	5.1
Total	**1,322**	**21.85**

The Tapteal Greenway Plan seeks to link these ownerships with a system of river and shoreline trails and paths over the 30-mile stretch of river and to use or improve each public property according to an overall plan. The plan aims to connect public spaces in Benton City, West Richland, and Richland via a network of trails and parklands anchored by the Yakima River.

The Tapteal Greenway Plan was developed jointly during the mid-1990s through a planning effort involving local, state, and federal interests; and implementation of the Tapteal Greenway Plan is the primary mission of the Tapteal Greenway Association[2].

8.3 Current Trends

8.3.1 Recreational Demand

Demand for public recreational opportunities and facilities is increasing and will continue to increase as both the urban and rural populations of the County grow and as the growth in overall state population results in "out of area" visitors looking for recreational opportunities (Washington population growth is 100,000 per year).

Based on Washington State Recreation and Conservation Office's 2013 State Comprehensive Outdoor Recreation Plan, walking and hiking continue to be popular activities in Washington. Outdoor team and individual sports (which includes fitness activities like jogging), nature activities, and picnicking and barbequing are also popular in the State.

8.3.2 Levels of Service and Park Management

The County's Parks Plan has adopted LOS standards that are meant to be used as guidelines, not absolutes. The LOS identified in Table 8-2 is based on the four park types described above:

Table 8-2
Level of Service Standards

Park Type	Service Area	Level of Service
Regional	15-mile radius and within an hour drive	5 acres per 1,000 population
Natural	20-mile service radius	5 acres per 1,000 population
Trails	N/A	1.37 miles per 1,000 populations
Special Use	N/A	Case by Case

In addition to LOS designations, Benton County organizes its ten parks by "level of management," resulting in a two-tiered system.

- **Tier One** parks have daily operational oversight, either by an assigned County park ranger or by concessionaires or volunteers.
- **Tier Two** parks are smaller, have significantly less use overall, and do not have daily active management.

[2] Tapteal Greenway Association mission available from www.tapteal.org.

Table 8-3 provides specific information on ownership/lease, size, type, and level of management at each park. See Appendix A: Map Folio, Figure 15 – Parks and Recreation Map.

Table 8-3
Types and Level of Management at Benton County Parks

Sites	Owner	Acres	Level of Management
Regional			
Horn Rapids Parks	County	564.5	Tier 1
Two Rivers Park	U.S. Army Corps of Engineers	159.0	Tier 1
Natural			
Badger Mountain Preserve	County	627.1	Tier 1
Candy Mountain Preserve	County	186.0	Tier 1
Wallula Gap Preserve	County	110.0	Tier 2
Special			
Horse Heaven Cemetery	County	2.0	Tier 2
Horse Heaven Vista	County	6.3	Tier 2
Hover Park	U.S. Army Corps of Engineers	175.0	Tier 2
Rattlesnake Mountain Shooting Facility	State and County	740.0	Tier 1
Vista Park	County	0.3	Tier 2

As mentioned, the LOS standards for parks are meant to be used as guidelines, not absolutes. The Parks Plan develops standards to fit with the current population and feedback during the workshop sessions and questionnaire.

According to the Parks Plan, the current park system is not meeting the LOS standards by 374 acres and will need a total of 900 more acres of land to meet those standards 20 years from now (Table 8-4). This acreage analysis does not include special use parks, trail connections, or community desire for preservation of open space lands in certain sensitive and view corridors. Local citizen requests and interest for improvements, whether they be federal- or County-owned lands, generally focus on improved vehicular and boat access. However, "natural area" recreation is only one type of opportunity. There is also an unmet demand for recreational opportunities that rely upon a higher level of facilities and improvements in more developed parks.

Table 8-4
County Parks Level of Service Requirement by 2035

Park Type	2014 Level of Service (Population 183,400)	2035 Level of Service (Population 236,007)
Regional	917 acres	1,180 acres
Natural	917 acres +	1,180 acres +
Special Use	Case by Case	Case by Case
Total Parkland to meet Level of Service	**1,834 acres**	**2,360 acres**
Trails	253 miles	323 miles

Source: Benton County (2014)

8.4 Future Considerations

8.4.1 Key Opportunities to Meet Demands

Capital expenditures to enhance recreational use of County parklands are developed as part of the Capital Facilities element, Chapter 9, and should be prioritized to focus first on locations that have current facilities deficits and/or on park lands where the provision of additional recreational facilities can leverage other recreation related economic and visitor benefits beyond the park itself. Major improvements considered in the Parks Plan are mentioned below.

Horn Rapids Park. Within the unincorporated area, the land and water resources of the park are the central element of the Tapteal Greenway Plan. Development of Horn Rapids Park according to its Master Plan would provide a regional destination point, as well as an activity center for the Greenway. The County 2017-2022 CIP identifies three projects for Horn Rapids Park: 1) addition of a new shop; 2) paving of the driveway to the office/maintenance area; and 3) development of a new master plan for the park.

Two Rivers Park. Improvements are needed for the boat launch, dock, nature trail (boardwalk addition), restroom facilities, and signage. The County CIP considers two major capital projects for Two Rivers Park: 1) remodel of the boat launch, including replacement of all floating docks; and 2) complete replacement of the main restroom at the central part of the park.

Badger Mountain Centennial Preserve Improvements. Anticipated improvements include trail connections to adjacent properties both to the east (Badger Butte/Little Badger Mountain) and to the west (Candy and Red mountains). The 2017-2022 CIP includes improvement to the Summit Road that connects Dallas Road to the summit area along the west ridgeline. This road follows a utility easement and is used numerous times daily by vendors who need access to the summit, as well as

for park business. Improvements would include choosing a formal route, grading in some areas, removal of large cobbles, and placement of suitable coarse gravel.

Badger Mountain Preserve

Improvements to Other Parks and Facilities. In the special use parks, trail and access improvements and maintenance are important. These improvements are done as funding becomes available and are based the County's Parks Plan and as prioritized by the Park Board. Some facilities are operated by County partners who are responsible for maintenance and improvements (e.g., RMSF is operated by the TCSA).

Other improvements as indicated in the CIP are listed below:

- Horse Heaven Vista will have a large entrance sign and placement of two standard alert signs (one each direction) along the highway.
- Hover Park will add a dedicated, purpose-built parking area at the end of Hover Road, lined with barriers, and able to easily accommodate multiple horse trailers. The gravel lot will measure approximately 200 feet by 50 feet and will include appropriate vehicle access controls.

9 Capital Facilities Element

9.1 Introduction and Purpose

The Capital Facilities element identifies necessary and planned capital improvements, improvement schedules, and funding resources that functionally integrate capital facilities into the Comprehensive Plan. For the purposes of this element, capital facilities are defined as the infrastructure the County is responsible for constructing, operating, and maintaining, and which enable the County to provide public services to County residents. This element provides the framework for the County's CIP (Appendix J) and adopts a 6-year CIP list of proposed projects and financing plan.

This element is one of six mandatory planning elements that GMA requires in County's Comprehensive Plan (RCW 36.70A.070 (3)) and must identify specific facilities, include a realistic financing plan, and adjust the plan if funding is inadequate. WAC 365-196-415 provides requirements and recommendations for this element.

9.1.1 Relationship between Land Use and Capital Facilities

There is a direct relationship between the Capital Facilities and Land Use elements of the Comprehensive Plan. The Land Use element determines where and at what density population and employment growth will be located. The Capital Facilities element identifies the thresholds of growth, when new and expanded public facilities will be needed, and indicates the County's priority system for constructing the identified public facilities. Although some public facilities are provided by other government agencies or private entities, the County must demonstrate these services are available.

Identified improvements to public facilities that are owned or operated by Benton County shall also be included in the County's annual budget. Any identified public facility improvements that are not owned or operated by the County should be included in the annual budgets and CIPs of the entities which provide those public facilities. State, local government, and district plans that are affected by proposed public facility improvements will be considered prior to inclusion of the improvements in the CIP. This includes considering a city's comprehensive plan when evaluating proposed improvements that affect that city's UGA.

9.1.2 Capital Facilities Element Update Process

Any updates to the Capital Facilities element of the Comprehensive Plan will be considered concurrently with other proposed amendments that are included in the annual Comprehensive Plan amendment review. Benton County's CIP, adopted by reference, is a dynamic document that will be updated annually to reflect new cost information, funding information, project list changes, and existing facility updates. The annual updates to the CIP will be done prior to the annual budget process so that CIP projects can be included in the annual budget.

9.2 Capital Project Selection and Level of Service Standards

9.2.1 Level of Service

The County and public facility providers will use established LOS for identifying capital improvements. For the County, two sets of LOS standards have been established: 1) C standard for County roads, as discussed in Section 7.3.1, and 2) Park standards as described in Section 8.3.2. These LOS standards, along with other factors considered for other County facilities are considered in identifying planned capital improvements. Other factors considered in planning these improvements include identifying projects that:

- Address existing deficiencies
- Preserve existing capacity
- Provide for new development
- Enhance quality of life
- Meet other County needs not related to growth

The County will evaluate whether the County road and park system standards and other identified capital needs are being met when updates to the Comprehensive Plan are performed according to the deadlines in RCW 36.70A.130(1), when UGAs are reviewed according to RCW 36.70A.130(3), and when major changes are made to this element. If these standards are not being met and public facilities are inadequate, the County will consider one or more of the following strategies:

- Reduce public facility demand
- Reduce LOS standards
- Increase revenue
- Reduce the cost of the needed public facilities
- Reallocate or redirect population and employment growth to make better use of existing facilities
- Phase growth or adjust the timing of development, if the lack of public facilities is a short-term issue

The County will also evaluate if proposed development activities would reduce the LOS of public facilities below the adopted standards. If a proposal is expected to impact a transportation facility and cause it to fall below the LOS standard, or if additional parks and recreation facilities are needed to meet the applicable standards, then preliminary development approval would also need to include additional improvements or strategies made concurrent with the development that maintain these standards. All other types of public facilities do not have the specific concurrency requirement that transportation facilities have, but they do require the provision of adequate public facilities as a condition of project approval.

Public facility improvements for maintenance or other needs and not targeted to maintain LOS may include:

- Facility repairs
- Remodels
- Renovation
- Replacement of obsolete or worn out structures
- Improvements that do not reduce financing for other improvements needed to achieve or maintain LOS standards
- Improvements that do not contradict, limit, or substantially change the goals and policies of any element of this Comprehensive Plan

Public facility improvements may also provide capacity in excess of what would be required to achieve or maintain LOS standards (i.e., the minimum capacity of a capital project is larger than the capacity required to provide the LOS). Excess capacity is beneficial if it results in economies of scale making it less expensive than a comparable amount of capacity acquired at a later date. However, these projects may be given a lower priority than projects needed to maintain the LOS standard.

9.2.2 Analysis of Future Development

The County will estimate the type and amount of public facilities needed to accommodate future growth by evaluating previously issued development permits and determining future growth patterns. Future development will be required to pay its fair share of the capital improvements needed to address the impact of such development and the portion of the cost of the replacement of obsolete or worn out facilities. The different methods of payment allowed for these capital improvements include:

- Voluntary contributions for the benefit of any public facility
- SEPA mitigation payments
- Dedications of land
- Provision of public facilities

Future development will not be required to pay fees for needed public facilities to reduce or eliminate existing deficiencies. The growth forecasts, to be used for planning purposes and the specific growth targets for each UGA, are developed using the Benton County population projections established by the OFM, as summarized in Section 3.7.

9.2.3 Siting Public Facilities

There are types of public facilities that cannot be located in rural areas of the County, but must remain in cities or UGAs. These include new municipal urban public facilities for residential development such as sewage collection and treatment, urban street infrastructure, and storm water

collection facilities. The County does not currently provide, nor does it plan to provide in the foreseeable future, sewer, water, or utility services. Accordingly, its capital facilities do not include processing or production plants and the distribution/collection systems typically associated with such services. The only exception to this general condition occurs when a private water or disposal system fails, whereupon if placed in "receivership" under state law the County must assume responsibility as an interim condition.

The County may coordinate planning and development of public facilities in UGAs with municipalities and public facility providers by entering into interlocal/joint planning agreements, contracts, memorandums of understanding, or joint ordinances. Capital facilities and utilities may be constructed and operated by outside public service providers on rural properties if they are within the boundaries of a MPR, or a Rural Community Center pursuant to County Comprehensive Plan policies and development regulations. Electric and natural gas transmission and distribution facilities may be sited throughout Benton County both inside and outside of municipal boundaries, UGAs, MPRs, and Rural Community Centers. The County will coordinate with the BFCG and/or municipalities within the County when siting regional and community facilities. This coordination may include developing an inventory of essential facilities, determining a fair share allocation of essential facilities, conducting public involvement strategies, and assuring protections for the environment, public health, and public safety.

9.2.4 Improvements to Public Facilities Identified in Other Plans

Various plans-prepared by other public agencies have been reviewed by the County as part of this periodic Comprehensive Plan review and update ~~that identify potential~~. A summary of capital facilities forecasted for the next six years, along with the six-year financing plan, for these non-County operated facilities is provided in Table 9-1. This non-County operated facilities forecast and financing plan, combined with the County CIP for County-owned facilities comprise the County's forecast of future needed public facilities and financing plan for the next 6 years, to support implementation of the Comprehensive Plan. The County will review and revise this forecast and financing plan, as applicable, during plan implementation.

Regarding firefighting capabilities, in addition to the capital improvements identified in Table 9-1, the County has conducted an analysis of the adequacy of the firefighting capabilities for those districts that serve on the borders of the UGA and within rural areas of the County. This includes reviewing and incorporating into this plan by reference the Benton County 2018 Community Wildfire Protection Plan, and also interviews conducted with fire district personnel. A discussion of the findings from this analysis is provided in narrative following Table 9-1.

Table 9-1
Six-Year Capital Improvements Plan for Non-County Operated Facilities

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
School Districts	Kennewick School District	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.	Planned new or remodeled schools	Bond	• Kennewick High School, 2019-2021, $105,000,000 • Amistad Elementary (Phase 2), 2019-2020, $22,000,000 • Kamiakin High School Addition, 2020-2021, $5,000,000 • Southridge High School Addition 2020-2021, $5,000,000 • New Elementary #18, 2021-2024, $26,000,000 • Ridge View Elementary, 2023-2024, $24,000,000
				Potential bond, planned for future	• Hawthorne Elementary, 2025-2026, $28,000,000 • Washington Elementary, 2025-2026, $28,000,000 • New Elementary #19, 2025-2026, $29,000,000 • Horse Heaven Hills Middle School • 2025-2027, $40,000,000
	Richland School District	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.	Planned new or remodeled schools and make other facility improvements. The school district is starting a facilities long term plan in the	Bond approved February 2017 for $99 million bond. Also applying for about $42 million in state assistance	• Replacement of Badger Mountain Elementary 2020-2021, $21 million • Replacement of Tapteal Elementary, 2019-2020, $19.9 million

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
			next year to see how they are doing in growth areas and depending on findings, there is potential for seeking additional bond funding before 2025.	dollars to augment local contributions	• New elementary school #11 on Belmont Boulevard in West Richland, opened 2019, $17.5 million • Construction of a new elementary school in south Richland, 2021-2022, estimated $22 million • Renovation of the Richland High School auditorium, will be completed in 2021, $9 million • Home side improvements and installation of field turf at Fran Rish Stadium, 2022-2023, $10 million • Improved athletic fields at Hanford High School, 2021-2022, $6 million • Construction of a new Teaching, Learning & Administrative Center, Sept. 2020 opening, $11.6 million • Renovation of the1982 wing of the old Jefferson Elementary into the Early Learning Center • Classroom additions, almost done with Phase 2, and working on getting a

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
					grant to do another phase in summer 2020 • Working on other purchases of land throughout district
	Prosser School District	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.	Planned remodel of schools, new high school and district offices	Bond	• New Prosser High School, $66,804,783; June 2021 • Remodel of 3 elementary schools, $39,339,497, fall 2022 • Remodel old Prosser High School into District Offices, $905,000, summer 2023
	Ki-Be School District	Aging facilities need updates. Capacity to meet school enrollment is adequate for several years.	Planned remodel of schools in future and parking lot repaving	Received a state grant and will run a bond in 2025 for remodeling the elementary and middle school in 2026.	• Repaving the high school parking lot with the state grant received sometime from now through 2020. • No other planned projects until after 2026.
	Finley School District	Aging facilities need updates.	Have done remodeling the last few years.	Bond of $10 million in 2017	• Renovate the Career & Technical Education (CTE) Buildings and Greenhouses, $2,140,746 • Upgrade athletic facilities, including ADA compliant grandstands, weight room equipment, and locker room modernization, $2,556,000 • Install security cameras and new key system at all

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
					three school buildings to improve student and staff safety, $405,000 • Complete additional projects including new carpeting at the elementary school, new roofing at the middle school, a new water distribution plant at the middle and high school, new lighting in all schools, $4,015,000 • Tax & Contingencies $883,254
	Paterson School District	Existing facilities adequate	None	Not applicable	Not applicable
	Grandview School District	Existing facilities within Benton County adequate	None	Not applicable	Not applicable
Water and Sewer	Cities and Towns in Benton County	Existing system plans with facilities inventories and capacities adopted by reference	6-year water system and sewer plans	Rates and development charges, grants and loans. Existing revenues and planned rate increases will support system improvements, with growth paying for growth	See system plans, incorporated by reference, for these details

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
Power	Benton County PUD	Existing system plans with facility inventories adopted by reference	Transportation improvements	Rates and development charges. Existing financial plans support system improvements, with growth paying for growth	See system plans, incorporated by reference, for these details
Transportation and Stormwater	Benton County, and Cities and Towns	Existing inventories adopted by reference	6-year transportation (including stormwater) improvement plans adopted by reference	County road fund, city revenue sources, grant and loans	See 6-year plans, incorporated by reference, for details
Fire Districts (see also associated narrative that follows for additional information on adequacy of firefighting capabilities)	District 1	Fire station needs remodeled in Badger Canyon, and outdated equipment needs replaced	Fire station remodel in Badger Canyon, new fire truck ambulance purchase, replacement of specialized apparatus, replacement of wildland and structure engines and evaluating current administrative facility	Planned bond on ballot in November 2019 for $3 million Received FEMA grant for additional personnel	• Fire station remodel in Badger Canyon, new fire truck ($700,000), • Ambulance purchase ($240,000) • Replacement of specialized apparatus ($200,000) • Replacement of wildland and structure engines ($800,000 - $1 million) Most to be done or started in 2020, if bond passes, with replacement of engines over the next 6 years. Hiring 4 - 5 additional personnel in 2020
	District 2	Main fire station is over 22 years old and needs	Currently adding additional apparatus bay and lean to	Current budget and WA State Local	Apparatus bay and lean to onto existing maintenance

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
		remodeled but do not have the funding due to low tax revenue.	onto existing maintenance facility out of existing budget. Purchase of two new ambulances. In need of hiring one or more additional Firefighter/Paramedics but	program on a 3-year term. Repayment funds will come from ambulance revenue. No funding yet identified for additional staff.	facility out of existing budget ($45,000), Purchase of two new ambulances ($320,000) Both currently in process
	West Benton Fire Rescue	Trucks and equipment aging, and need replaced	Replacement of 3 structure engines, 3 wildland apparatus, 2 tactical tenders, 1 new dozer and 2 command vehicles (more than $3 million) 1 career staff added in 2020, 6 resident firefighter positions added by end of 2020, 2 career staff adds in 2022 or 2023.	Private and government financing Funds from ballot measure and in 2021 will apply for grant to get these positions two years sooner	Over $3 million over the next six years
	District 4	Capacity improvements needed	Would like to build a new fire station (#430) on Keene Road in West Richland and purchase at least two new fire engines Will need to add personnel due to growth in the area over time	Bond	New station (costs under development) and fire engines by end of 2020 ($500,000 for each fire engine)
	District 5	No information available	No information available	No information available	No information available

Capital Facility Type	Providers (Location)	Existing Condition	Planned Improvements (Capacity)	Funding Source(s)	Estimated Cost/Date
	District 6	Currently looking at replacing an ambulance and one Type 1 engine.	Would like to build two new fire stations and a training ground over the next 10 years in the Plymouth area and at far west end off of Sonova Road. Just starting to talk about the building of new fire stations but no timeframe yet. Looking at increasing paid staff from 4 to 7 within next couple years. If station in Plymouth is built, they will have 1 career staff and 6 resident volunteers.	USDA grant or loan program Current budget and savings EMS levy to fund 3 positions	No set timeframe yet

Notes:
ADA – American Disabilities Act
EMS – Emergency Management System
FEMA – Federal Emergency Management Agency
USDA – U.S. Department of Agriculture

Analysis of the Adequacy of Firefighting Capabilities in UGAs and Rural Benton County

Fire District 1

- **Capacity needs or deficiencies for addressing fire risks -** County code for property owners for defensible space and Firewise mitigations would be helpful as the district continues to go into the outreaching interface areas. Continue to deal with fireworks fires annually with lack of enforcement for regulations.

- **Wildland Urban Interface and Residential Growth -** The District has no current hazard fuel reduction program within the annual operating budget due to budget priorities. An increase in available grant funds would be beneficial to target some of the high hazard fuels reductions areas identified in the Benton County Community Wildfire Protection Plan (2018).

- **Fire Breaks:** Changes in the Conservation Reserve Program rules that would allow fire breaks down to the dirt without a negative financial impact to the property owner would be beneficial.

- **Rural Water Supplies:** Continue to seek and develop water supply systems in our rural areas for assistance in fire suppression.

- **Residential and Agricultural Burning:** Provide education to County residents on the process of conducting and/or requesting permits for the four types of fires permitted within the County; recreational burns, agricultural burns, tumbleweeds, barbeques and woodstoves. Provide education to agricultural producers on Washington State Department of Ecology regulations and permit requirements required to safely conduct agricultural burns within Benton County.

- **Communications -** Although the SECOMM system has gone through a major equipment update and fine tuning, the service area due to topography continues to have areas where radio communications between Dispatch and Fire/EMS responders is not always reliable or serviceable in some areas.

- **Other:** As with most volunteer agencies, The District continues to seek ways to improve its ability to recruit and retain more firefighters and EMS personnel.

Fire District 2:

- **Capacity needs or deficiencies for addressing fire risks -** Current and largest risk is not having enough personnel. Small tax base with relatively low-income taxpayers does not produce much in tax revenue. Calls for service have increased dramatically over the years and continue to see a growth in large fires threatening our community.

- **Wildland Urban Interface Defensible Space -** Our Fire District for the last two years has instituted and developed a Firewise program to district residents. This has proven to offer some reduction to our wildfire-related calls; however, it does not get much participation to the high majority of our community despite public campaigns and strong community push. Plan to continue to use this program and maximize the use of our staff time to meet with property owners and educate them on the value of defensible space. Funding for staff time is a need to enhance this program; completing structural assessments every two years has proven difficult.

- **Fire Breaks** - The costs associated with maintaining established fire breaks costs our small fire department thousands of dollars annually and cannot be sustained without some type of financial assistance.

- **Rural Water Supplies** - Continue to seek and develop water supply systems in our rural areas for assistance in fire suppression. Very few areas exist for drawing water in the rural areas due to remoteness and lack of developed water systems.

- **Residential and Agricultural Burning** - All open burning within the County is subject to guidelines concerning, size, time, location and permit requirements from Benton County Clean Air Authority (BCCAA). Moreover, the BCCAA and the local cities have banned back yard burning except for blown in tumbleweeds. This is a two-fold problem. The first is that getting rid of some of the fuel loads reduces the fire potential to sustain burning. The other issue is that burning incorrectly causes numerous out of control fires.

- **Communications -** The SECOMM system has some limitations to cover the entire two counties due to topography despite the multiple channels and repeater sites.

- **Other -** As with most volunteer agencies, the District continues to seek ways to improve its ability to recruit and retain good firefighters and emergency response personnel.

West Benton Fire Rescue:

- **Capacity needs or deficiencies for addressing fire risks -** Always need more volunteer firefighter staffing. The career positions will not take away anything from the current volunteer force and are only being hired to supplement the response of volunteers. Need to maintain a robust roster of fulltime and volunteer staff to combat large incidents in the jurisdiction.

- **Personnel** - Response model relies heavily on Volunteer Firefighters, which make up 85 percent of response force. Due to a societal decline in volunteerism and the ever-increasing requirements to be a firefighter, it is difficult to increase the depth of the Volunteer ranks. In

addition, it is difficult to expand specialized services such as technical rescue and hazardous materials response when so heavily reliant on volunteer firefighters.

- **Rural Property Development** - Response area continues to see development of new single-family residential structures into the Intermix/Interface areas comprised of heavy grass/brush fuels. Many times, fires in the interface/intermix require an extensive amount of resources to provide structure protection as well as being actively engaged in fire suppression. This can cause a large drain on regionally available apparatus.

- **Communications** - With the recent addition of Franklin County and Walla Walla Fire District 5 to dispatching, radio traffic has been extremely busy. Though local repeaters and tactical frequencies used to command individual incidents are plentiful, both the availability of simulcast frequencies to communicate with the dispatcher and dispatch center capability to listen to and respond to multiple frequencies is lacking.

- **Vegetation Management** - Invasive plant species make managing a 5-acre rural residential parcel difficult. Many rural property owners fail to control invasive species which leads to insufficient or non-existent defensible space. The lack of a State Vegetation Management Program has allowed the cheatgrass and invasive species to grow right up the end edge of Interstate and State Highway road surfaces. Vegetation that has grown up to the edge of a roadway becomes critically dry in the summer months and is easily ignited by discarded smoking material, mechanical problems or traffic accidents and creates traffic hazards due to fire, smoke and responding fire apparatus in the roadway. It is a challenge to protect thousands of acres of lands that abut under-maintained roadways; spend a considerate amount of time dealing with wildland fires started from roadside ignitions.

- **Burn Permits** - Burning is limited within the City Limits of Prosser, and surrounding UGA to tumbleweeds. In the rural areas of the response area, Benton County Clean Air Agency sets burning regulations and sets the daily burn decision regarding outdoor burning. Many times, people are unaware about the daily burn decision or the presence of a burn ban.

- **Fire Inspections** - Prosser is home to a vibrant downtown core comprised of 100-year-old multistory buildings that house restaurants, assembly occupancies, mercantiles, offices and residential units. Fire and Life Safety Inspections came under the authority and responsibility of the City of Prosser in 2015. Proper fire and life safety inspections must be maintained to minimize the occurrences of devastating downtown fire losses.

- **Other** - Relying primarily on Volunteer Firefighters, it can be a struggle to mount an effective initial response force to incidents, and a large/complex natural cover fire or structure always requires the assistance from neighboring agencies to mitigate. To augment daytime

response in during the summer months, seasonal employees help with station tasks and incident responses.

The two fire stations are not staffed around the clock, and calls that occur at night or over the weekend are staffed with personnel responding from home. Continue to identify ways to decrease "turnout time" to incidents, which includes identifying funding to house responders at the headquarters fires station.

Identifying and installing fuel breaks with heavy equipment. Continue to build private landowner relationships and identify areas where fuel breaks will have a positive impact.

Fire District 4:

- **Wildland Urban Interface Defensible Space** - Funding for additional staff time is needed by the fire District to enhance the Firewise program and complete structural assessments every two years and deliver educational materials to potential participants as the population continues to grow and change. There are additional areas that abut City of West Richland property (specifically the sewer treatment plant) as well as many private homes that have never had a significant fire resulting in large buildup of fuel. The area also has extremely limited access and does pose a significant hazard if wildfire does gain access to the area. Efforts are needed to coordinate fuel reduction or defensible space around this area. This will be challenging, as there are wetlands in the area as well as being adjacent to the Yakima River and associated fish habitat.

- **Rural Water Supplies** - Continue to seek and develop water supply systems in rural areas for assistance in fire suppression. The District has worked with some of the vineyards to establish water supply points at irrigation ponds, but these are not always a reliable source of water depending upon the time of year and required water use for the vineyards. The District has also worked with the Barker Ranch to identify water supply access points to be developed as the ranch makes improvements to the irrigation and wetland management program. These water supplies allow access to water supplies closer to the threat of wildland fires as identified by landowners, users and the District.

- **Communications** - SECOMM has a rather sophisticated, intricate, and reliable – repeater simulcast microwave system. The system has some limitations to cover the entire two counties due to topography despite the multiple channels and repeater sites.

- **Residential and Agricultural Burning** - The District continues to see a high number of controlled burning activities that are not allowed under the current Benton County Clean Air Authority rules. The types of allowed burning depend upon the urban growth boundaries as well as agricultural use of lands. Many of the residents who have lived in the area for longer,

still conduct burning of natural vegetation even though they are inside the urban growth boundary, where this type of burning is not allowed. Efforts to educate the public on the rules continues to be a challenge based on the perceived rural nature of large portions of the District.

- **Cooperative Agreements** - The District is part of an automatic and mutual aid agreement system with Three counties; Benton, Franklin and Walla Walla. We have developed a dispatch matrix that allows us to put a large amount of resources on an incident in a relatively short period of time in the urban areas, but the rural areas take much longer to deploy resources due to the remote areas.

- **Other** - As with most combination career/volunteer agencies, the District continues to seek ways to improve its ability to recruit and retain reliable personnel to assist with the variety of responses and other administrative activities that must occur to be a progressive and successful organization.

Fire District 5:

- **Residential Growth** – The District has not seen significant population growth. However, there is growth in the suburban areas on the outer district lines, with housing development expanding into the district.

- **Communications –** The District is part of a Bi-County dispatch center (SECOMM) that is responsible for dispatching all fire, ems and police, as well as one fire agency from a third county, Walla Walla County. SECOMM has a VHF simulcast and microwave system utilized by fire agencies, and law enforcement agencies operate on an 800MHz radio system. The VHF radio system is outdated and will require a major overhaul within the next 2 to 5 years as parts are no longer available. The merger to one dispatch center was recent. With the addition of Franklin County Fire agencies, Pasco Fire Department and Walla Walla Fire District #5, radio traffic has increased. It seems that the number of dispatch staff needs to be increased to handle the increased radio traffic and calls.

- **Other** – The District is reliant on neighboring fire agencies for structure fires as well as for ALS services. There is a need to have access to Water Tenders and Type 1 Engines.

- **Cooperative Agreements** – The District has mutual aid agreements with neighboring fire agencies. The District will implement or renew needed mutual aid agreements.

Fire District 6:

- **Capacity needs or deficiencies for addressing fire risks -** Need more volunteers and paid staff. Have six seasoned responders that are near retirement age. However, these few

volunteers respond to a majority of the calls for service. These precious few members are the "backbone" of our organization and are vital to our continued operation. New volunteers have recently joined our ranks but will require several years of training to be able to take on medical and fire responsibilities.

The District does not enjoy a large donating population. Fundraisers in our economically depressed area do not produce the donations needed to purchase equipment. The tax base and a small amount of ambulance income are all that is available to operate on.

The remaining budget priorities are placed on personal protective equipment, maintenance, ensuring apparatus are safe, training firefighters and training EMT's. Several fire stations owned by the District are thirty-five years old and require major repair.

- **Other** - Need weed abatement along the state, federal highways and railways. The overgrowth and close proximity of combustible vegetation causes multiple large fires every year. With our rural location, this can be detrimental to the person in need if we do not have the responders to help. Additional training would also be helpful. Due to rural location it is difficult to get outreach training for firefighter 1, wildland firefighter and Emergency Medical Technician.

9.2.5 Prioritizing Public Facility Projects

Prioritization of projects and programs can be difficult, so the County has established the following general guidance in prioritizing public facility projects, from highest to lowest priorities they include:

1. Repair existing public facilities to achieve or maintain LOS
2. Construct new or expanded public facilities to achieve or maintain LOS
3. Repair existing public facilities or construct new public facilities to eliminate hazards
4. Construct new or expanded public facilities to achieve or maintain LOS and other needs as forecasted during the next 6-years
5. Repair existing public facilities or construct new public facilities to reduce the operating cost of providing a public service or facility
6. Construct new facilities to provide excess capacity that will be needed beyond the next 6 years
7. All other facilities the County is obligated to complete that do not meet the criteria above

9.2.6 Other Considerations

County strategic goals, key objectives, and financial policies provide the broad parameters for development of the annual CIP. Additional considerations include the following:

- Does a project support the County Commissioners' strategic goals?
- Does a project qualify as a capital project as defined in the County Budget Policy and have an expected useful life of at least 5 years?

- Does a project satisfactorily address all federal, state, and county legal and financial requirements?
- Does a project support the County's favorable investment ratings and financial integrity?
- Does a project support the County's goal of ensuring all geographic areas of the County have comparable quality in the types of services that are defined in the CIP?
- Does a project prevent the deterioration of the County's existing infrastructure and respond to and anticipate future growth in the County?
- Does a project encourage and sustain quality economic development?
- Is a project responsive to the needs of residents and businesses within the constraints of reasonable taxes and fees?
- Does a project leverage funds provided by other units of government where appropriate?

Master plans also help determine which projects should be included in the CIP, along with associated timeframes. Economic forecasts also inform the capital planning process.

9.3 Financing

9.3.1 Funding Sources for Public Facility Projects

Identifying funding sources for public facility projects is critical to the success of the Benton County's CIP. It requires coordination among County Departments and a thorough understanding of the fiscal capacity of the County to finance these facilities. Public facility projects are often very expensive, requiring multi-year commitments of financial resources. It is important to understand that a CIP does not represent a financial commitment or guarantee that the projects will be implemented. County approval does not automatically authorize funding. It does approve the program in concept and provides validity to the planning process. In an attempt to stretch money as far as possible, many different funding sources are considered. The financing of some projects relies on outside grant resources. If grants are not received, the projects may be delayed, removed, or financed with dedicated revenues, general revenues, excess surplus funds, or bond financing.

The County is guided by the following three principles in selecting a funding source for public facility improvements:

Equity. Whenever appropriate, the beneficiaries of a project or service will pay for it. For example, if a project is a general function of government that benefits the entire community, such as a public safety facility, the project will be paid for with general fund revenues or financed with general obligation bonds. If, however, the project benefits specific users, such as a road improvement district, then the revenues will be derived through user fees or charges, targeted taxes, and assessments.

Effectiveness In selecting a source or sources for financing projects, the County will select one or more that effectively funds the total cost of the project. For example, funding a capital project, or the

debt service on a project, with a user fee that does not provide sufficient funds to pay for the project is not an effective means of funding the project.

Efficiency If grants or current revenues are not available to fund a project, the County will select a financing technique that provides for the lowest total cost consistent with acceptable risk factors and principals of equity and effectiveness. These methods currently consist of fixed-rate general obligation or revenue bonds issued by the County, special funding programs funded by state or federal agencies, or special pool financing. When public facility improvements are located both in a City and UGA, the County and City can jointly sponsor the formation of Local Improvement Districts, Road Improvement Districts, and other benefit areas for the construction or reconstruction of infrastructure to a common standard.

9.3.2 When Funding is Unavailable

When funding is unavailable to meet existing needs and support plan implementation or as County priorities evolve, the capital facilities plan will be revised at the next annual amendment in one or more of the following ways, as applicable:

- Reduce the LOS for one or more public facilities
- Increase the use of other sources of revenue
- Decrease the cost, and therefore the quality of some types of public facilities while retaining the quantity of the facilities that is inherent in the standard for LOS
- Decrease the demand for and subsequent use of public facilities
- Reassess the land use element

9.3.3 Maintenance Financing

The County intends to set aside sufficient revenue to finance ongoing maintenance needs and to provide periodic replacement and renewal of public facilities. This is necessary to keep public facilities in good repair and to maximize their useful life. The County should not provide a public facility or accept the provision of a public facility by others, if the County or other provider is unable to pay for the subsequent annual operating and maintenance costs of the facility.

9.4 Existing Facility Inventory

Benton County maintains a comprehensive capital facilities inventory to meet insurance requirements that is incorporated by reference into the Comprehensive Plan and available upon request. The County existing public facility inventory is updated annually. General capital facilities owned and maintained by the County include:

- County administrative office support including auditor, treasurer, assessor, prosecuting attorney, planning and building, coroner, facilities and recreation, and road
- Construction and maintenance of rural and "farm to market" roads

- Law and justice, including the operation and administration of the courts, jail, and sheriff's functions
- Juvenile justice facilities including detention
- Regional parks and recreational facilities
- Bi-county regional health and human services
- Drainage improvement districts for low lying areas along river mainstems
- Waste management
- Regional fairground facilities

9.5 Capital Improvement Plan

The CIP is a 6-year list of projects updated at least biannually and used by the County to identify, maintain, and pay for current and future infrastructure needs for services provided by the County. The County prepares a comprehensive capital projects list that correlates funding sources to needed improvements and identifies project funding. The CIP is reviewed and updated in conjunction with the County budget process. Each update to the County's CIP is adopted by reference into the Comprehensive Plan.

Because the CIP is a working document regularly amended, it is not included in its entirety as a part of the Comprehensive Plan but is incorporated by reference.

9.6 Siting of Essential Public Facilities (RCW 36.70A.200)

The GMA requires that the comprehensive plans of each county and city include a process for identifying and siting essential public facilities. Essential public facilities include those facilities that are typically difficult to site, such as airports, state education facilities, state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and inpatient facilities including substance abuse facilities, mental health facilities, group homes and secure community transition facilities. The OFM maintains a regional list of such facilities that are required to be built within the next 6 years. Because of their nature, these facilities may have large land parcel requirements and unique siting needs with regard to public services and transportation or produce noise and raise complex public health and safety concerns. These requirements and impacts would be imposed upon those living and working in the surrounding area of such facilities. Benton County shall provide land use zones that are compatible and development regulations that are consistent with the statutory requirements applicable to these facilities. The County uses a review process that allows citizen, city, and state agency input when such facilities are proposed. The siting process is summarized in Table 9-2: Essential Public Facilities Siting Matrix.

Airports and heliports operated for the benefit of the public must be appropriately planned to assure that adjacent land uses are compatible. The Benton County Zoning Ordinance shall provide

development regulations that protect life, property, and prevent the establishment of airspace obstructions and other hazards which interfere with safe airport operations.

Table 9-2
Essential Public Facilities Siting Matrix

Use: Essential Statewide Facility	Zone	SEPA	Public Utilities		Reviewing Board		Responsible Jurisdiction (local/ federal/ state)	Benton County Permits	Special Siting Criteria
			Water	Sewer	PC/ BOCC	BOA[1]			
Airport[2]	RL 5, GMA-AG, LI, HI	Yes	X	X	A/H Overlay	X	RTPO/FAA/WSDOT/ Ecology	BC-Building	Transportation access public services
State Education	UGAR, RL 5, GMA-AG	Yes	X	X		X	Ecology/DOH	BC-Building	Transportation access public services
State & Regional Transportation	All Zones	Yes				X	Ecology/WSDOT/RTPO	BC-Building Structures only	Public services structures only
State Correctional	HI, GMA-AG	Yes	X	X		X	Ecology/DOH	BC-Building	Transportation access public services
Solid Waste Handling	LI, HI, GMA-AG	Yes	X			X	Ecology	BC-Building	Transportation access public services
In-patient Health[3]	UGAR, RL 5	DOS[4]	X	X		X	Ecology/DOH/DSHS	BC-Building	Transportation access public services
Secure Community Transition[5]	HI	DOS	X	X		X	Ecology/DOH/DSHS	BC-Building	SCTF's land and cell access, not in close proximity to risk potential activities
Others as listed by OFM[6]	TBD[7]	DOS	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Notes:
Source: 2006 Benton County Comprehensive Plan, Appendix 4

1. Conditional Use Permit
2. Airport/Heliports are subject to the provisions of 11A.86
3. Substance abuse, mental health, and group homes
4. Depending on size of facility
5. SCTFs as required by RCW 36.70A.200 & RCW 71.09 (civilly committed sex offender housing)
6. Facilities listed by the OFM required or likely to be built within the next 6 years (RCW36.70A.200)
7. To be determined by Benton County Planning Department as projects are identified

A/H: Airport/Heliports
BC: Benton County
BOA: Board of Adjustment
BOCC: Board of County Commissioners
DOH: Department of Health
DOS: Determination of Significance
DSHS: Department of Social and Health Services
Ecology: Department of Ecology
FAA: Federal Aviation Administration
GMA-AG: Growth Management Act Agriculture
HI: Heavy Industrial
LI: Light Industrial
OFM: Office of Financial Management
PC: Planning Commission
RCW: Revised Code of Washington
RL: Rural Lands
RTPO: Regional Transportation Planning Organization
SCTF: Secure Community Transition Facility
SEPA: State Environmental Policy Act
TBD: To be determined
UGAR: Urban Growth Area Residential
WSDOT: Department of Transportation

10 Utilities Element

10.1 Introduction and Purpose

Utilities include the supply, treatment, and distribution, as appropriate, of domestic and irrigation water, sewage, storm water, natural gas, electricity, telephone, cable television, microwave transmissions, and streets. Such utilities consist of both the service activity along with the physical facilities necessary for the utilities to be supplied. Utilities are supplied by a combination of general purpose local governments as well as private and community based organizations.

The primary regulatory agency for most utilities in Washington State is the Washington Utilities and Transportation Commission (WUTC). The WUTC ensures that safe and reliable service is provided to customers at reasonable rates. The WUTC regulates the rates and charges, services, facilities, and practices of most of Washington's investor-owned gas, electric and telecommunication utilities. As defined by the WUTC, some utilities are considered a critical service, namely electricity and standard telephone, and must be provided "upon demand." In order to fulfill public service obligations, these utility providers must plan to extend or add to their facilities when needed. On the other hand, natural gas is not considered a necessity, but rather a utility of convenience. All utilities regulated by the WUTC are prohibited from passing the cost of new construction onto the existing rate base. Federal agencies also play a role in regulating some of these utilities. For example, the Federal Communications Commission regulates telecommunications. In addition, the Federal Energy Regulatory Commission, an independent commission with the U.S. Department of Energy, sets rates and charges for the transportation and sale of natural gas, the transportation of oil by pipeline, the transmission and sale of electricity, and the licensing of hydroelectric power projects. Local government, too, has a role in regulation for certain utilities, such as franchise agreements. However, the effort behind meeting GMA requirements is not primarily regulatory; rather, it is to promote coordination and cooperation between jurisdictions and utility providers.

The GMA has given local jurisdictions the obligation and requirement to plan for utilities including identification of utility corridors. The intent of this element is to support utility providers in meeting their public service obligations to provide service on demand to existing and future customers. It is also the intent to minimize negative impacts resulting from the provision of services on the residents, infrastructure, and environment of the County. The County's responsibilities for utilities ranges from regulating their land use, to permitting their activities in public rights-of-way.

Virtually all land uses require one or more of the utilities discussed in this Chapter. Local land use decisions drive the need for new or expanded utility facilities. In other words, utilities follow growth. Expansion of the utility systems is a function of the demand for reliable service that people, their land uses, and activities place on the systems.

Existing and updated maps of utilities in Benton County are maintained by the County GIS to meet the requirements of the Utilities element as outlined in state law. In addition, Capital Facilities Plans of utility providers available in Benton County are hereby adopted by reference to meet the requirements of identifying proposed facilities. See Appendix A: Map Folio, Figure 16 – Public Utility and Rural Electric Association Service Areas.

Information on other special service providers such as fire, port, and school districts, is included in this chapter.

10.2 Electricity

10.2.1 Bonneville Power Administration

The Bonneville Power Administration (BPA) is an agency of the U.S. Department of Energy. It wholesales electric power produced at 29 federal dams located in the Columbia-Snake River Basin, as well as one non-federal nuclear plant. BPA does not own or operate any federal dams; however, it does sell the power produced by these dams as well as power produced by Energy Northwest-operated nuclear power plant located just north of Richland. The U.S. Army Corps of Engineers owns and operates Bonneville Dam, and Grand Coulee Dam is owned and operated by the U.S. Bureau of Reclamation. Between them, these two agencies run all of the dams whose power is sold by BPA.

Electricity is purchased from the BPA and supplied to areas in Benton County via two local public utilities: the Benton County Public Utility District (Benton PUD) and Benton Rural Electric Association (Benton REA).

10.2.2 Benton County Public Utility District

The Benton PUD was established by vote of the residents and began electric distribution operations in October 1946. The Benton PUD service area is entirely within Benton County and includes the cities of Kennewick, Benton City, Prosser, and portions of West Richland. Benton PUD serves Benton County except for the City of Richland, the U.S. Department of Energy's operations on the Hanford Reservation, and those rural areas of the County that are served by Benton REA. It maintains offices in Kennewick and Prosser.

10.2.3 Benton Rural Electric Association

Incorporated in 1937, Benton REA is a consumer owned rural cooperative, which serves portions of Benton, Lewis, and Yakima counties. Benton REA's 1,300 square mile territory extends from the Columbia River at Paterson, north to the Hanford Reservation, and west to White Pass in the Cascade Mountains.

Benton REA serves the rural areas of the Benton County and some urban areas. While Benton REA was originally set up to serve the rural customers of Benton and Yakima counties, the cooperative is becoming more of an urban player as the cities expand into rural areas. Benton REA also serves the community of West Richland and many parts of the UGA around Richland, Benton City, Prosser, and parts of the Hanford Reservation.

10.3 Wind Energy

Deregulation of the electric industry and subsequent energy supply issues have emphasized the need for new and diverse energy sources in the BPA's service area. Wind is a renewable resource that provides an environmentally friendly (or green) source of energy and allows BPA to diversify its energy sources. Several "wind farms" have located in the County on privately owned agricultural land pursuant to leases between landowners and the project developer. Large turbines are strategically placed along the major ridges to capture wind and generate power which is fed back to BPA facilities through substations.

Wind turbine in wheat fields

10.4 Natural Gas

10.4.1 Williams Northwest

Williams Northwest Pipeline operates and maintains its natural gas pipeline that runs through Benton County near Plymouth. Virtually all natural gas is now transported through pipelines.

"Gathering" lines collect and carry the natural gas from wells to transmission lines or plants for processing. A series of compressor stations propel the fuel long distances overland through major transmission pipelines to local distribution and service lines or storage facilities. A network of small-diameter distribution mains and service lines transport the gas to end-users. Related facilities include, but are not limited to cathodic protection stations, test posts, mile markers, meter stations, and valves.

Future pipeline safety concerns are related to the adverse impact and encroachment of development near transmission lines. With more people living and working near transmission lines, the severity of pipeline failures from all causes are likely to increase.

10.4.2 Cascade Natural Gas

Cascade Natural Gas Corporation builds, operates, and maintains natural gas facilities serving Benton County. Cascade Natural Gas is an investor owned utility serving customers in 16 counties in Washington State. The Pacific Northwest receives its natural gas from the Southwest United States, and from neighboring Canada. Natural gas is supplied to the entire region via two interstate pipeline systems. The Northwest Pipeline Corporation owns and operates the network that supplies natural gas to Benton County. Natural gas is stored in a facility in Plymouth.

10.5 Telecommunications

The Telecommunications Act of 1996 enacted into law the first comprehensive rewrite of the Communications Act of 1934. The act establishes national guidelines for enabling equitable competition in all telecommunication markets, including the local telephone market, and identifies respective roles of the Federal Communications Commission and the states to accomplish the transition. Several telephone companies supply local, long distance, and cellular service in Benton County.

10.6 Water and Sewer Systems

Benton County does not currently own, operate, or maintain a water or sewage treatment facility with the exception of occasional temporary responsibility for water systems under "receivership" per RCW 70.119A. Sources of water and sewer disposal for housing units are shown in Table 10-1.

Table 10-1
Sources of Water and Sewer Disposal

Source	How Served
Water	Public/Private System
	Private Well/Other
Sewer Disposal	Public System

	Septic Tank/Private

10.6.1 Existing Conditions

A public supply is generally defined as any system, excluding systems serving only one single-family residence that provides piped water for human consumption. Washington State Department of Health keeps an inventory of water systems in the County that includes a classification of systems according to type of system and number of customers served. The criteria used in establishing the classifications are described in Table 10-2.

Table 10-2
Washington State Department of Health Water System Criteria

Class	Water System Criteria
Group A	15+systems/ or serves 25+ people for over 60 days a year
Group B	System with 4+ service connections but <15, serving <25 people a day for over 60 days a year.

Washington State Department of Health defines a "community" water system as a public water system that serves a permanent or seasonal population (e.g., subdivisions, mobile home parks), and a "non-community" water system as a public water system that serves a transitory population (e.g., restaurant, motel). Benton County has Group A water systems, including both non-transient and transient (e.g., campgrounds) and Group B water systems.

The source of water supply is ground water for all these systems with the exception of the Cities of Kennewick and Richland, which in addition to ground water receive water from the Columbia River. Information for each city's water system, the population served, and the average daily amount of water used, can be found in each entities' comprehensive plan.

Most rural residents rely on on-site septic tanks and drain fields for their wastewater system needs. While adequately designed and installed on-site septic systems can be appropriate for rural level development, maintenance of such systems varies from excellent to none at all. Poorly maintained septic systems are a source of ground and surface water pollution and have been identified both at the state and local level as significant contributors to high nitrate levels in soil and coliform bacteria in surface water. All on-site systems in the County are permitted and regulated by the Benton-Franklin Health District.

10.6.2 Current Trends

Living in rural areas has become a lifestyle preference in today's society. The influx of people moving into newly-developed areas of Benton County means more individual or community wells that depend on groundwater and an increased demand on the groundwater supply.

Under state law, all new public water systems must be owned or operated by an SMA. This ensures that the new system has sufficient management and the financial resources to provide safe and reliable service to the system users.

If a SMA is not available to receive ownership/or operation of the system and Washington State Department of Health determines that the new system has met sufficient management and financial resource criteria to provide safe and reliable service, then the new system may be conditionally approved. The conditions may include future inclusion into a SMA, or findings that the system meets the Washington State Department of Health criteria for management, and include an ongoing review of its operational history and status.

Currently the City of Richland and an entity named Water System Management operate SMAs in Benton County. If a system loses its owner/operator due to non-compliance, the system goes into "receivership." During receivership actions, Washington State Department of Health meets with water systems owners and users to discuss restructuring options. If no other SMA or person is willing to be named as a receiver, the court appoints the County as receiver. At present the County is in receivership of one such water system, with the City of Richland SMA operating the system.

State regulations include criteria for sewage treatment systems located in gravely or course sand soils such as minimum land area requirements, or special engineered systems (i.e., mound, sand line trench systems). There are several areas in the County were these soils exist. The Benton-Franklin Health District oversees the placement and permitting of on-site sewer systems. Systems over 3,500 gallons per day are permitted through Ecology.

10.6.3 Future Considerations

On-site water and waste systems for multiple users may be a desirable alternative to the single user systems and the extension of municipal systems. The option to cluster development in Rural Community Centers opens the opportunities for the use of such systems.

In the rural communities of Whitstran, Paterson, Plymouth, and Finley, there is a desire among residents for public water systems, which are perceived to be more affordable than individual wells. If such systems were to become a reality, the logical next step could be public waste disposal systems.

A water resource management program to conserve and maintain the County's groundwater supply will be necessary to provide a long term dependable supply sufficient to sustain the future needs for potable water and water for agricultural purposes, as discussed further in Section 4.5.

10.7 Solid Waste

10.7.1 Existing Conditions

The *2013 Benton County Comprehensive Solid Waste Management and Moderate Risk Waste Management Plan* (2013 Plan; Appendix K) provides background and guidance for a long-term approach to solid waste and moderate risk waste management in the region. This 2013 Plan comprises the combined comprehensive solid waste management plan and Local Hazardous Waste/Moderate Risk Waste Plan for the incorporated and unincorporated areas of Benton County.

The purpose of the 2013 Plan is to serve as a roadmap to managing the comprehensive solid waste and moderate risk waste management systems in Benton County. The 2013 Plan was developed as a joint effort of Benton County and the cities of Benton City, Kennewick, Prosser, Richland, and West Richland. It is intended to provide citizens and decision makers in Benton County with a guide to implement, monitor, and evaluate future activities in solid waste for a 20-year period. The recommendations for the 2013 Plan not only guide local decision makers, but substantiate the need for local funds and state grants to underwrite solid waste and moderate risk waste projects.

10.8 Special Service Providers

10.8.1 School Districts

The County is divided into seven school districts. All districts are located entirely within the County, with the exception of the Grandview District, which is principally located in Yakima County, but includes approximately 6 square miles of Benton County (stretching 3 miles north and south of Highway 12 at the Yakima County line).

All school districts offer kindergarten through twelfth grade education except the Paterson School District, which contracts sixth through twelfth grades (middle and high school levels) with the Prosser School District.

10.8.2 Higher Learning

Increasingly, education is the key to individual economic success. Frequently, this means a college degree. For counties, a well-educated population is also an ingredient in economic success.

Columbia Basin College, located at Pasco in adjacent Franklin County, is the primary college in the area; they also have a branch campus in Richland. Columbia Basin College is a two-year community college offering a wide range of academic, vocational, and night school programs.

Washington State University (Pullman) has a branch campus located in Richland, offering both graduate and masters education programs. This campus continues to grow in both facilities and

programs offered, and Washington State University degree programs are often integrated with Columbia Basin College programs.

10.8.3 Library Districts

The Mid-Columbia Library includes both Benton and Franklin counties and is directed by a board of seven members appointed jointly by the Benton and Franklin County Commissioners. The district's main library is located in Kennewick, while branch libraries are located in towns in both counties. The rural areas are served by a bookmobile that maintains a scheduled route throughout the district. The City of Richland has its own city library.

10.8.4 Fire Districts

The five incorporated communities and portions of the remaining unincorporated area of Benton County are served by a mixture of municipal and rural fire departments. Richland and Kennewick municipal fire departments are manned by full-time firemen. Prosser, Benton City, and West Richland operate with full and part-time positions along with volunteer staff. The rural districts are principally manned by volunteer personnel. A mutual aid cooperative-agreement exists between Richland, Kennewick, Pasco, Benton City, Prosser, and the rural districts.

Long-range fire protection needs will also require increases in equipment and manpower to maintain an effective level of protection. With increased urbanization of the County, increased full-time employment due to increased LOS required by residents as opposed to volunteer service can be expected to occur in some of the County's fire protection organizations.

An additional factor is the integration of fire protection needs with long-range water needs. The source, storage capacity, and distribution systems of water systems, as well as fire hydrant placement in urban density developments, must be adequate to provide sufficient volume and pressure for firefighting needs.

10.8.5 Hospital Districts

General hospitals are located in Richland, Kennewick, and Prosser providing County residents with inpatient care. The Kennewick and Prosser hospitals are each operated by a public entity in the form of a hospital district directed by elected board members, while the Richland hospital is privately owned and operated. Benton County is also served by a variety of public and private medical clinics providing treatment for most medical concerns.

10.8.6 Benton-Franklin District Health

This regional health agency is responsible for a wide variety of health-related programs in Benton and Franklin counties. Some examples of its activities are in the environmental health division: solid

waste, permitting community wells (2 to 4 hookups), approval of on-site sewage disposal systems, and restaurant inspections. The public health division serves the public with immunizations, tuberculosis and sexually transmitted disease clinics, and registration of birth and death certificates.

10.8.7 Benton Conservation District

Benton Conservation District is a non-regulatory organization established to provide landowners with technical and financial assistance and dedicated to the wise stewardship of soil, water, air, fish, and wildlife in Benton County. Benton Conservation District is funded by grants and a special assessment authorized by Benton County Commissioners.

10.8.8 Mosquito Control District

The Benton County Mosquito Control District is established to eradicate mosquitoes, particularly the mosquito *Culeax tarsalis*, which is a carrier of sleeping sickness. The district is administered by a manager, who is directed by a 12-member board appointed by the Commissioners of Benton and Yakima counties, and mayors from the respective city councils of the cities who are within the district (Kennewick, Benton City, Prosser, Richland, West Richland, Mabton, and Grandview). There are three board members representing the unincorporated area of Benton County. The district encompasses 354 square miles within the Yakima and Columbia river drainages, exclusive of the Horse Heaven and Rattlesnake hills, and the Hanford Reservation.

10.8.9 Benton Clean Air Authority

The Benton Clean Air Authority carries out the requirements of the Washington State Clean Air Act, RCW 70.94, within the boundaries of Benton County. The agency functions as a single county authority to control the emissions of air contaminants from all sources within the County. The agency is charged with implementing and overseeing agricultural and backyard burn programs; air quality monitoring; asbestos removal notifications and inspections; industrial and commercial air permitting; and enforcement of federal, state, and local air quality regulations.

10.8.10 Irrigation Districts and Private Irrigation Systems

Agricultural production that takes place across the midsection of the County, from the Yakima County line to the Finley area, is made possible by the Yakima Project developed by the U.S. Bureau of Reclamation, and by several large water rights on the Columbia River. The Yakima Project was developed primarily for the purpose of providing irrigation water for the fertile Yakima River Valley and consists of over 200 miles of canals and laterals. This project provides the water that enables the

Yakima Valley, which extends into Benton County, to continually be one of the Nation's premier producers of such crops as apples, mint, hops, cherries, and grapes.

The irrigation district locations in Benton County are listed below:

- Roza District
- Sunnyside Valley Irrigation District
- Benton Irrigation District
- Kennewick Irrigation District
- Kiona Irrigation District
- Columbia Irrigation District
- Badger Mountain Irrigation District

10.8.11 Noxious Weed Control District

The Benton County Noxious Weed Control District is directed by a board of five members appointed by the County Commissioners. The intent of the district is to promote weed control by instituting a program that emphasizes education as a means to assist landowners in the identification and control of noxious weeds listed on the County's noxious weed list.

10.8.12 Port Districts

Ports can develop property for industrial use and can lease and sell land, buildings, and facilities to private industry in accordance with state laws. State laws specify that ports may acquire, construct, maintain, operate, develop, and regulate within the district harbor improvements; rail or motor vehicle transfer and terminal facilities; water transfer and terminal facilities; air transfer and terminal facilities; and other commercial transportation, transfer, handling, storage, and terminal facilities and industrial improvements.

Port districts are funded by revenues from the operation of terminals, the sale or lease of properties, and tax levies. A port district may incur debt including issuing general obligation bonds up to 0.25 percent of the assessed value of taxable property in the district without vote of the people. An additional 0.05 percent debt may be incurred if 60 percent of the electorate approves. Port districts also have the power to issue revenue bonds for the acquisition, construction, reconstruction, or extension of various improvements.

There are two port districts in Benton County, the Port of Benton and the Port of Kennewick. They are governed by a three-member elected board of commissioners who appoint the Executive Director.

The Port of Kennewick District was formed in 1915 and expanded to its current area in 1954, including Kennewick, south Richland, West Richland, south Benton City, and the southeast part of the County. The Port of Benton District was formed in 1958 and includes Prosser, central and north Richland, and the majority of Benton City, as well as Hanford and northwest Benton County.

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Appendix A
Map Folio
(prepared by Benton County GIS)

Appendix B
Environmental Impact Statement Addendum

Appendix C
Public Participation Plan

Appendix D
Visioning Summary Results

Appendix E
Benton County-wide Planning Policies

Appendix F
Shoreline Master Program Update (2014)

Appendix G
Red Mountain AVA Master Site Plan (2012)

Appendix H
Transportation

Appendix H-1
Road Program 2016 – 2021
(or as updated)

Appendix H-2
Transportation Level of Service

Appendix H-3
Washington State Highway Inventory Within Benton County

Appendix H-4
Washington State Highway Inventory within Benton County and 2028 Forecast and Level of Service Analysis

Appendix I
Comprehensive Parks Plan, 2014 – 2020

Appendix J
Capital Improvement Plan, 2017 – 2022

Appendix K
Benton County Comprehensive Solid Waste Management and Moderate Risk Waste Management Plan, 2013

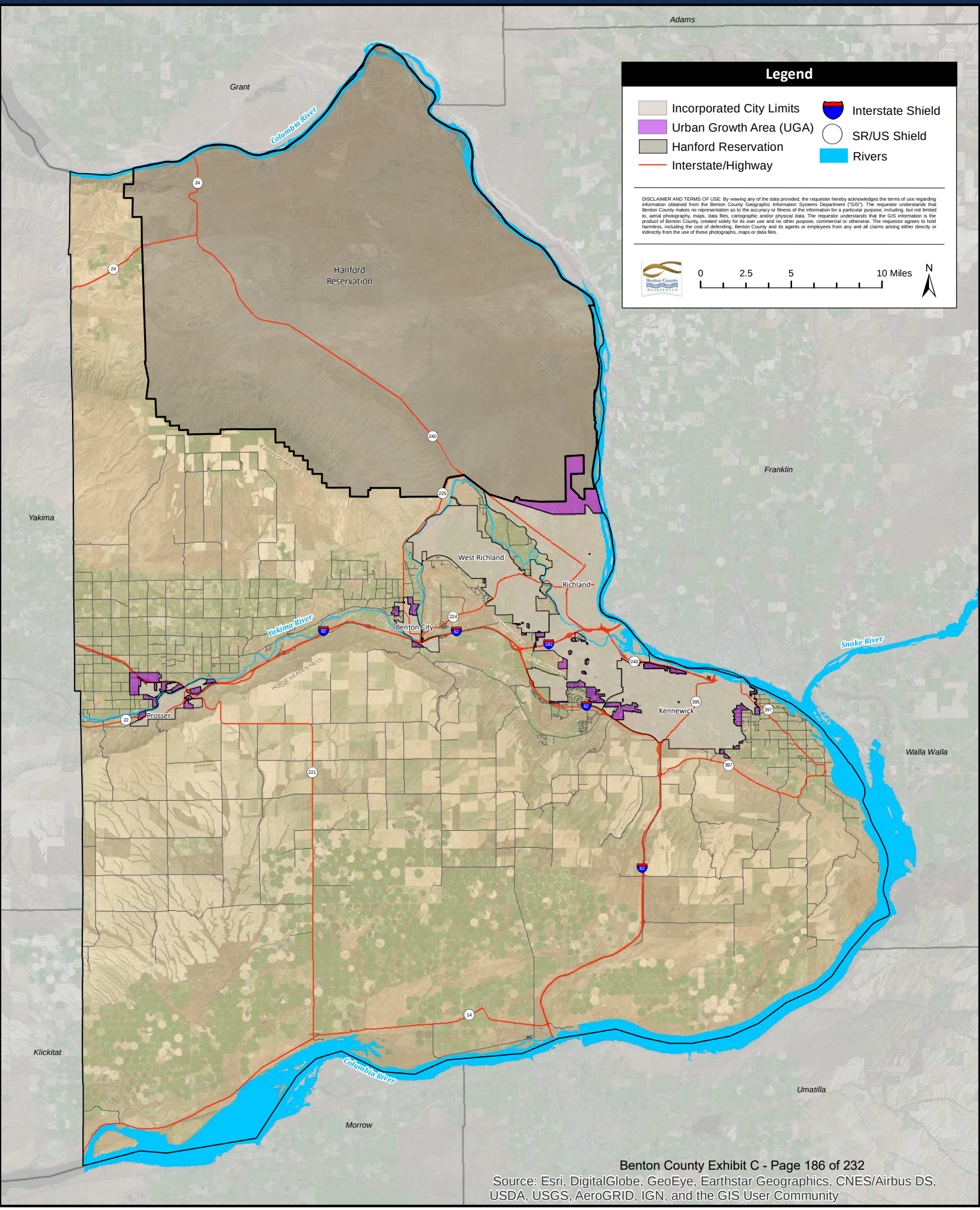
Appendix L
Agricultural Land Reclassification Memorandum (2018)

Appendix M
Benton County Community Wildfire Protection Plan (2018)

Appendix N
Benton County Natural Hazard Mitigation Plan (2019)

Appendix O
Comment Response Matrix

Figure 1: Vicinity Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure 2: Publicly Owned Lands Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

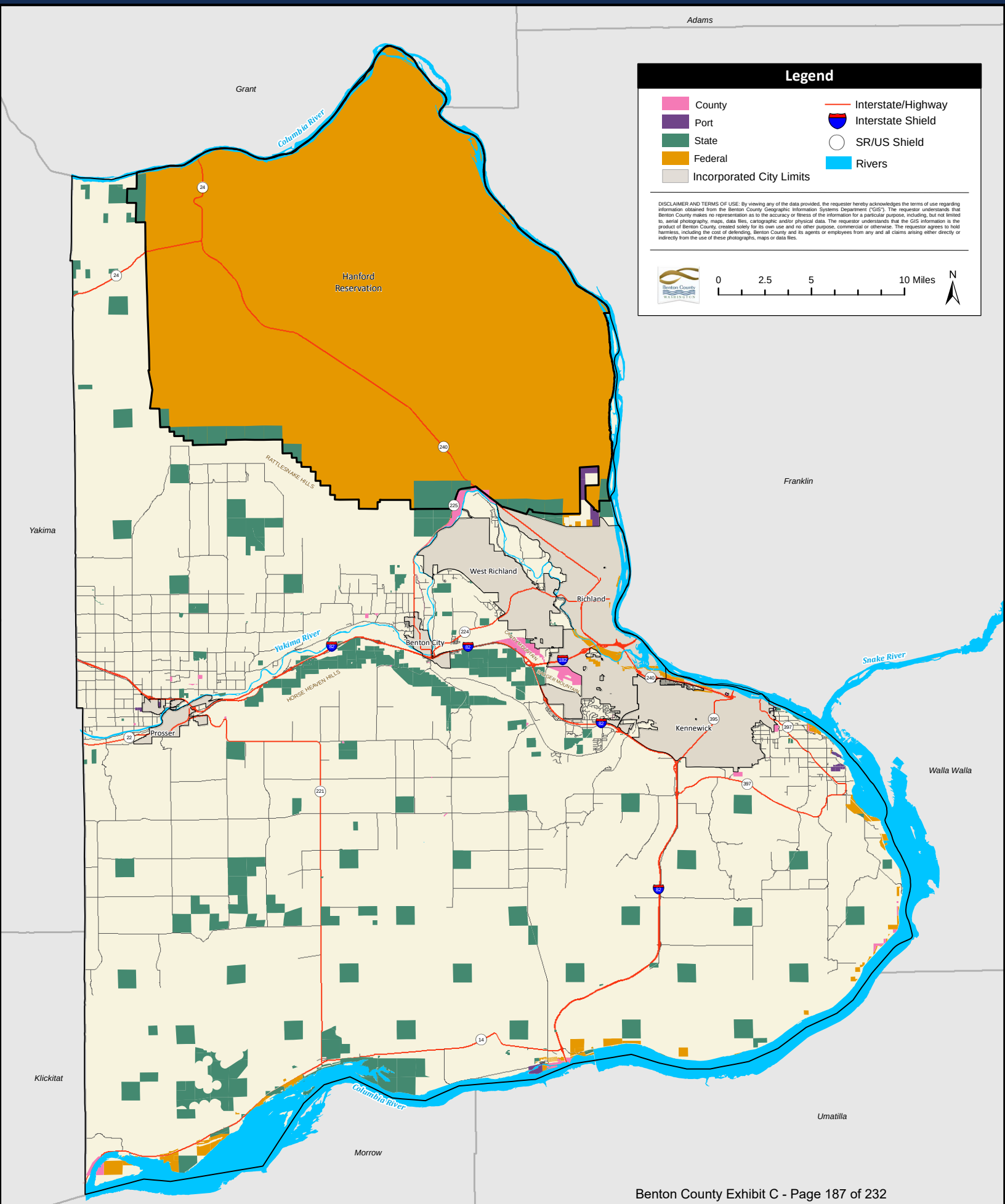


Figure 3: Existing Land Cover Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

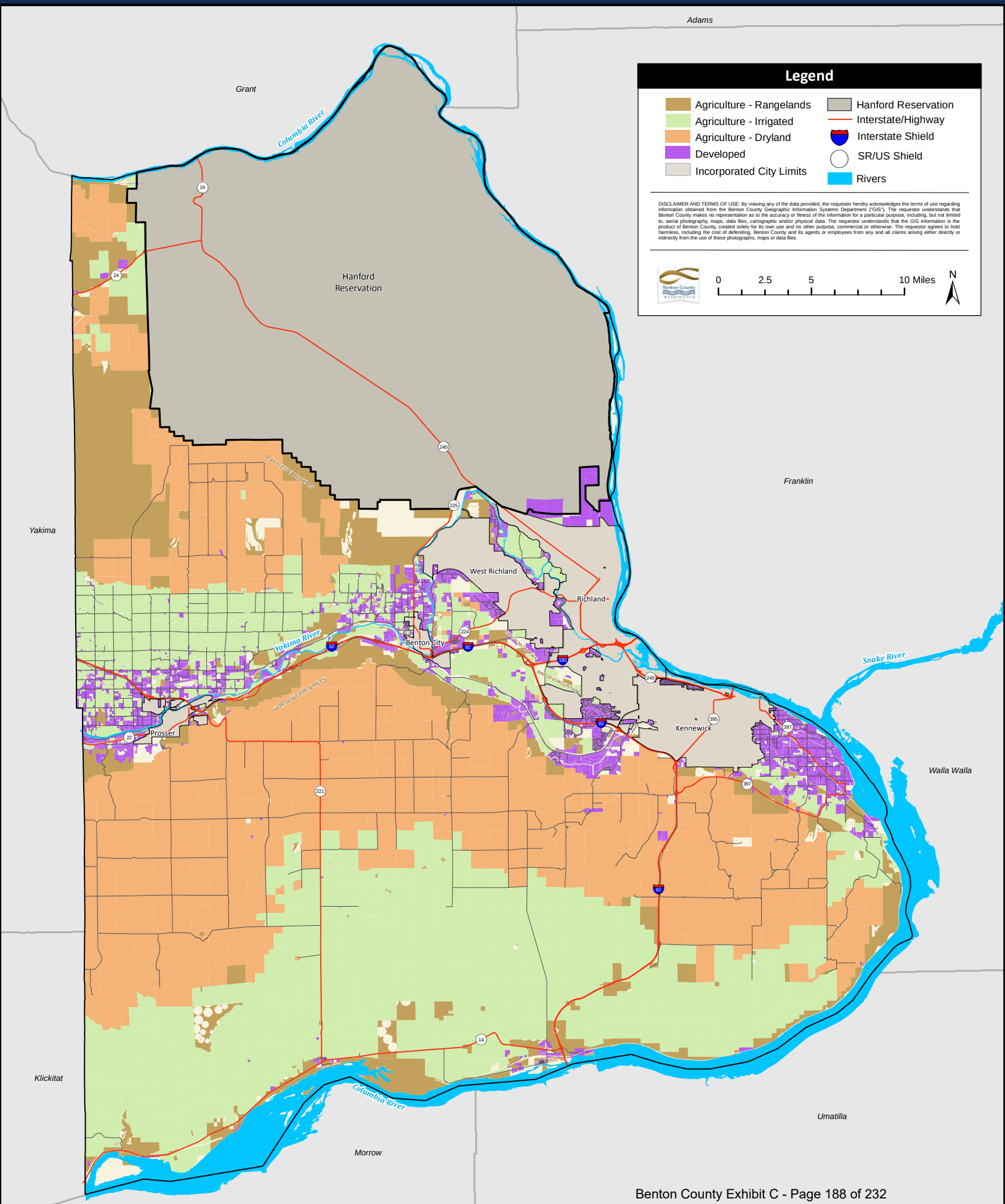
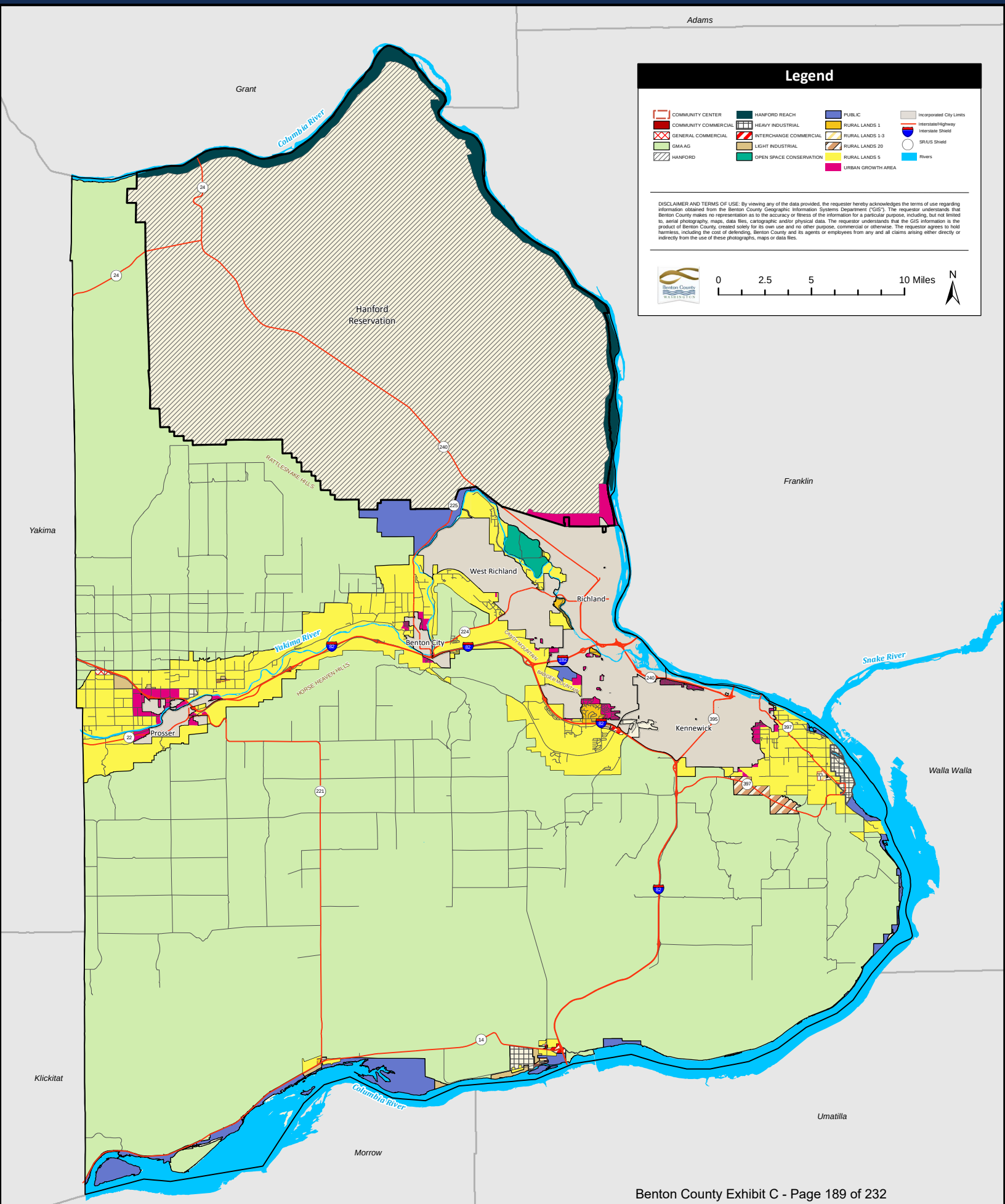
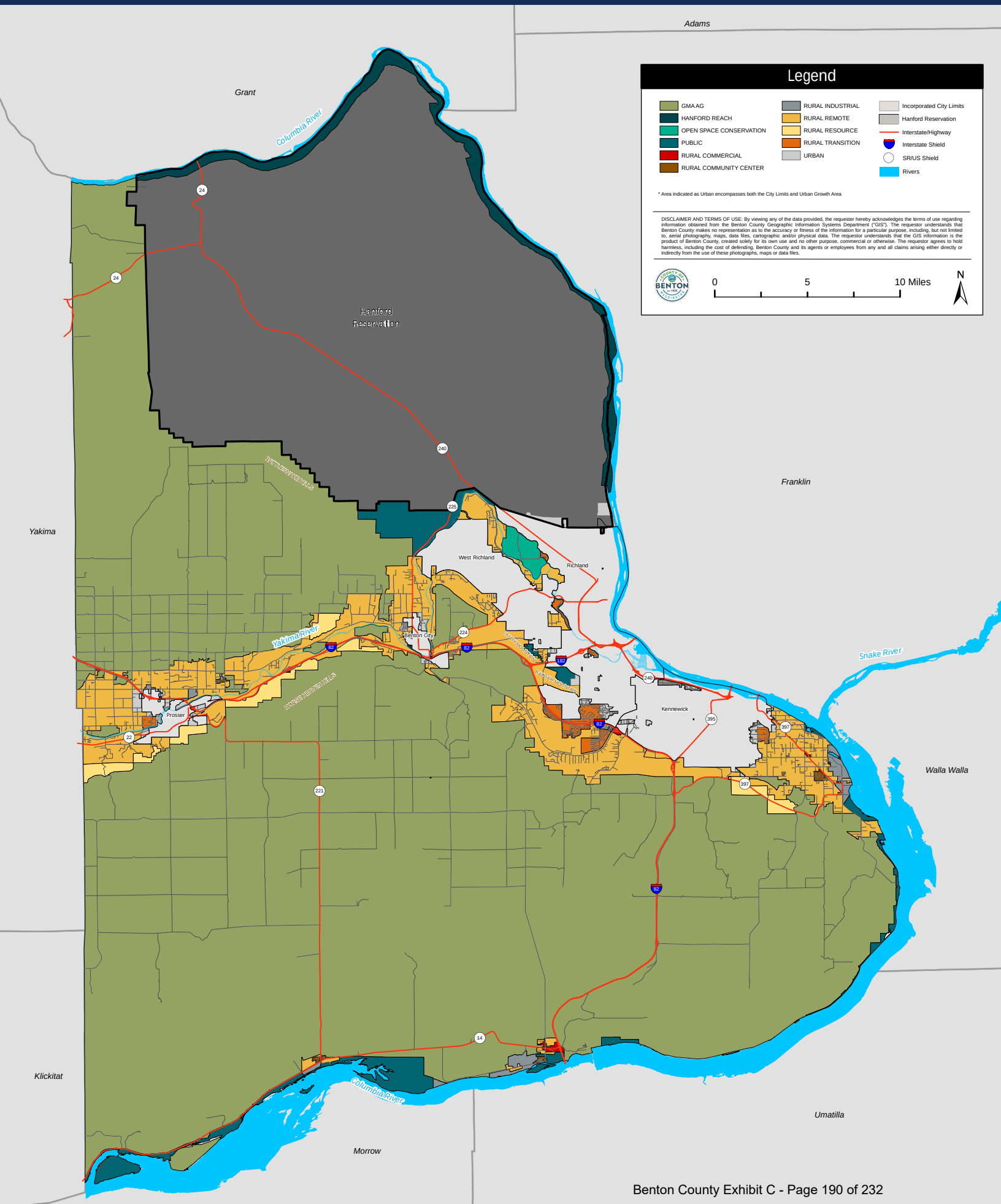


Figure 4: 2006 Periodic Update Land Use Designations Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018




Adams
Grant
Columbia River
Hanford Reservation
Franklin
Yakima
West Richland
Richland
Benton City
Yakima River
Snake River
Kennewick
Prosser
Walla Walla
Klickitat
Columbia River
Umatilla
Morrow
Legend
GMA AG
HANFORD REACH
OPEN SPACE CONSERVATION
PUBLIC
RURAL COMMERCIAL
RURAL COMMUNITY CENTER
RURAL INDUSTRIAL
RURAL REMOTE
RURAL RESOURCE
RURAL TRANSITION
URBAN
Incorporated City Limits
Hanford Reservation
Interstate/Highway
Interstate Shield
SR/US Shield
Rivers
* Area indicated as Urban encompasses both the City Limits and Urban Growth Area
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0
5
10 Miles
N

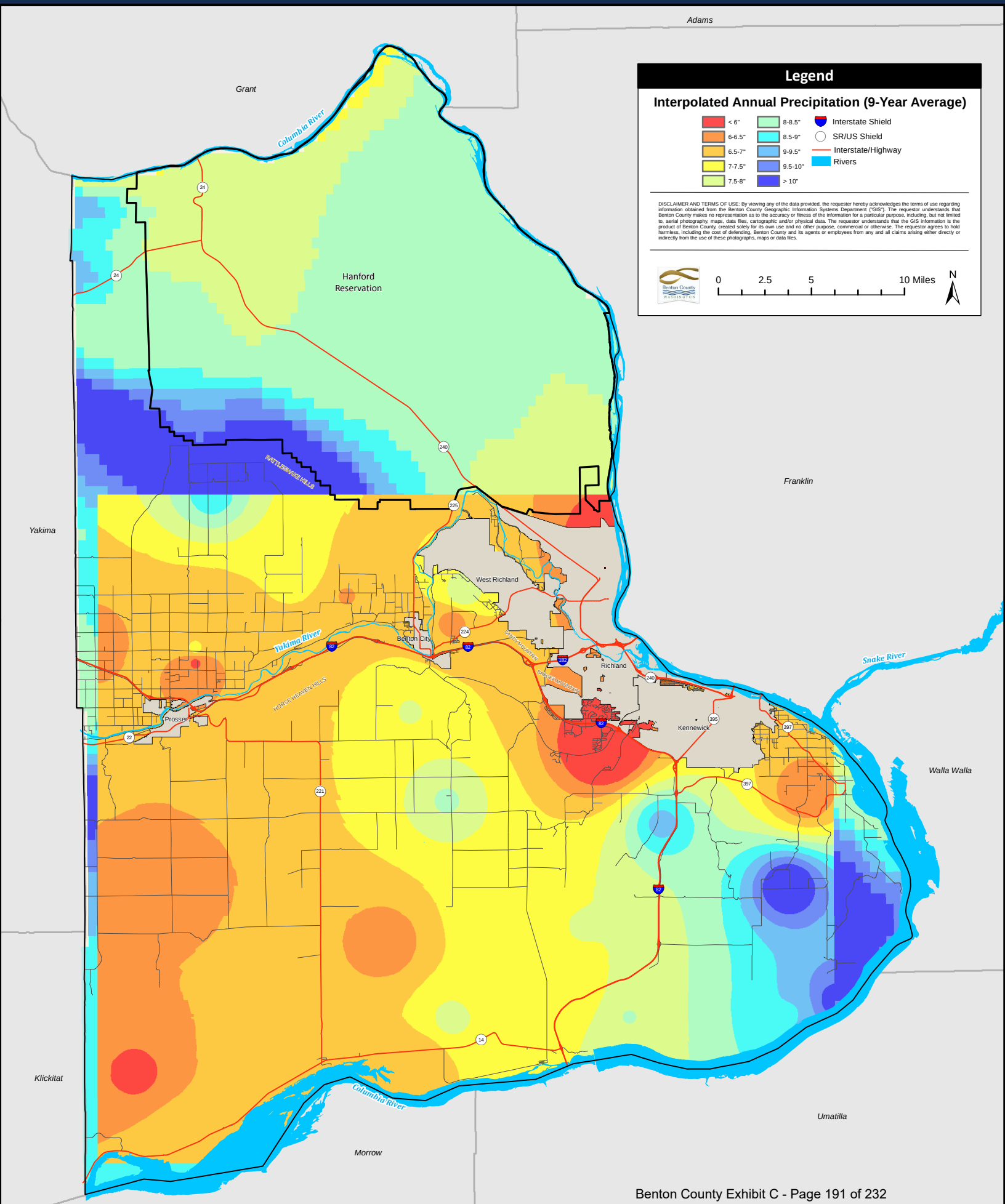

Adams
Grant
Columbia River
Hanford Reservation
Franklin
Yakima
Yakima River
Snake River
West Richland
Benton City
Richland
Kennewick
Prosser
Walla Walla
Klickitat
Columbia River
Umatilla
Morrow
Legend
Interpolated Annual Precipitation (9-Year Average)
< 6"
6-6.5"
6.5-7"
7-7.5"
7.5-8"
8-8.5"
8.5-9"
9-9.5"
9.5-10"
> 10"
Interstate Shield
SR/US Shield
Interstate/Highway
Rivers
DISCLAIMER AND TERMS OF USE: By viewing any of the data provided, the requester hereby acknowledges the terms of use regarding information obtained from the Benton County Geographic Information Systems Department ("GIS"). The requestor understands that Benton County makes no representation as to the accuracy or fitness of the information for a particular purpose, including, but not limited to, aerial photography, maps, data files, cartographic and/or physical data. The requestor understands that the GIS information is the product of Benton County, created solely for its own use and no other purpose, commercial or otherwise. The requestor agrees to hold harmless, including the cost of defending, Benton County and its agents or employees from any and all claims arising either directly or indirectly from the use of these photographs, maps or data files.
0
2.5
5
10 Miles
N

Figure 7: General Soils Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

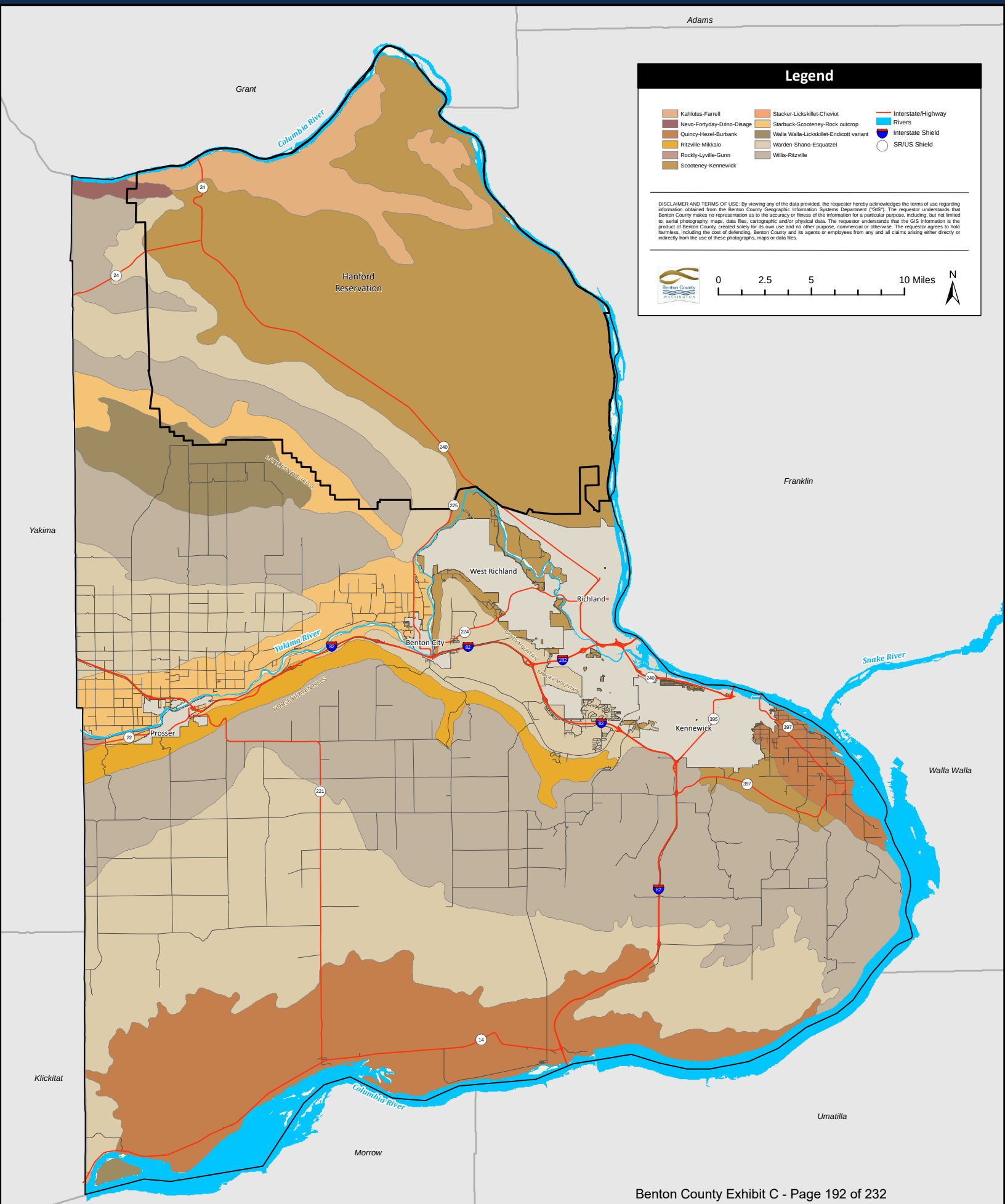


Figure 8: Water Resources Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

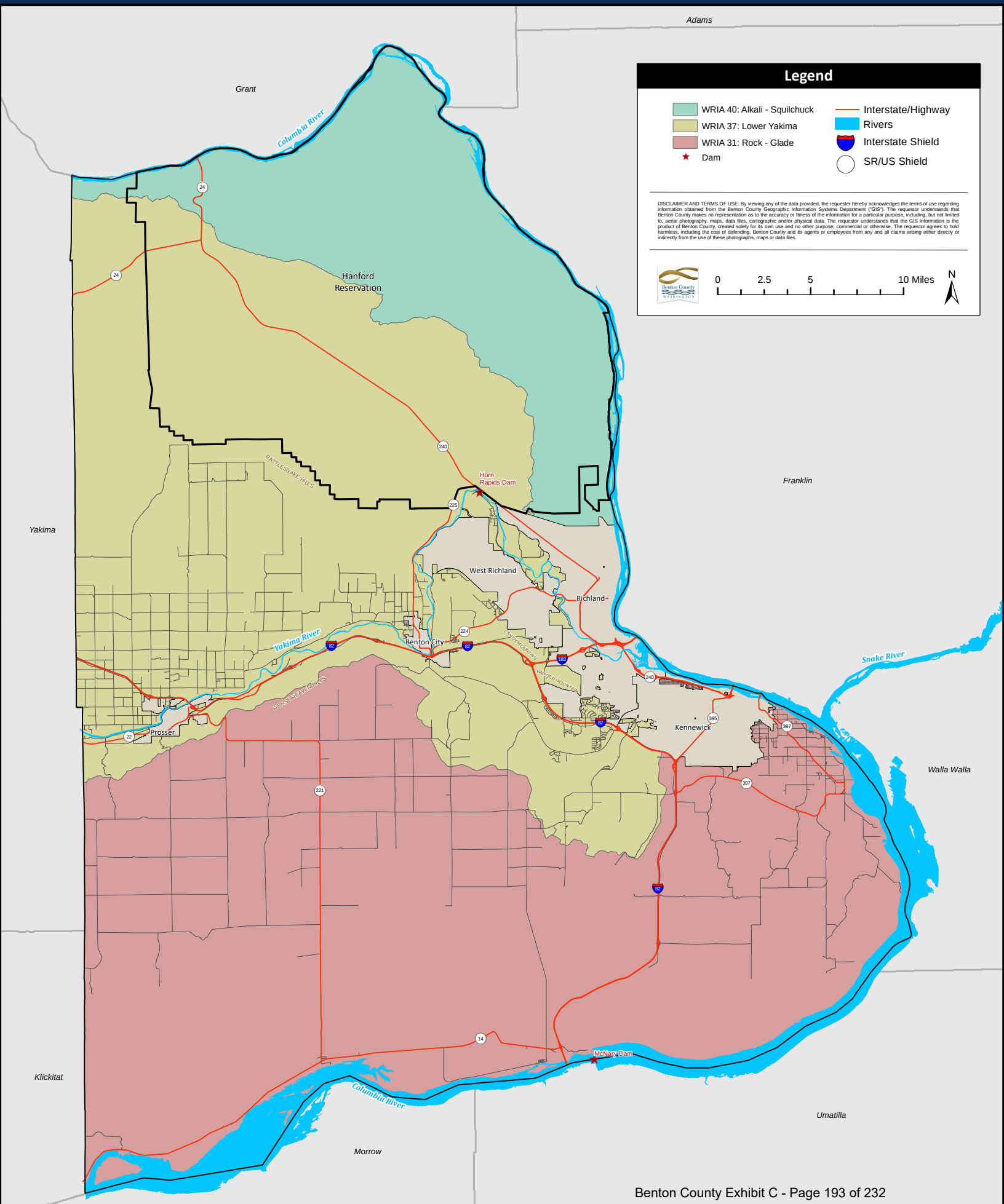


Figure 9: Wetlands, Rivers, and Streams - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

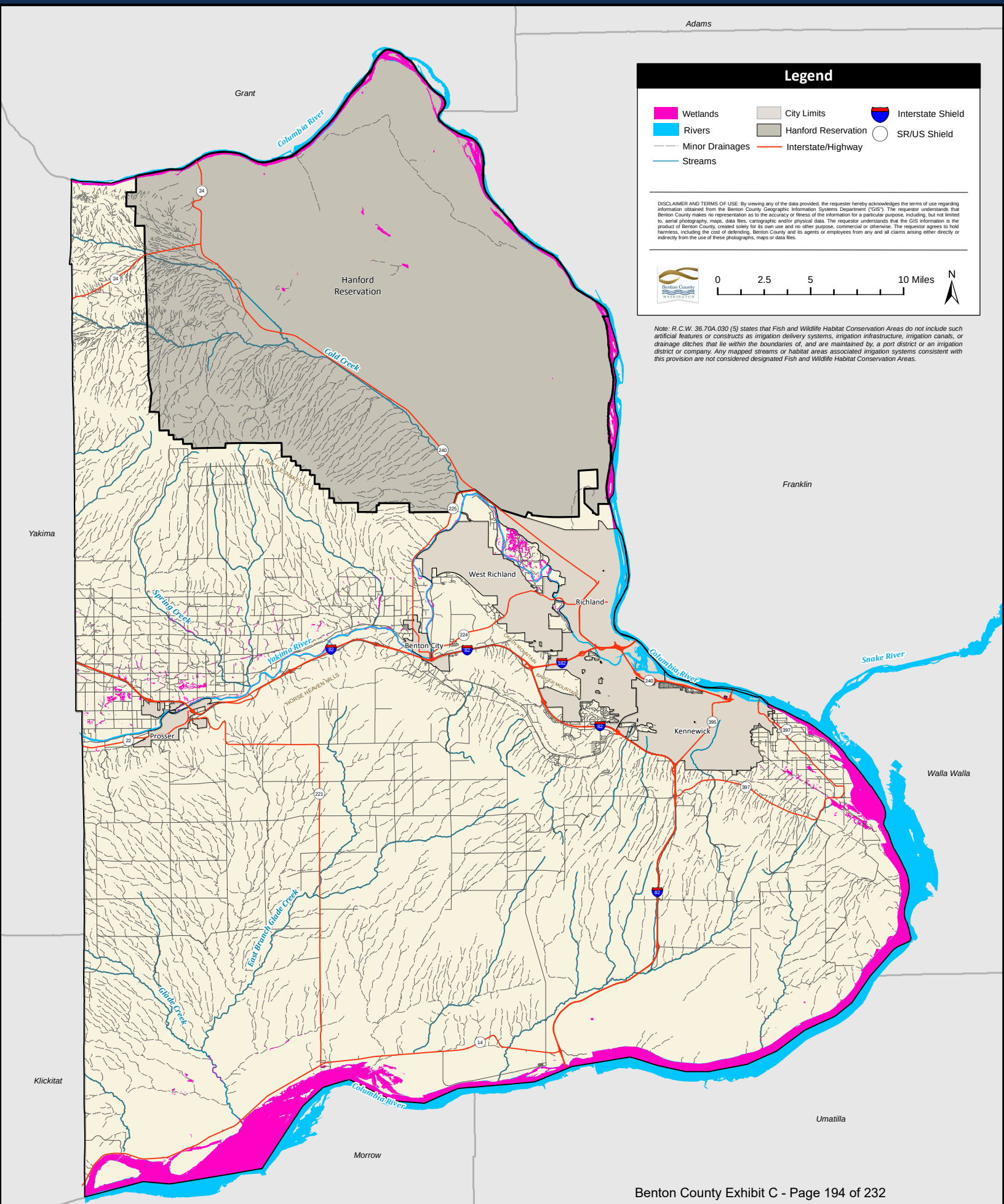


Figure 10: Critical Aquifer Recharge Areas - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

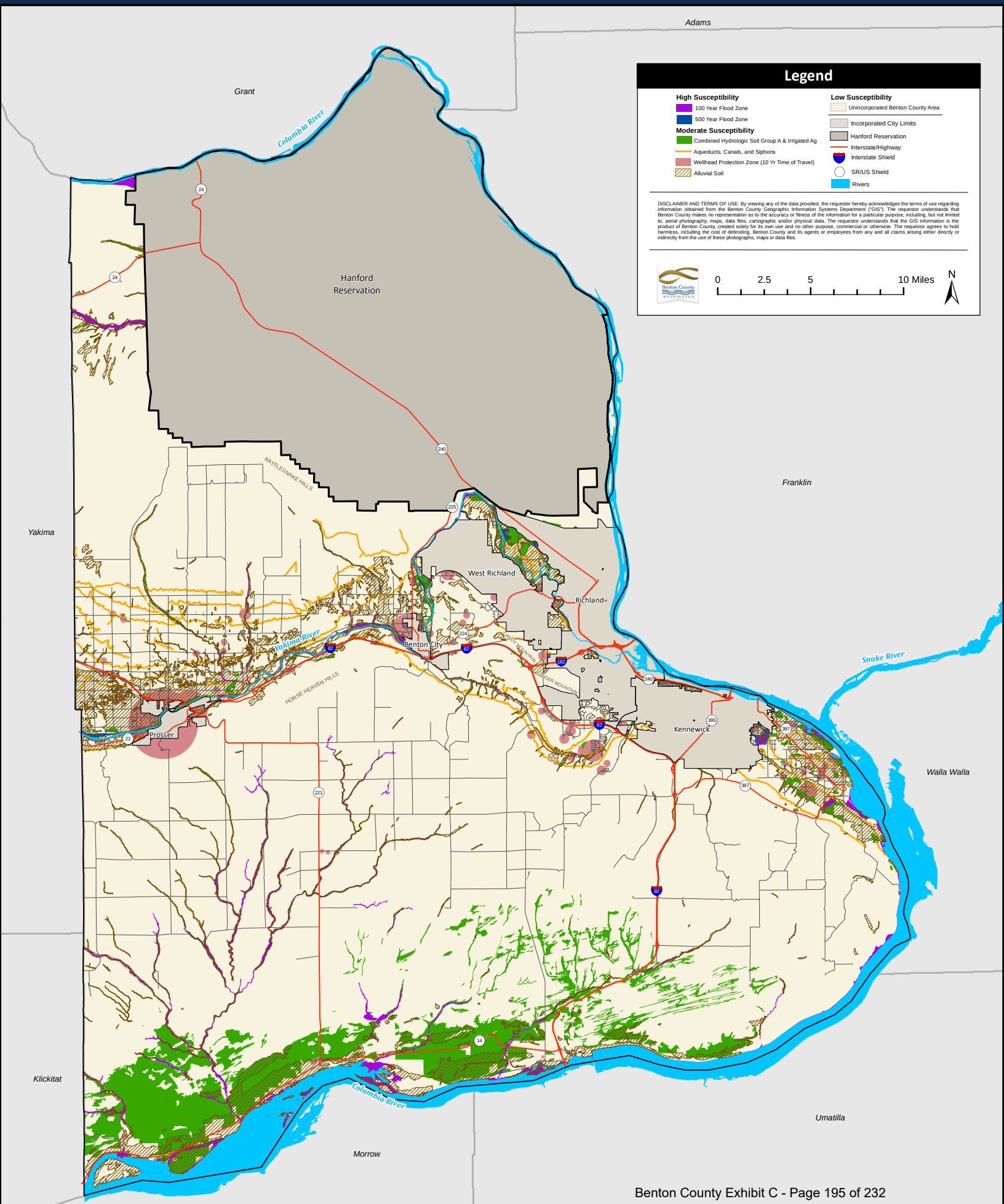


Figure 11: Frequently Flooded Areas - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

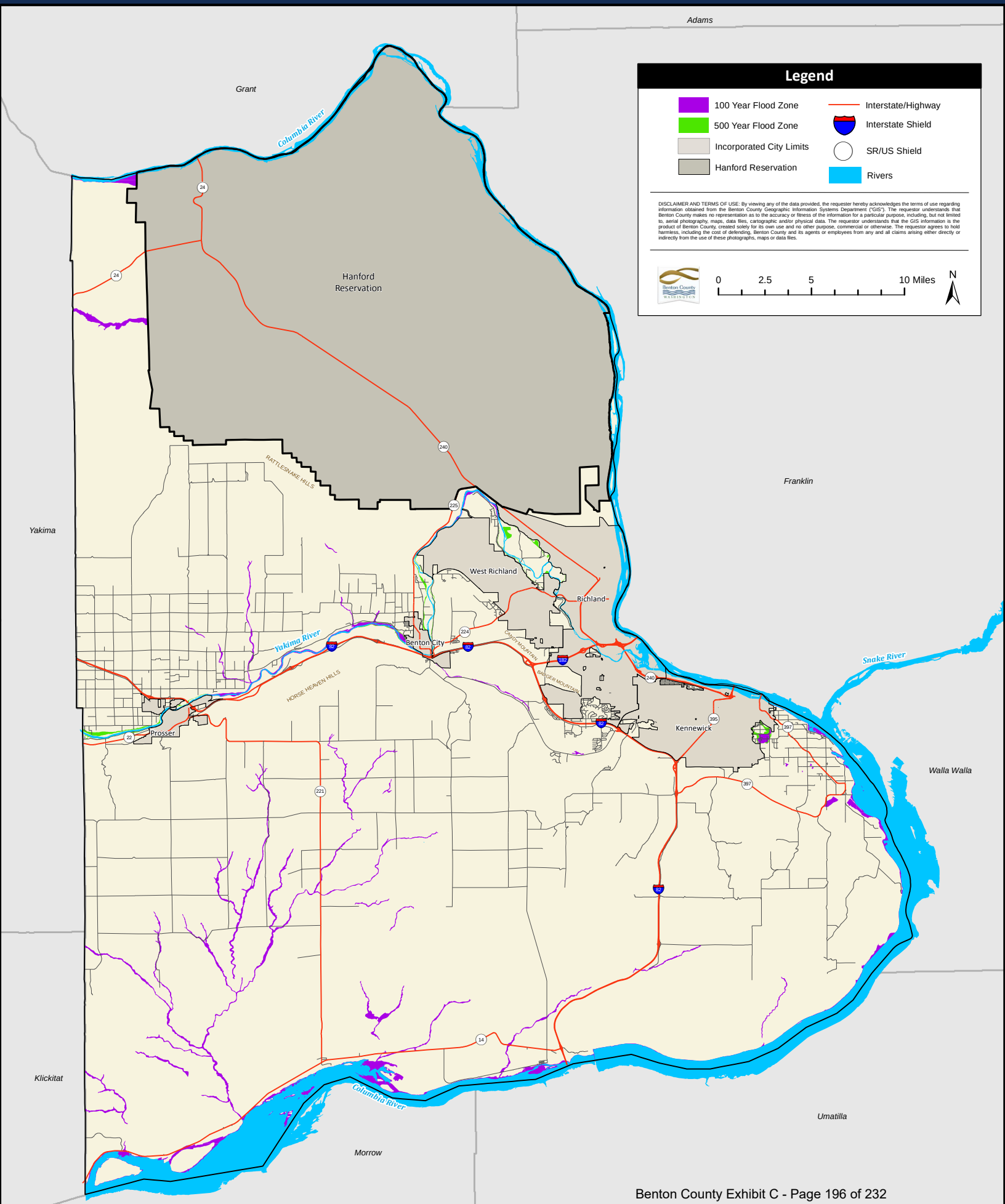
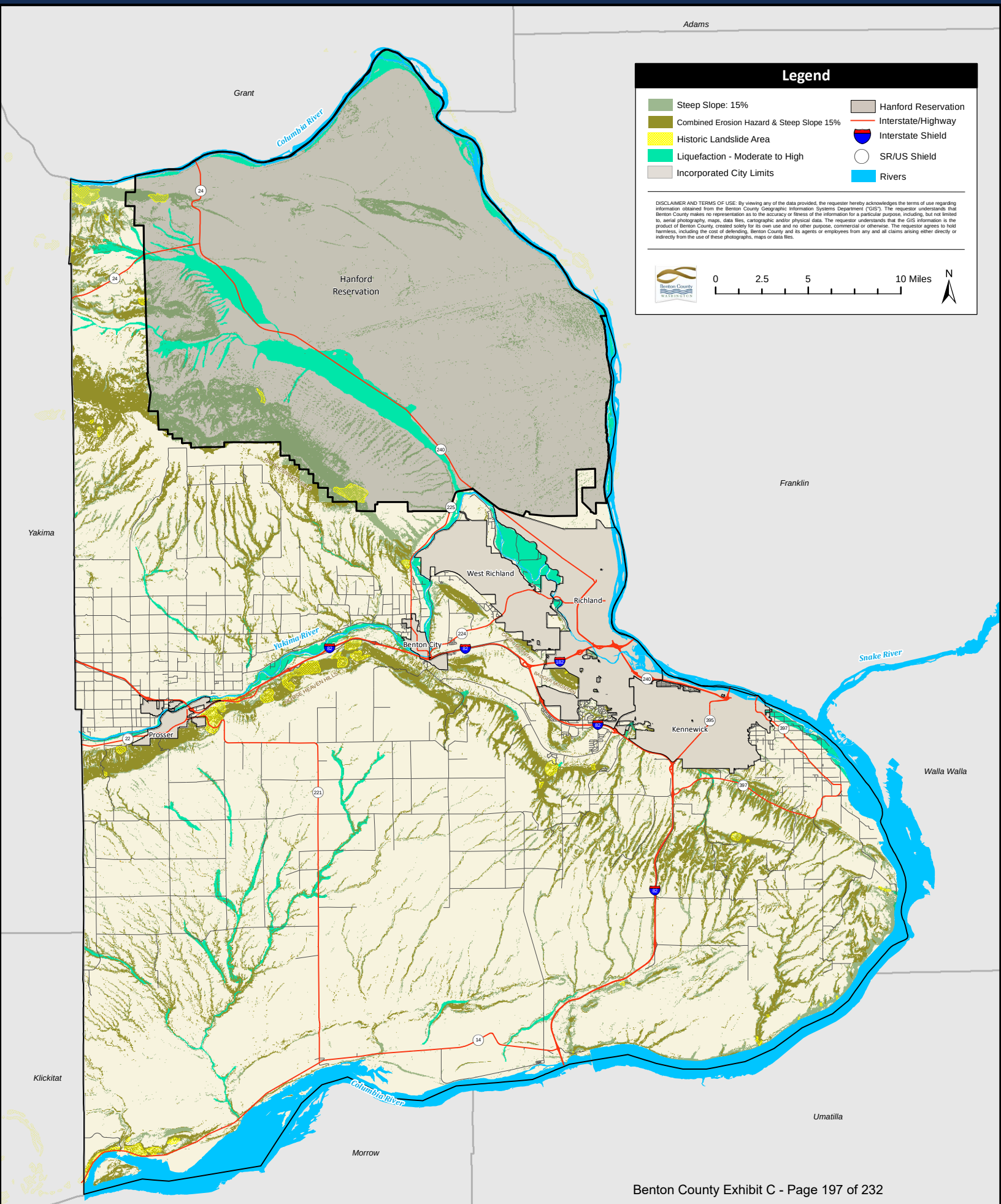
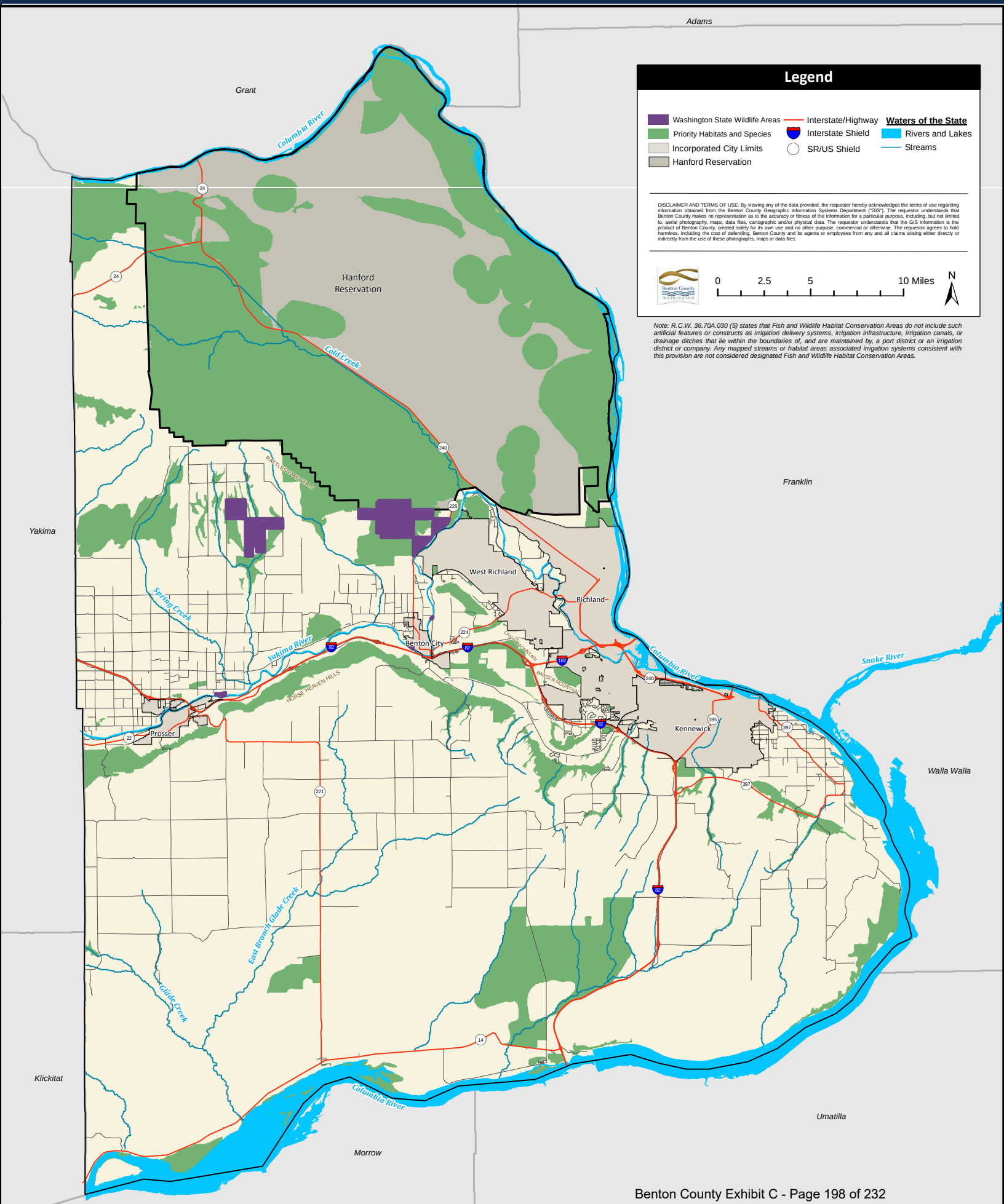


Figure 12: Geologically Hazardous Areas - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018




Adams
Grant
Columbia River
Hanford Reservation
Cold Creek
Franklin
Yakima
West Richland
Richland
Benton City
Spring Creek
Yakima River
Columbia River
Snake River
Kennewick
Prosser
Horse Heaven Hills
Rattlesnake Hills
Walla Walla
East Branch Glade Creek
Glade Creek
Klickitat
Columbia River
Umatilla
Morrow
Legend
Washington State Wildlife Areas
Priority Habitats and Species
Incorporated City Limits
Hanford Reservation
Interstate/Highway
Interstate Shield
SR/US Shield
Waters of the State
Rivers and Lakes
Streams
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Benton County WASHINGTON
0 2.5 5 10 Miles
N
Note: R.C.W. 36.70A.030 (5) states that Fish and Wildlife Habitat Conservation Areas do not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of, and are maintained by, a port district or an irrigation district or company. Any mapped streams or habitat areas associated irrigation systems consistent with this provision are not considered designated Fish and Wildlife Habitat Conservation Areas.

Figure 14: Exisiting Major Facilities Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

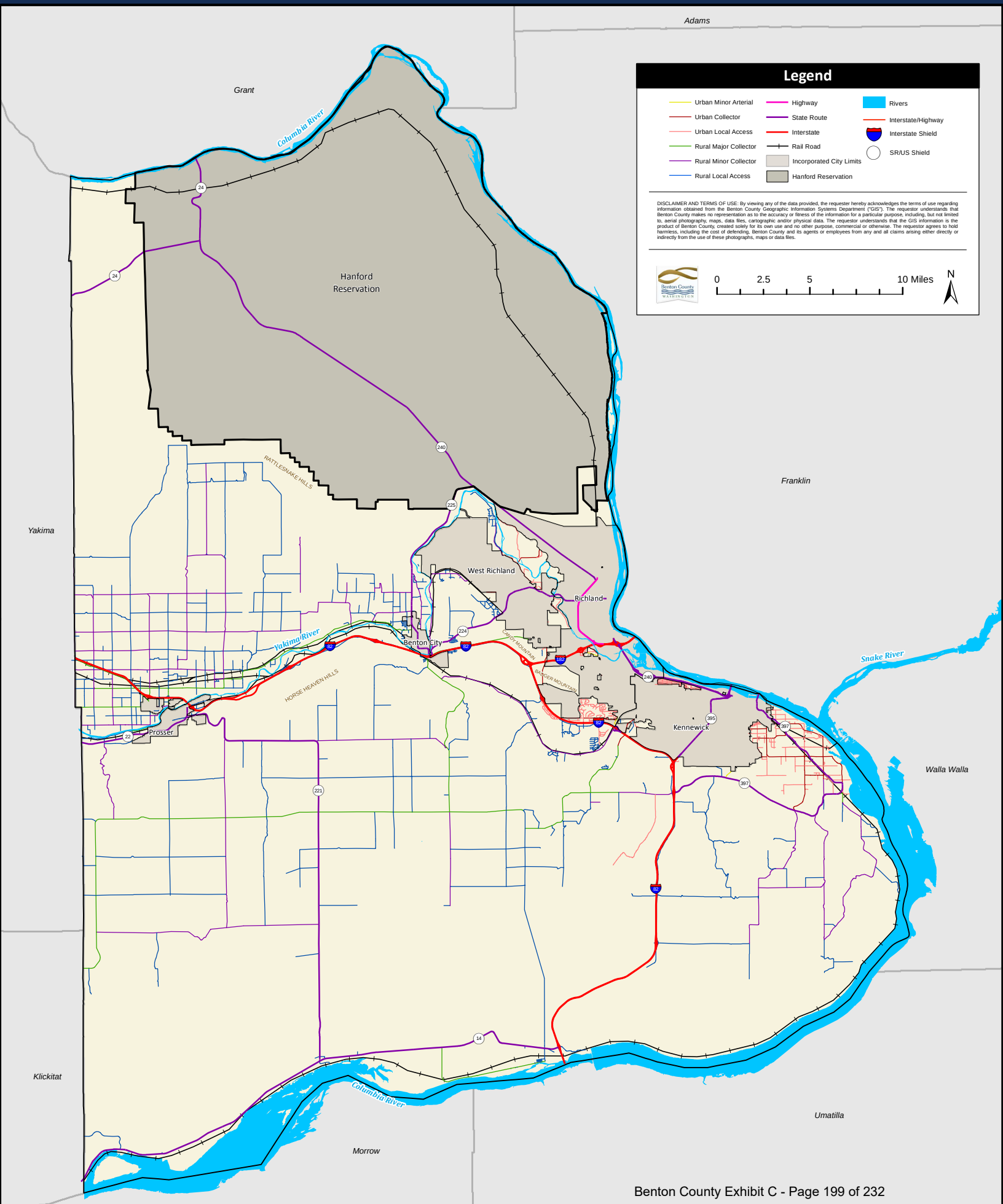


Figure 15: Parks and Recreation Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

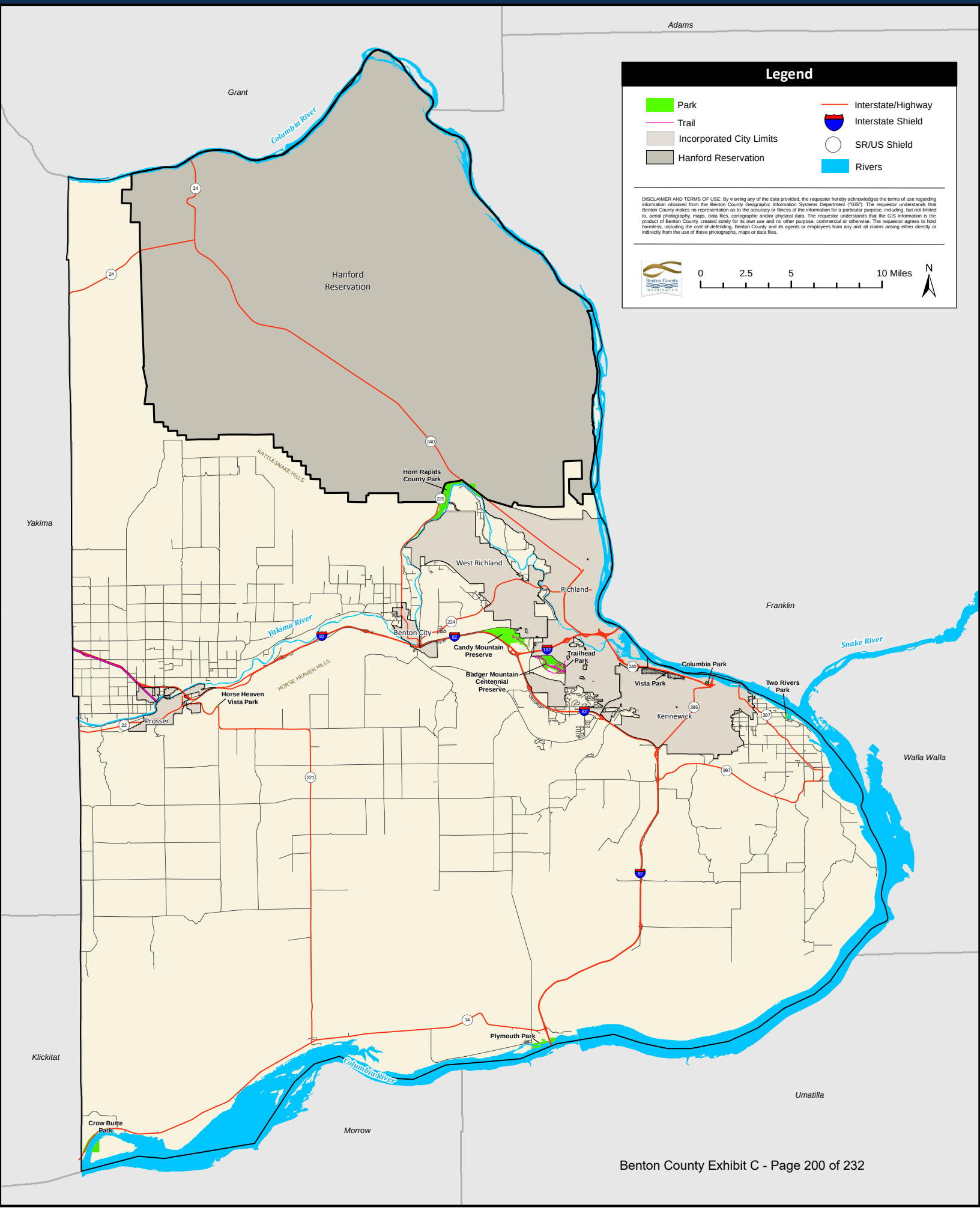


Figure 16: Utilities Map - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018

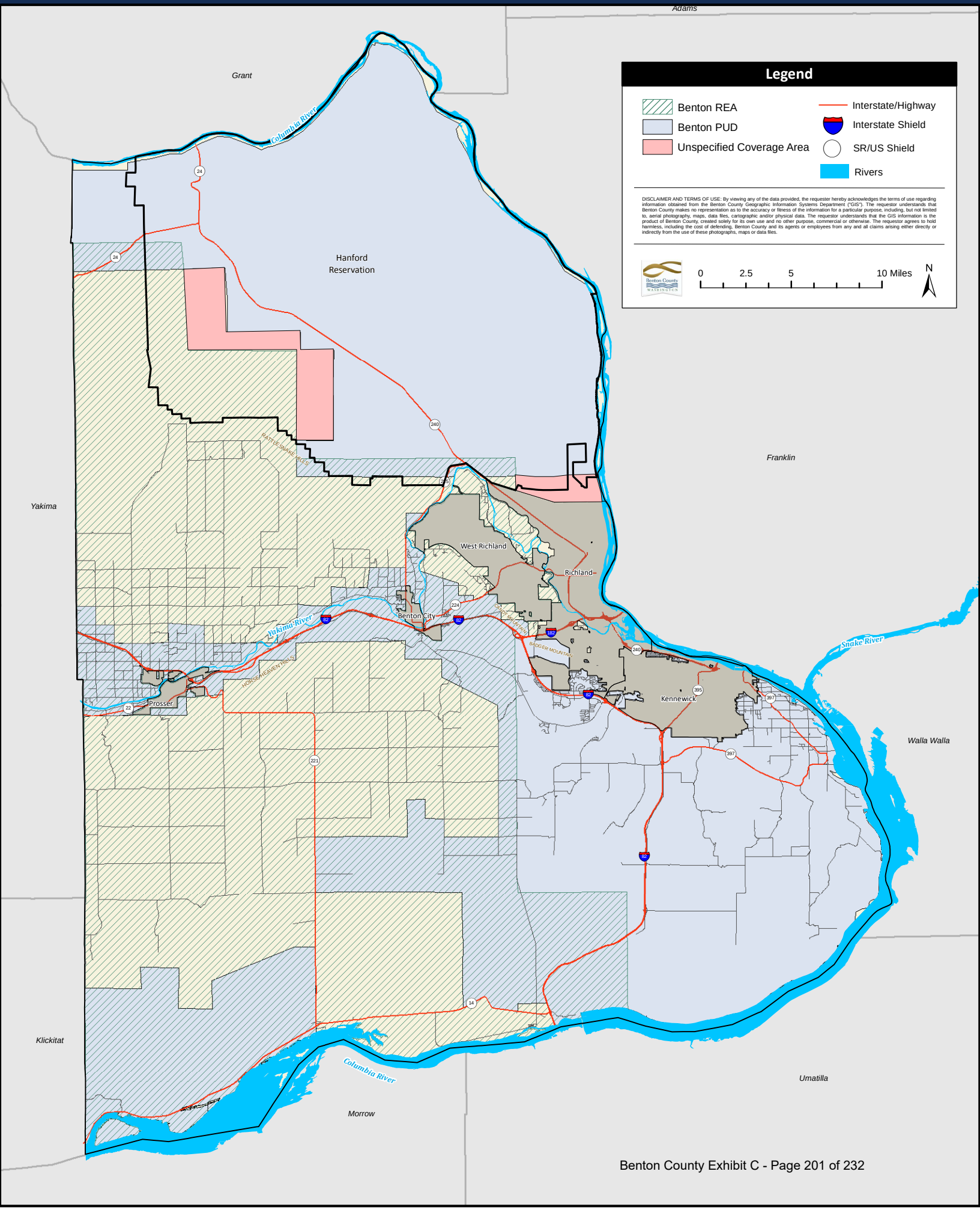
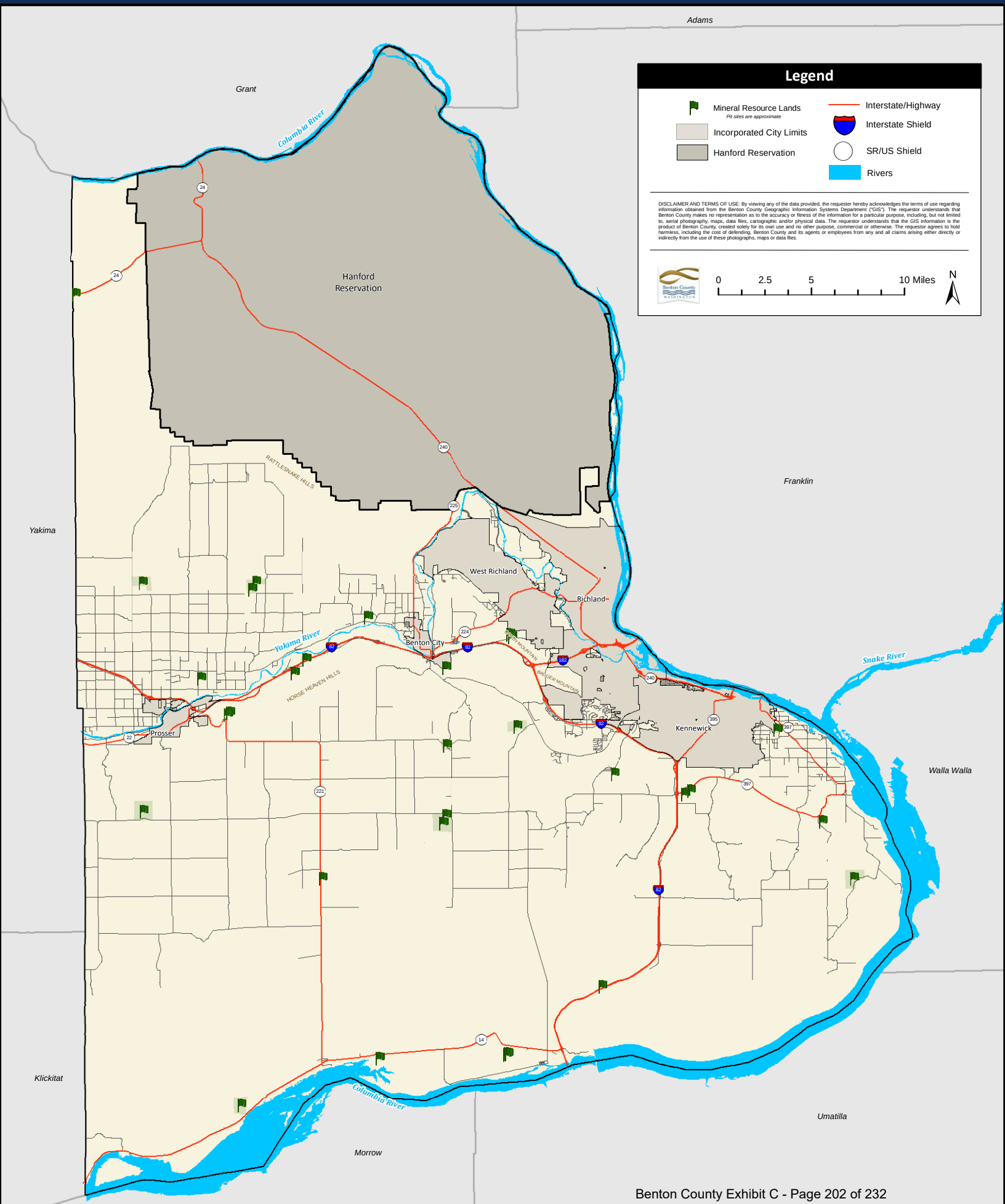
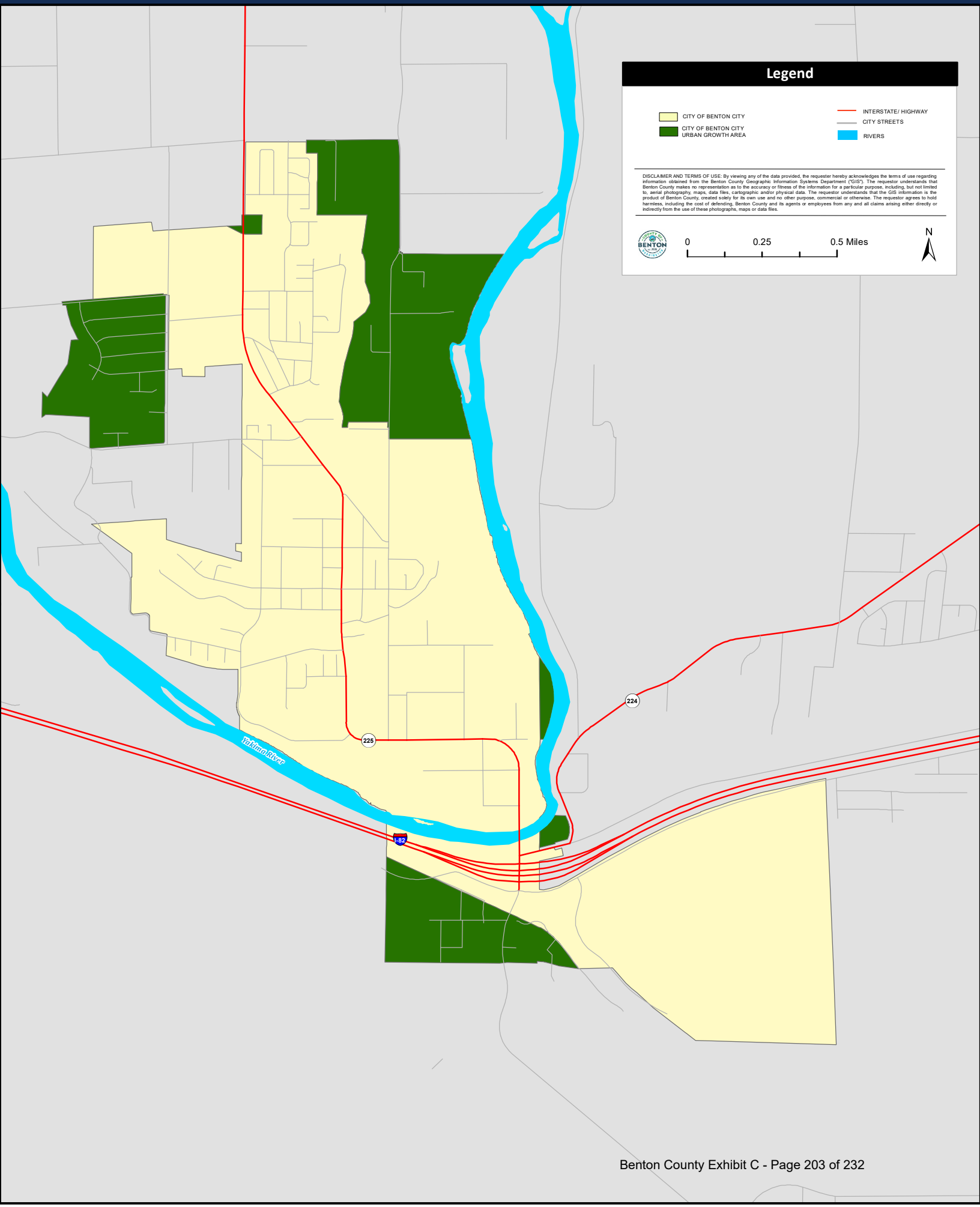
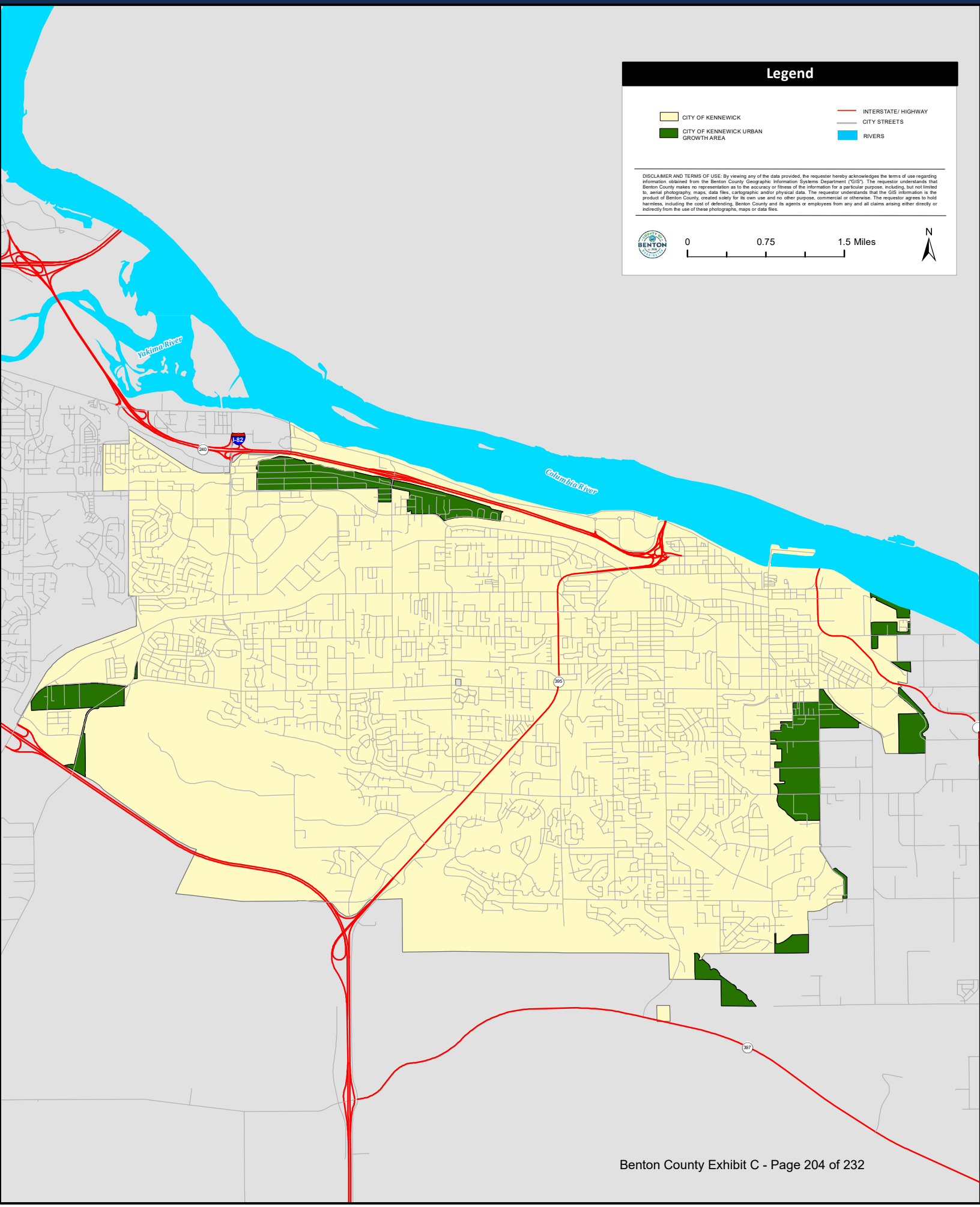
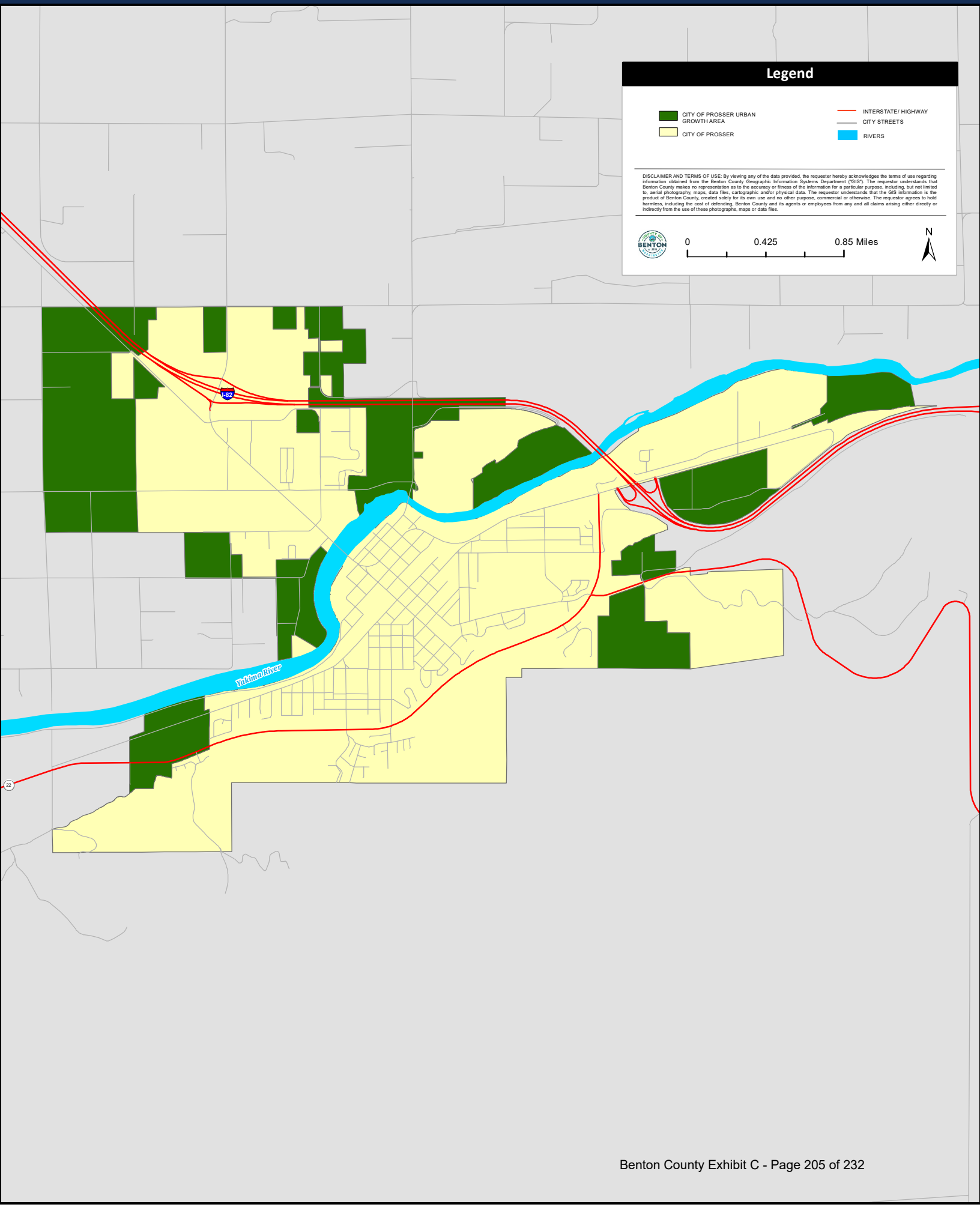


Figure 17: Mineral Resource Lands - Benton County Comprehensive Plan Update Appendix A: Map Folio / February 2018




Legend
CITY OF BENTON CITY
CITY OF BENTON CITY URBAN GROWTH AREA
INTERSTATE/ HIGHWAY
CITY STREETS
RIVERS
DISCLAIMER AND TERMS OF USE: By viewing any of the data provided, the requester hereby acknowledges the terms of use regarding information obtained from the Benton County Geographic Information Systems Department ("GIS"). The requestor understands that Benton County makes no representation as to the accuracy or fitness of the information for a particular purpose, including, but not limited to, aerial photography, maps, data files, cartographic and/or physical data. The requestor understands that the GIS information is the product of Benton County, created solely for its own use and no other purpose, commercial or otherwise. The requestor agrees to hold harmless, including the cost of defending, Benton County and its agents or employees from any and all claims arising either directly or indirectly from the use of these photographs, maps or data files.
BENTON
0
0.25
0.5 Miles
N
Yakima River
225
224
I-82


Legend
CITY OF KENNEWICK
CITY OF KENNEWICK URBAN GROWTH AREA
INTERSTATE/ HIGHWAY
CITY STREETS
RIVERS
DISCLAIMER AND TERMS OF USE: By viewing any of the data provided, the requester hereby acknowledges the terms of use regarding information obtained from the Benton County Geographic Information Systems Department ("GIS"). The requestor understands that Benton County makes no representation as to the accuracy or fitness of the information for a particular purpose, including, but not limited to, aerial photography, maps, data files, cartographic and/or physical data. The requestor understands that the GIS information is the product of Benton County, created solely for its own use and no other purpose, commercial or otherwise. The requestor agrees to hold harmless, including the cost of defending, Benton County and its agents or employees from any and all claims arising either directly or indirectly from the use of these photographs, maps or data files.
BENTON
0
0.75
1.5 Miles
N
Yakima River
Columbia River
I-82
240
395
397


Legend
CITY OF PROSSER URBAN GROWTH AREA
CITY OF PROSSER
INTERSTATE/ HIGHWAY
CITY STREETS
RIVERS
DISCLAIMER AND TERMS OF USE: By viewing any of the data provided, the requester hereby acknowledges the terms of use regarding information obtained from the Benton County Geographic Information Systems Department ("GIS"). The requestor understands that Benton County makes no representation as to the accuracy or fitness of the information for a particular purpose, including, but not limited to, aerial photography, maps, data files, cartographic and/or physical data. The requestor understands that the GIS information is the product of Benton County, created solely for its own use and no other purpose, commercial or otherwise. The requestor agrees to hold harmless, including the cost of defending, Benton County and its agents or employees from any and all claims arising either directly or indirectly from the use of these photographs, maps or data files.
BENTON
0
0.425
0.85 Miles
N
I-82
Yakima River
22

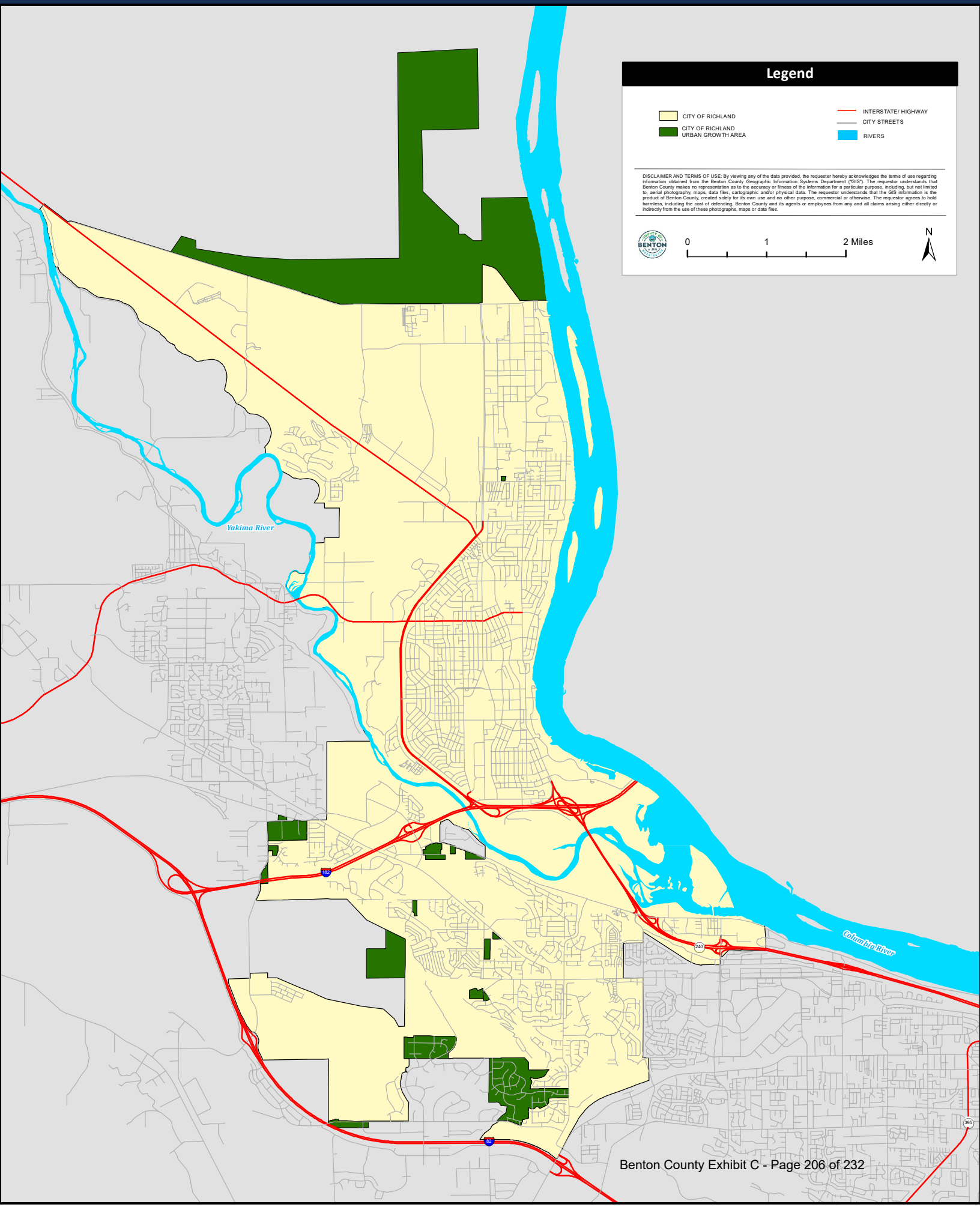
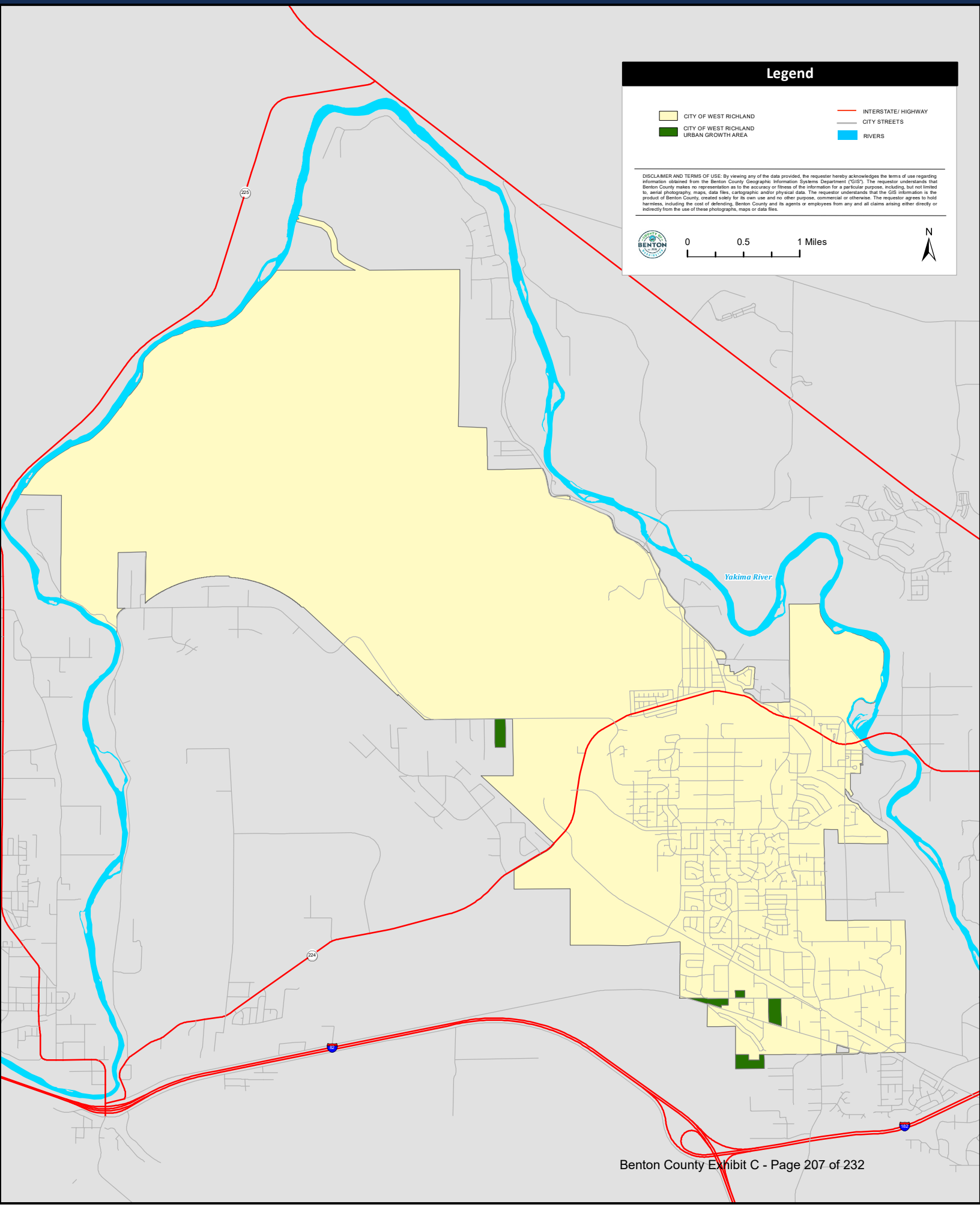

Legend
CITY OF RICHLAND
CITY OF RICHLAND URBAN GROWTH AREA
INTERSTATE/ HIGHWAY
CITY STREETS
RIVERS
DISCLAIMER AND TERMS OF USE: By viewing any of the data provided, the requester hereby acknowledges the terms of use regarding information obtained from the Benton County Geographic Information Systems Department ("GIS"). The requestor understands that Benton County makes no representation as to the accuracy or fitness of the information for a particular purpose, including, but not limited to, aerial photography, maps, data files, cartographic and/or physical data. The requestor understands that the GIS information is the product of Benton County, created solely for its own use and no other purpose, commercial or otherwise. The requestor agrees to hold harmless, including the cost of defending, Benton County and its agents or employees from any and all claims arising either directly or indirectly from the use of these photographs, maps or data files.
0
1
2 Miles
N
Yakima River
Columbia River

Figure 22: City of West Richland UGA -Benton County Comprehensive Plan Update Appendix A: Map Folio/April 12, 2022



Appendix L
Agricultural Land Reclassification Memorandum (2018)

720 Olive Way, Suite 1900
Seattle, Washington 98101
206.287.9130

ANCHOR QEA

Memorandum

January 1, 2018

To: Jerrod MacPherson, Benton County Planning Department

From: Adam Hill and Ben Floyd, Anchor QEA

Re: Agricultural Resource Land Reclassification

Introduction

Benton County is amending their Comprehensive Plan through a comprehensive 2017 plan update. As part of these amendments, it was determined that a county-wide review of agricultural resource lands be completed, as the designated lands had not been reviewed and updated for several years, and to confirm a more complete set of designation factors are addressed in the updated analysis. This memorandum describes work completed as part of this review and analysis process, including the elements necessary to consider for agricultural resource land classification, findings from the review, and recommended changes to agricultural resource lands in Benton County.

Agricultural Resource Land Considerations

Benton County is required to implement a comprehensive plan under Revised Code of Washington (RCW) 36.70A.040. As part of this requirement, "the county…**shall designate** critical areas, **agricultural lands**, forestlands, and mineral resource lands, and **adopt development regulations conserving these designated agricultural lands**, forestlands, and mineral resource lands and protecting these designated critical areas" (emphasis added) (RCW 36.70A.040(3)(b)).

Agricultural land is defined as "**land primarily devoted to the commercial production** of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees…, finfish in upland hatcheries, or livestock, **and that has long-term commercial significance for agricultural production**" (emphasis added) (RCW 36.70A.030(2)). Long-term commercial significance "includes the **growing capacity, productivity, and soil composition of the land** for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of the land" (emphasis added) (RCW 36.70A.030(10)). Additionally, in *Lewis County v Western Washington Growth Management Hearings Board* (2006), it is noted that "[i]f the farm industry cannot use land for agricultural production due to economic, irrigation, or other constraints, the possibility of more intense uses of the land is heightened. RCW 36.70A.030(10) permits such considerations in designating agricultural lands."

Further, each county "shall designate where appropriate [a]gricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other agricultural products" (RCW 36.70A.170(1)(a)). A county "may use a variety of innovative zoning techniques in areas designated as agricultural lands of long-term commercial significance…. The innovative zoning techniques should be designed to conserve agricultural lands and encourage the agricultural economy" (RCW 36.70A.177(1)).

Washington Administrative Code (WAC) 365-190-050 establishes minimum guidelines to assist counties in classifying and designating agricultural lands. The following sections go through the minimum guidelines in WAC 365-190-050 and the approach being used to follow the guidelines.

Classification/Designation Approach

WAC 365-190-050(1) states that "counties must approach the effort as a county-wide or area-wide process. Counties…should not review resource lands designations solely on a parcel-by-parcel process. Counties…must have a program for the transfer or purchase of development rights prior to designating agricultural resource lands in urban growth areas. Cities are encouraged to coordinate their agricultural resource lands designations with their county and any adjacent jurisdictions" (WAC 365-190-050(1)).

The first part of this guideline (county-wide/area-wide process) is met because analyses and approaches developed in the following sections of this memorandum are applied county-wide as part of the review process to determine if agricultural land designations need revisions. Individual parcels are not evaluated in this process. Figure 1 shows the existing agricultural resource land designations of Benton County.

No lands are being designated as agricultural resource lands in urban growth areas, so a program to transfer or purchase development rights is not required by Benton County.

Several cities are adjacent to Benton County planning jurisdictions. Figure 1 also shows the delineation of city limits and urban growth areas within Benton County.

Development Regulations

WAC 365-190-050(2) states that counties "must adopt development regulations that assure the conservation of agricultural resource lands" (WAC 365-190-050(2)). Benton County has adopted regulations to meet this guideline; these regulations are coded in Benton County Code (BCC) Chapter 11.18. These regulations discuss allowable uses, uses requiring permits, and building requirements.

Additionally, coordination with the Benton Conservation District (CD) Board of Supervisors and staff occurred over two meetings in preparing this memorandum, one with the District Manager on

May 19, 2017, and another with the Board on June 14, 2017. The CD inquired about a setback or buffer zone between Growth Management Act (GMA) agricultural resource land and residential development, to further protect agricultural lands of long-term commercial significance, and to avoid future land use conflicts. The County confirmed a 150-foot setback is in place to perform these functions. Additionally, the Conservation District suggested opportunities for strengthening the analysis to the findings and conclusions, and provided other comments on evaluation criteria, how to incorporate Conservation Reserve Program (CRP) lands and other topics. Revisions to this memorandum were made to address these comments.

Designation Factors

WAC 365-190-050(3) states that "lands should be considered for designation as agricultural resource lands based on three factors:" 1) specifically is not characterized by urban growth, 2) is used or is capable of being used for agricultural production, and 3) has long-term commercial significance for agriculture. Each of these factors are described in more detail and analyzed below.

Urban Growth

WAC 365-190-050(3)(a) states that lands should be considered for agricultural resource designation if "the land is not already characterized by urban growth" (WAC 365-190-050(3)(a)). Urban growth areas are characterized in WAC 365-196-310. Figure 2 shows the areas in Benton County already characterized by urban growth.

These urban growth areas mapped in Figure 2 were not under consideration as agricultural resource lands for this analysis.

Production Capability

WAC 365-190-050(3)(b) states that lands should be considered for agricultural resource designation if "the land is used or capable of being used for agricultural production. This factor evaluates whether lands are well suited to agricultural use based primarily on their physical and geographic characteristics" (WAC 365-190-050(3)(b)). Production capability is described in further detail, stating that lands currently used or capable to be used for agricultural production "must be evaluated for designation" (WAC 365-190-050(3)(b)(i)), and that counties "shall use the land-capability classification system of the United States Department of Agriculture Natural Resources Conservation Service [NRCS] as defined in relevant Field Office Technical Guides" (WAC 365-190-050(3)(b)(ii)).

The NRCS land-capability classification divides soil types into eight classes. Classes 1 through 4 are generally suitable for cultivation, while Classes 5 to 8 are generally not suitable for cultivation. However, with certain types of land management, Classes 5 to 7 could be used for agriculture (Duncan 2017). Classes are different for the same soil type for irrigated and non-irrigated lands. An analysis was done using Benton CD data to determine land that is irrigated; the remaining land is

assumed to be non-irrigated. Figure 3 maps the NRCS land-capability classification for Benton County, splitting the classes into suitable, suitable with management, and non-suitable land for cultivation.

Figure 3 shows that there are some areas currently designated as agricultural resource lands that are not well suited to agricultural use, areas that can be suitable for agricultural use with certain types of land management, and other areas not designated as agricultural resource lands that may be well suited to agricultural use. Figure 4 highlights these areas. Of the areas highlighted, areas near the fringe of the current areas designated as agricultural land (along the freeway corridor and along the Columbia River) will be more likely considered for designation changes from agricultural resource lands as these areas are nearer to population centers and would have the possibility of more intense uses of the land in the long-term. Additionally, in some instances these are also the more marginal lands, particularly when considering dryland production areas.

This mapping procedure is done as an initial step to check the potential for areas to be well suited for addition or removal from agricultural resource land designation, as one consideration in the evaluation process.

Long-Term Commercial Significance

WAC 365-190-050(3)(c) states that lands should be considered for agricultural resource designation if "the land has long-term commercial significance for agriculture" (WAC 365-190-050(3)(c)). As part of determining this, counties should consider classification of prime and unique farmland soils, availability of public facilities including roads used in transporting agricultural products, tax status, public service availability, proximity to urban growth areas, predominant parcel size, land use settlement patterns, intensity of nearby land uses, history of nearby land development permits, land values under alternative uses, and proximity to markets (WAC 365-190-050(3)(c)). In addition to the factors listed in WAC 365-190-050(3)(c), considerations for long-term commercial significance in Benton County include water availability/precipitation, enrollment in CRP/conservation land, and pesticide restrictions. The considerations employed in this analysis are described in the following order:

- Water availability/precipitation
- Parcel size
- Nearby urban growth areas, settlement patterns, land use, land values, and development permits
- Land in CRP or conservation land
- Prime farmlands
- Pesticide restrictions
- Public facilities and proximity to markets
- Tax status

Water Availability/Precipitation

One of the main considerations in Benton County for long-term commercial significance is water availability. Water availability can either come from irrigation or precipitation. If there is insufficient water available, lands cannot be commercially significant in the long-term.

To assist in determining water availability for dryland production areas, an analysis of precipitation was completed using data from Washington State University's AgWeatherNet, a network of weather stations throughout Washington State (including Benton County) that monitor several weather aspects, including precipitation. The mean (average) annual precipitation was collected from the AgWeatherNet web site and averages over the past 5 years, 9 years, and over the period of record (up to 24 years) were compared for the 32 stations in Benton County. Most stations (27 of the 32) had at least 5 years of records, and over half had at least 9 years of records. The 9-year average was also similar to the period of record for stations with longer records, so for purposes of this analysis, a 9-year annual average was used. Precipitation was estimated for most of Benton County using an inverse distance weighted interpolation that was log-normalized and back-transformed through GIS analysis. Figure 5 shows the results of this analysis.

The precipitation analysis is compared against non-irrigated lands that are suitable for cultivation in Figure 6. This figure highlights lands that would typically be suitable but may not be getting sufficient water to be long-term commercially significant. For this analysis, it was assumed that less than 6.5 inches (annual average) was not sufficient. This is based on information provided by John Christensen, a Benton County producer, who has records of yield and net profits or losses information for dryland farming at various annual precipitations and elevations. Lower precipitation areas had significant net losses while higher precipitation areas had net profits. Specifically, areas with mean annual precipitations of 4 to 6 inches had net losses of $13 to $62 per acre for continuous crops and net losses of $68 to $118 per acre for summer/fallow crops. Areas with mean annual precipitation of 9 to 11 inches had net profits of $90 to $118 per acre for continuous crops and net profits of $41 to $69 per acre of summer/fallow crops (Christensen 2016).

The areas that fit into non-sufficient precipitation and dryland farming include land immediately south of the Richland/Kennewick border, areas in Finley, and areas south of Prosser on the Horse Heaven Hills. In communications with the CD Board of Supervisors, the Board identified that most of the lands with lower yields are enrolled in CRP, or were enrolled historically, with many of these lands left uncultivated after CRP contracts expired.

Elevations in Benton County were also briefly reviewed to note any relationship between elevation and precipitation in Benton County. Generally, precipitation increased as elevations increased. The low-lying areas near Richland and Kennewick had a much lower average annual precipitation than most areas in the Horse Heaven Hills in the southeastern area of the county, except as noted above.

These analyses are meant to give a general idea of precipitation in Benton County. Some areas may have more precipitation than modeled and some areas may have less precipitation than modeled. Findings from precipitation analysis are considered sufficiently accurate to draw conclusions for long-term commercial significance determinations.

Parcel Size

Agricultural lands must be large enough in area to have long-term commercial significance. An analysis was completed that compares parcel size to land use designation with a threshold of 10 acres–the threshold assumed to be needed for land to be long-term commercially significant, acknowledging as pointed out by the CD that smaller acreages may be adequate for certain high value crops such as tree fruits or wine grape vineyards. County land use designations for smaller parcels allow for development of these higher value crops, as desired. Figure 7 highlights the large parcels outside of agricultural resource land designation and small parcels inside of agricultural resources designation that may have potential for change based solely on parcel size. Capability class is also included in Figure 7 for reference.

Lands that have parcel sizes below the 10-acre threshold that are currently designated as agricultural resource lands include areas southwest of Richland and southeast of Benton City, and areas south of West Richland and northeast of Benton City.

Lands with parcel sizes above the 10-acre threshold and not currently designated as agricultural resource lands include areas east of Paterson, areas north of Plymouth, and land throughout the highway corridor. Many of these lands do not have suitable soils for cultivation without management, or they are already reserved as public or open spaces.

Nearby Urban Growth Areas, Settlement Patterns, Land Use, Land Values, and Development Permits

Some areas were included as agricultural lands when these lands included irrigation systems, permanent crops, and other evidence of ongoing agricultural land use, if they were larger parcels, and had a mix of rural residential and smaller agricultural operations around them with no clear land use settlement or higher intensity uses nearby. These lands were often adjacent to other agricultural lands. Other areas, including larger parcels in some cases, were considered for reclassified from GMA Agriculture to other designations if they were more marginal farm ground (typically dryland) and adjacent to areas developing that had experienced recent or ongoing higher intensity or urban land use settlement, associated higher land values, and also had roads and utilities in relative close proximity, as described further below. The areas demonstrating this kind of growth and development/intensity of nearby land uses to agricultural lands are the Southridge area, Badger Canyon, higher intensity residential development in Finley, and development south of Badger Mountain in South Richland.

Land Enrolled in Conservation Reserve Program or Conservation Land

Land in CRP or conservation land may or may not mean that a land has long-term commercial significance. In some cases, land may return from CRP or conservation and have long-term commercial significance; in other cases, the land is in CRP or conservation because it is not viable to farm the land. Figure 8 maps the land noted as CRP or conservation land in Benton County.

Prime Farmlands

Some farmlands are designated as farmland of statewide importance or farmland of unique importance. These areas are mapped in Figure 9. Statewide important and unique important farmland are reviewed with previous elements listed to determine if any areas should be designated as agricultural resource land.

Some areas near Finley, areas south of Richland, and areas between the northern area of West Richland and Richland are noted as farmlands of statewide importance.

Pesticide Restrictions

Benton County has restrictions to certain pesticide applications. Some areas have more stringent restrictions than others, which include prohibition of aerial application of insecticides labeled with the signal words “danger/poison” and restricted use herbicides (WAC 16-230-810). These areas are specifically located in the Northeast Horse Heaven Hills and reduce the potential of being long-term commercially viable due to the potential of added costs of hand-applying pesticides or reduced yield from not applying pesticides. While as a stand-alone factor, this may not result in removal of land classified as long-term commercially significant, it can be one additional factor in areas where lower yields typically occur could tip the balance away from designating an area as long-term commercially significant.

Public Facilities and Proximity to Markets

Most areas in Benton County have sufficient facilities available to the public for transportation of agricultural goods such that they are not limiting to long-term commercial significance. Some areas were considered for reclassification from GMA Agriculture to other designations if they had public facilities such as urban water and sewer systems nearby and available, and a relatively dense network of public roads also available. These areas include the Southridge area, Badger Canyon, and the area south of Badger Mountain.

In terms of proximity to markets, most areas are relatively close to markets such that this element does not limit an area’s long-term commercial significance.

Tax Status

Tax status for lands analyzed were unremarkable. The tax status for the areas reviewed and considered for agricultural land removal includes residential vacant lots, limited use areas, mobile homes, rural residential, dry agricultural land, and pasture.

Food Security

WAC 365-190-050(4) states that "counties may consider food security issues, which may include providing local food supplies for food banks, schools and institutions, vocational training opportunities in agricultural operations, and preserving heritage or artisanal foods (WAC 365-190-050(4)).

Benton County does not explicitly consider food security issues as Benton County is a net exporter of agriculture; however, this element was reviewed to ensure food security is not a concern for the area.

Sufficiency

WAC 365-190-050(5) states that "the process should result in designating an amount of agricultural resource lands sufficient to maintain and enhance the economic viability of the agricultural industry in the county over the long term; and to retain supporting agricultural businesses, such as processors, farm suppliers, and equipment maintenance and repair facilities" (WAC 365-190-050(5)).

In addition to agricultural resource land, Benton County has proposed adding a new land designation called Rural Resource land. This land is less dense than previous land designations (typically changing from 5-acre to 20-acre minimums), preserving agriculture and range lands generally on steeper and north-facing sloped lands, and expanding the areas where agriculture production can occur. This new designation is a variation of an innovative zoning approach as referenced in introductory information above.

To ensure the sufficiency of agricultural resource lands, an area comparison will be made of agricultural resource areas designated for removal and new agricultural resource area designations.

Local Importance

WAC 365-190-050(5) states that "counties…may further classify additional agricultural lands of local importance. Classifying additional agricultural lands of local importance should include, in addition to general public involvement, consultation with the board of the local conservation district and the local committee of the farm service agency" (WAC 365-190-050(5)).

Benton County has two American Viticultural Areas (AVAs) fully within the county boundaries and two AVAs partially located in the county boundaries. Figure 10 maps the AVAs located fully within Benton County.

Much of the AVAs are already designated as agricultural resource lands; it is recommended that these areas not be removed from designation.

Findings and Conclusions

Using the information presented in the previous sections, multiple areas in the County may be considered for reclassification. In general, it is important to maintain continuity in agricultural resource land designation; unless there are sufficient reasons that the agricultural resource land should be de-designated, land should remain as agricultural resource land to protect the resource. Therefore, many areas that may not be as suitable as agricultural land may remain within agricultural resource land designation due to its proximity to lands of other types.

Additionally, there are many areas that have potential to be removed from designation in some analyses, but not others. For example, there are several areas north of Prosser that have small parcel sizes but are currently designated as agricultural resource land. However, these areas are irrigated lands with suitable soils, so it would not be appropriate to remove them from agricultural resource land designation.

The areas that should be removed from agricultural resource land designation are areas south of Richland, Kennewick, and West Richland. These areas are near population centers, adjacent to growing areas, proximate to utilities and roads, have low precipitation without irrigation, are outside of AVAs, and follow the recent settlement pattern of the County. Some of these areas also have more restrictive pesticide regulations. Together these considerations threaten or have already reduced the viability for the long-term commercial significance of the land as agricultural land, which fits the considerations noted in Lewis County v Western Washington Growth Management Hearings Board (2006).

Areas that should be added to agricultural resource land designation are areas south of Finley, west of Benton City, and near Prosser. These areas are currently farmed, are irrigated and often have permanent crops in place, are large parcels, exist outside of urban growth areas, and are near existing land that is already designated as agricultural resource land and other rural uses.

Additionally, approximately 7,130 acres are proposed to be changed from higher density current designations to Rural Resource. This change in designation will preserve these lands for rangeland uses and agricultural production opportunity areas, such as vineyards and orchards. This can be considered an innovative zoning technique that fits RCW 36.70A.177(1) as being designed to conserve agricultural lands and encourage the agricultural economy.

Based on the information and analyses in the previous sections, some areas are proposed to be added to the agricultural land designation, some areas are proposed to be removed from the agricultural land designation. The changes are shown in Figure 11. Details of areas proposed to be added are summarized in Table 1. Details of areas proposed to be removed are summarized in Table 2.

Table 1
Agricultural Resource Lands Proposed Additions

Township/Range/Section	Area (acres)	Previous Land Use Designation	Reason(s) for Addition
T09N R24E S20,29	67	General Commercial	Irrigated land, suitable soil type, large parcel size
T09N R24E S24	171	Light Industrial	Irrigated land, large parcel size, farmland of statewide importance
T09N R24E S29,30	68	Rural Lands 5	Irrigated land, suitable soil type, large parcel size
T09N R26E S10,11.14,15,17,20,24 T09N R27E S19,30	1,160	Rural Lands 5	Irrigated land, suitable soil type, large parcel size, farmland of statewide importance
T08N R30E S34	144	Rural Lands 5	Irrigated land, suitable soil type, large parcel size
T09N R24E S24,28 T09N R25E S19,20,28,29,33,34 T09N R26E S04,05,07,17,18,19,20 T10N R26E S26,35	2,338	Rural Lands 5	Irrigated land, suitable soil type, large parcel size, farmland of statewide importance
T08N R24E S07,08,09	457	Rural Lands 5	Irrigated land, suitable soil type, large parcel size
T07N R30E S12	20	Rural Lands 5	Irrigated land, suitable soil type, large parcel size, farmland of statewide importance
T08N R30E S28,29,30	588	Rural Lands 5	Irrigated land, suitable soil type, large parcel size, farmland of statewide importance
T09N R26E S02,11	555	Rural Lands 5	Irrigated land, suitable soil type, large parcel size
T05N R27E S01 T05N R28E S06	483	Heavy Industrial	Irrigated land, suitable soil type, large parcel size
Total area (acres)	**6,051**		

Table 2
Agricultural Resource Lands Proposed Removals

Township/Range/Section	Area (acres)	New Land Use Designation	Reason(s) for Removal
T06N R30E S13,23,24,26,27 T06N R31E S07,18	122	Public	Not suitable soil type, public access to river
T08N R27E S30	2	Public	Small parcel size, public
T08N R27E S02 T08N R28E S27 T08N R30E S32 T09N R27E S21	797	Rural Remote	Parcel size, non-irrigation with low precipitation, near population center/urbanizing areas, follows settlement patterns extending to south and west of Tri-Cities, next to areas increasing in property value
T08N R28E S13,24 T08N R29E S17,18,19,20,22,23,26,27	3,644	Rural Remote	Non-irrigation with low precipitation, near population center/urbanizing areas, follows settlement patterns extending to south and west of Tri-Cities, next to areas increasing in property value
Total area (acres)	**4,565**		

Areas proposed for addition include areas that are currently farmed, are irrigated, have a suitable soil type, and are large enough to be commercially viable in the long-term. They are generally located on the border of the existing designated agricultural resource land. Areas proposed for removal are generally located near population centers, transportation systems, and public services, and have potential for more intense use.

As shown in Table 1, the areas proposed to be added to agricultural resource land designation total about 6,050 acres, while Table 2 shows the areas proposed to be removed from agricultural resource land designation total 4,565 acres. This is a net increase of approximately 1,500 acres of designated agricultural resource land. Lands added are larger in size and are already irrigated on suitable soils, while lands removed have either small parcel size, are public access, or are non-irrigated with low average annual precipitation.

In addition to the net increase of 1,500 acres of designated agricultural resource land, about 7,130 acres are designed to be changed from denser land uses to rural resource land, which (as noted

previously) is less dense than previous land designations that can be used for farms, orchards, and other agricultural land use to preserve agricultural lands.

These recommended changes follow the goals of the GMA in regard to agricultural lands. As noted in *Clark County v. Western Washington Growth Management Hearings Board* (2011), "[a] significant goal of the GMA is to identify, maintain, enhance, and conserve agricultural lands. See RCW 36.70a.020(8)." With the increase in agricultural resource land designation, removal of land that does not have long-term commercial significance, and a new land designation of rural resource land, these changes help maintain the GMA goals for agricultural lands.

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Figures

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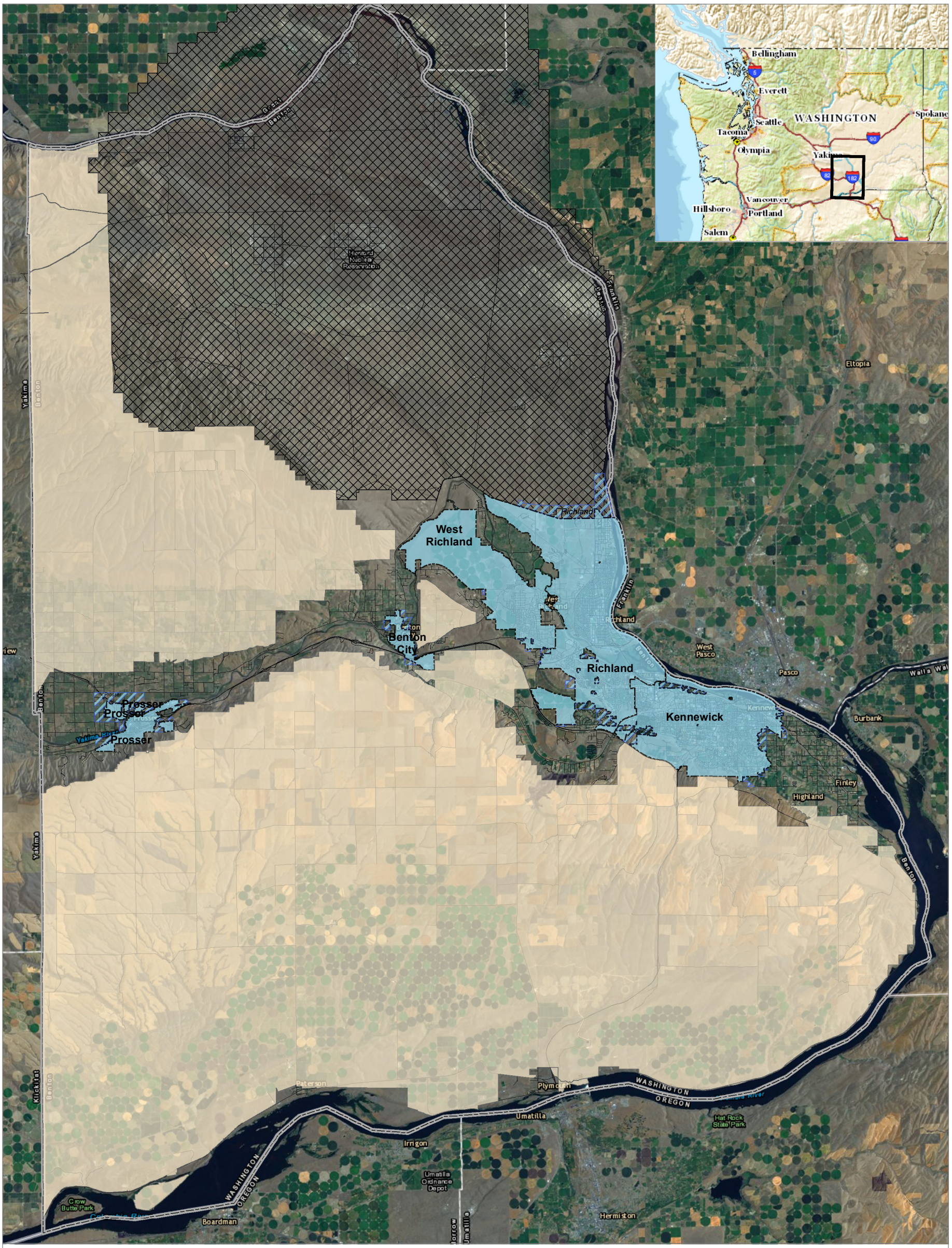

LEGEND:

- Roads
- City Limits
- UGA
- County Boundary
- Hanford Site

Land Use (2011)

District

- GMA AG

NOTE(S):

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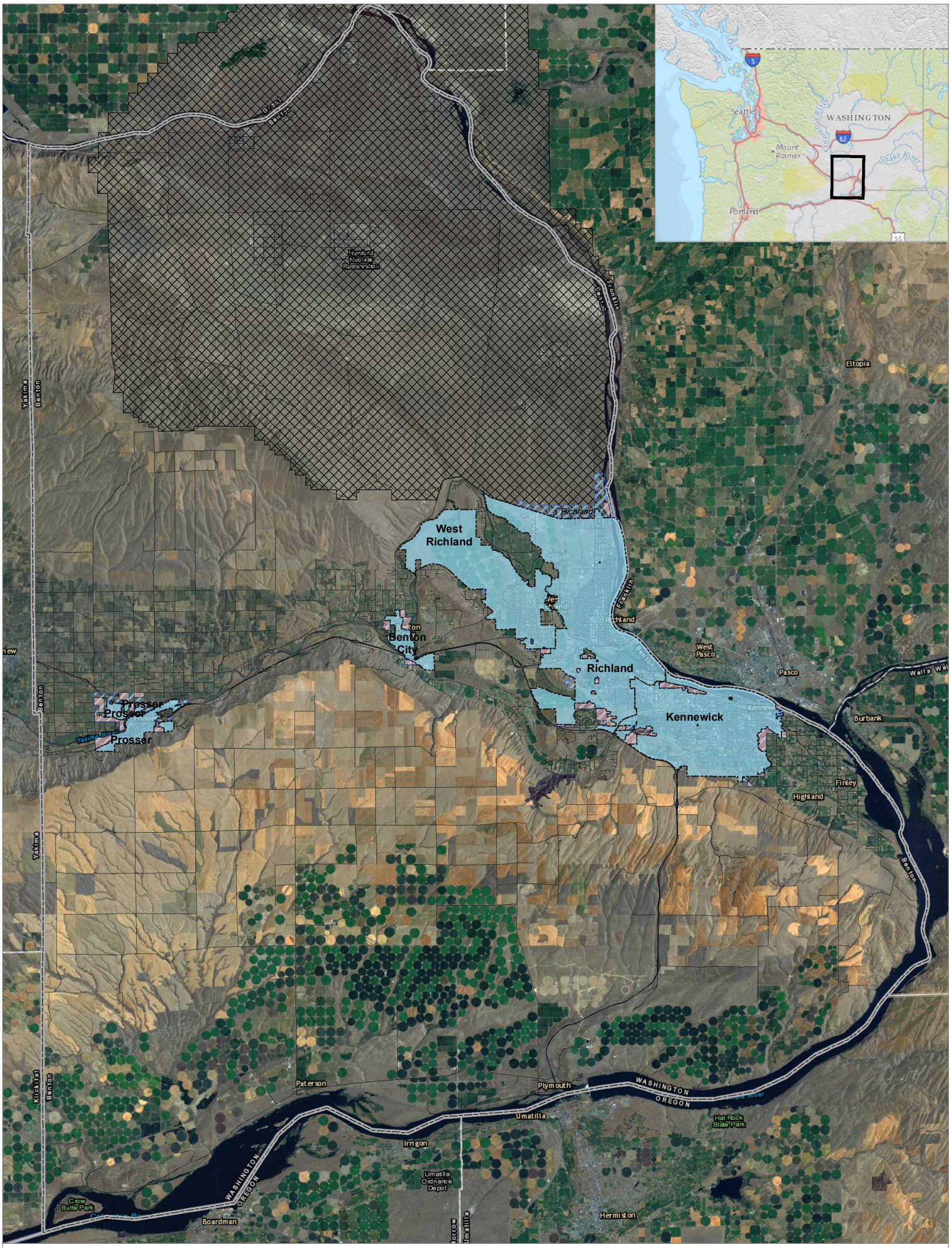
ANCHOR QEA

Figure 1
Existing Designated Agricultural Resource Lands and City Planning Areas
Benton County
Agricultural Resource Land Reclassification



LEGEND:

- Roads
- City Limits
- UGA
- County Boundary
- Hanford Site

Land Use (2011)

District

- UGA

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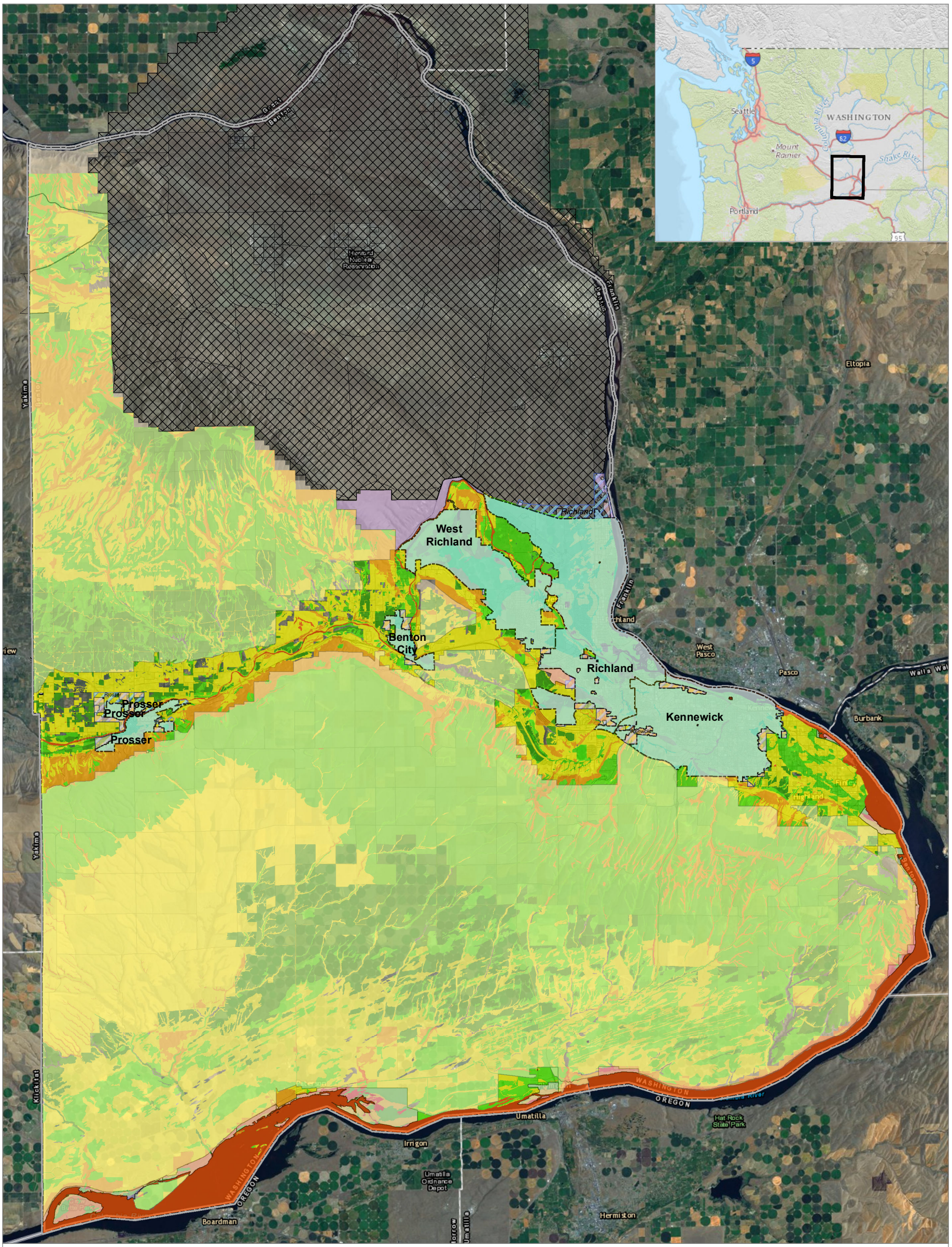
Figure 2
Urban Growth Areas
Benton County
Agricultural Resource Land Reclassification



LEGEND:

- Roads
- City Limits
- UGA
- County Boundary
- Hanford Site

Land Use (2011)

District

- PARK DISTRICT
- UGA
- GMA AG

Capability Class

- Suitable - Class 2
- Suitable - Class 3
- Suitable - Class 4
- Suitable with Management - Class 6
- Suitable with Management - Class 7
- Non-suitable - Class 8

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Figure 3
NRCS Capability Class
Benton County
Agricultural Resource Land Reclassification

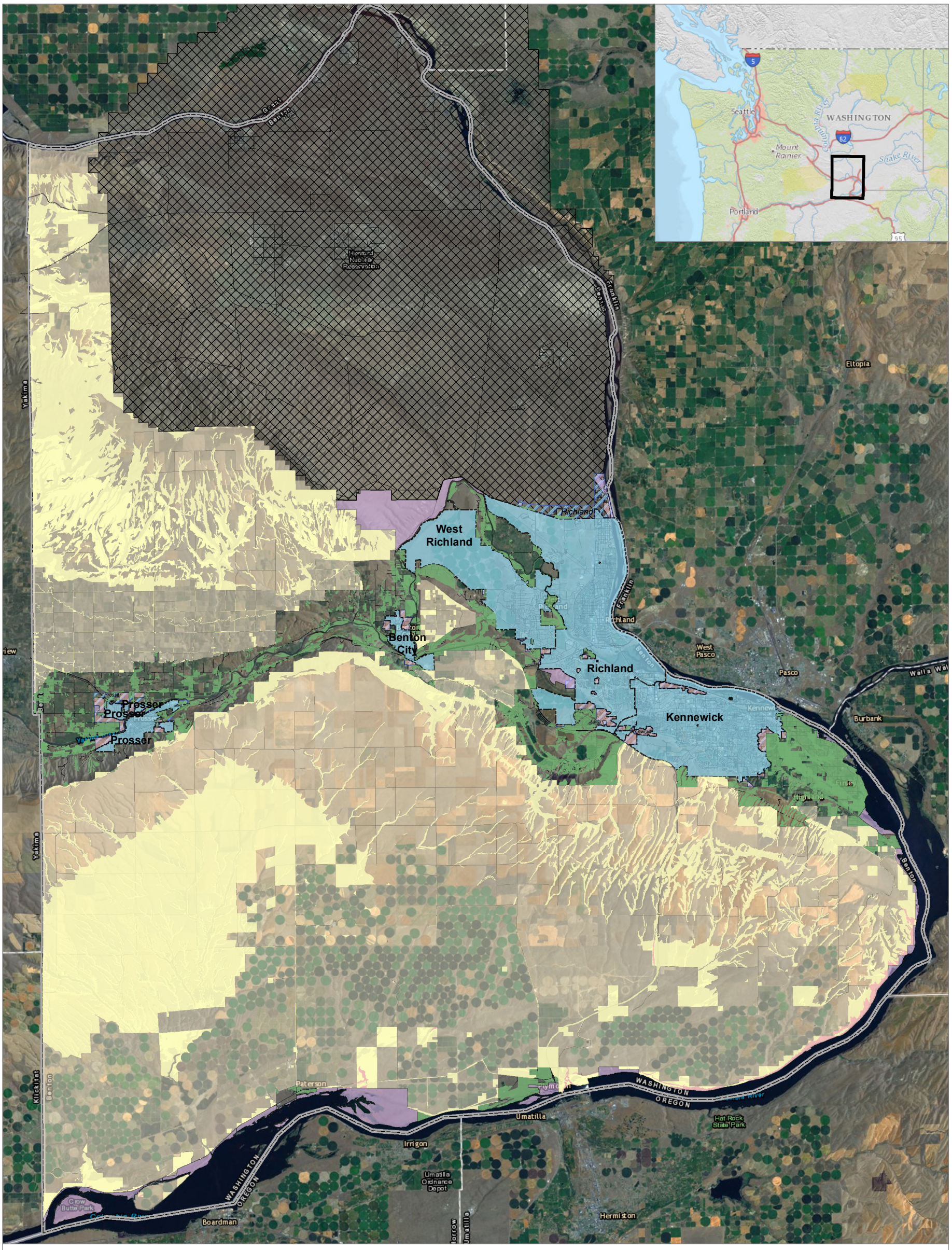

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Figure 4
Capability/Land Use Potential Mismatch Areas
Benton County
Agricultural Resource Land Reclassification

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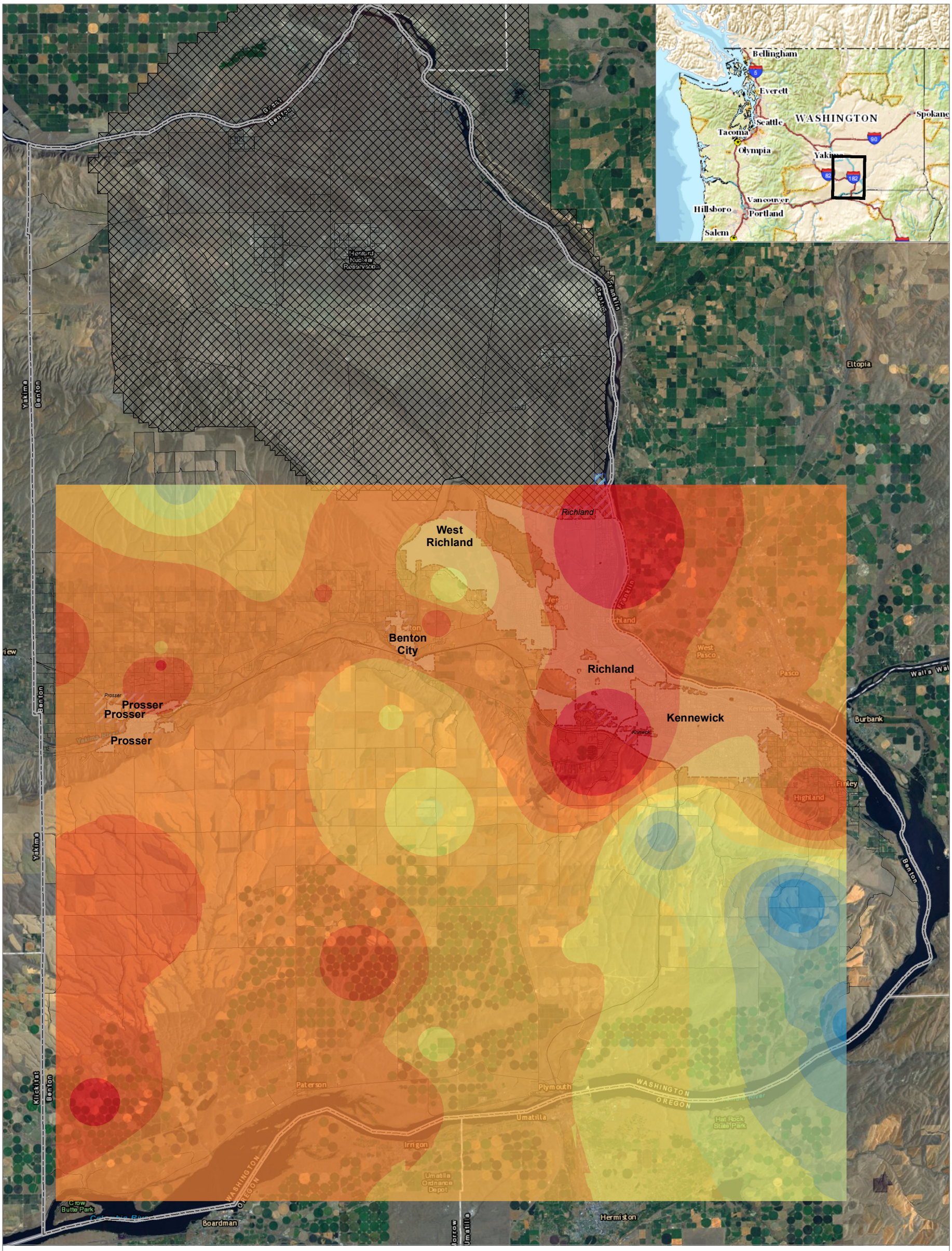

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Figure 5
Annual Average Precipitation Analysis
Benton County
Agricultural Resource Land Reclassification

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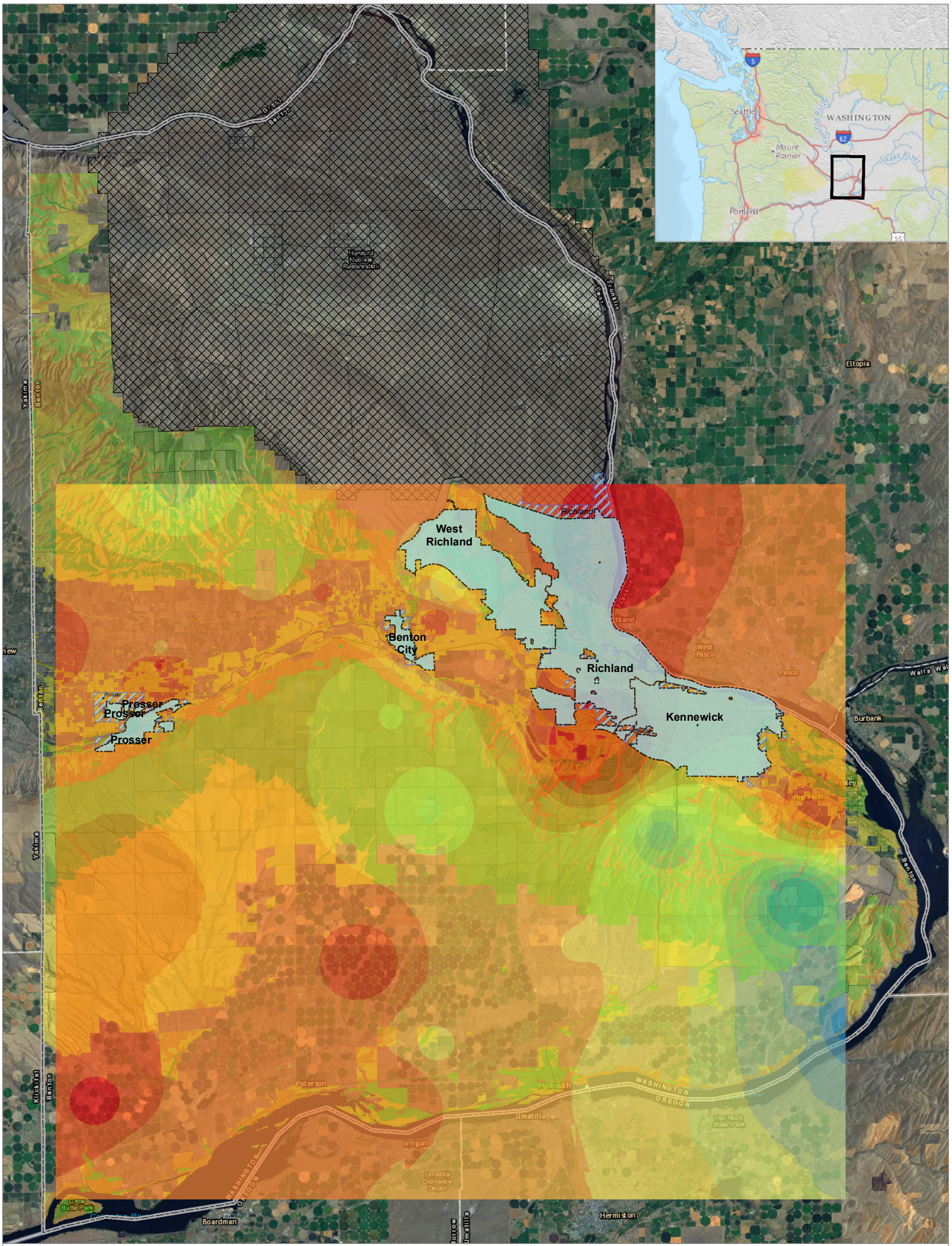

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Figure 6
Precipitation and Non-irrigated Lands Suitable for Cultivation
Benton County
Agricultural Resource Land Reclassification

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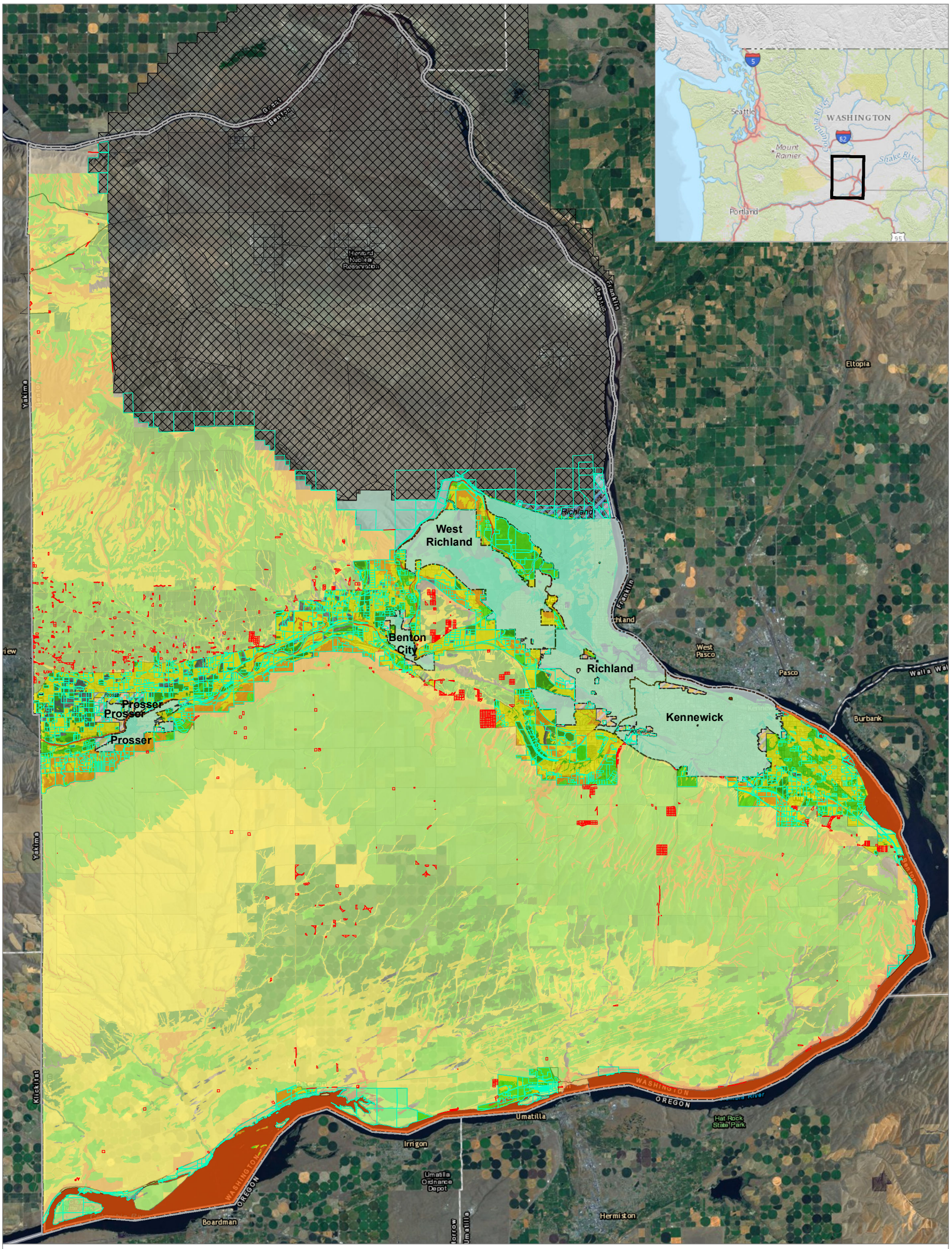

LEGEND:

- Roads
- City Limits
- UGA
- County Boundary
- Hanford Site
- Parcels below 10 acres in GMA AG
- Parcel above 10 acres not in GMA AG

Land Use (2011)

District

- PARK DISTRICT
- UGA
- GMA AG

Capability Class

- Suitable - Class 2
- Suitable - Class 3
- Suitable - Class 4
- Suitable with Management - Class 6
- Suitable with Management - Class 7
- Non-suitable - Class 8

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Figure 7
Parcel Size Analysis
Benton County
Agricultural Resource Land Reclassification

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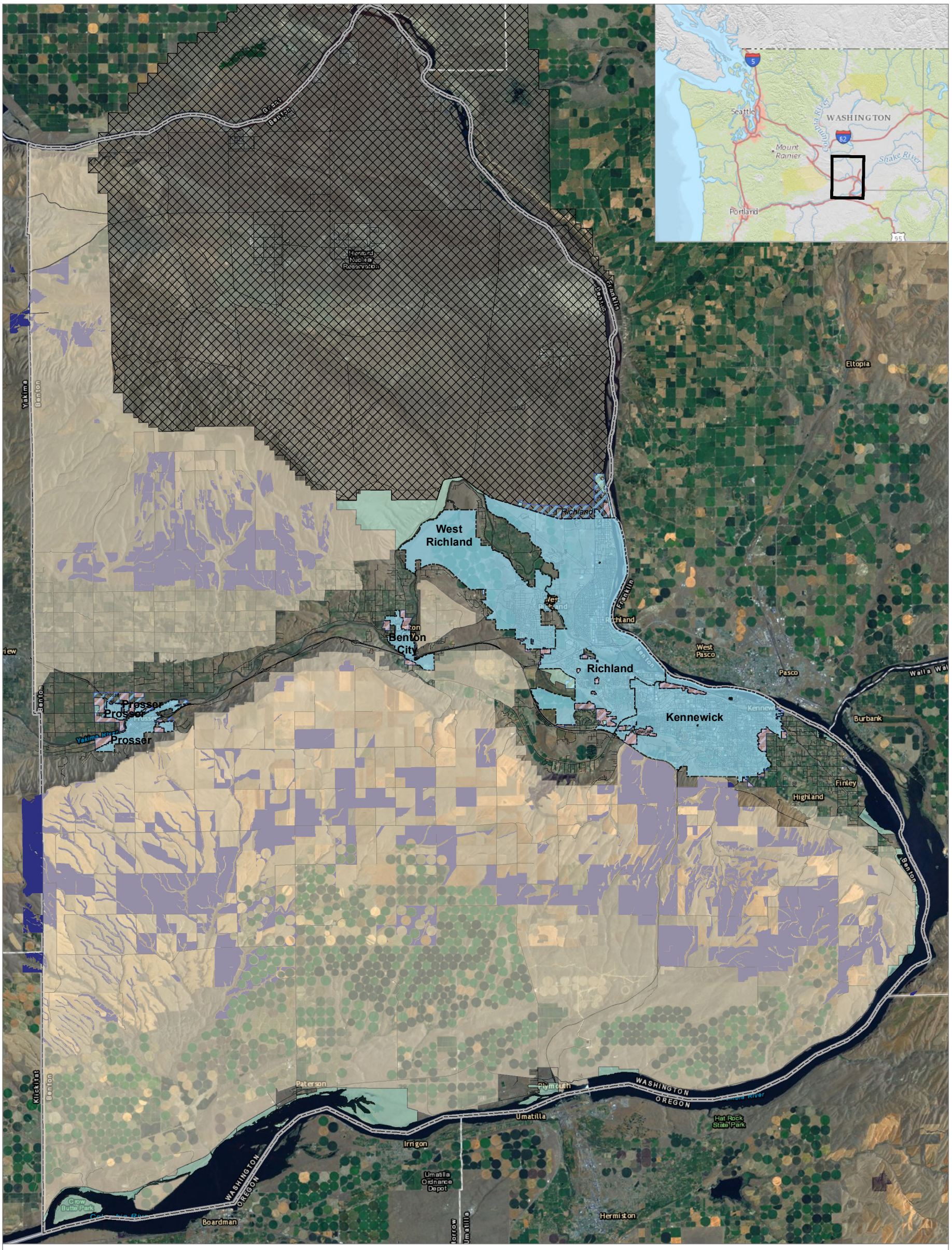

LEGEND:

- Roads
- City Limits
- UGA
- County Boundary
- Hanford Site

Land Use (2011)

District

- PARK DISTRICT
- UGA
- GMA AG

Crop Type

- CRP/Conservation

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Figure 8
Lands in CRP/Conservation
Benton County
Agricultural Resource Land Classification

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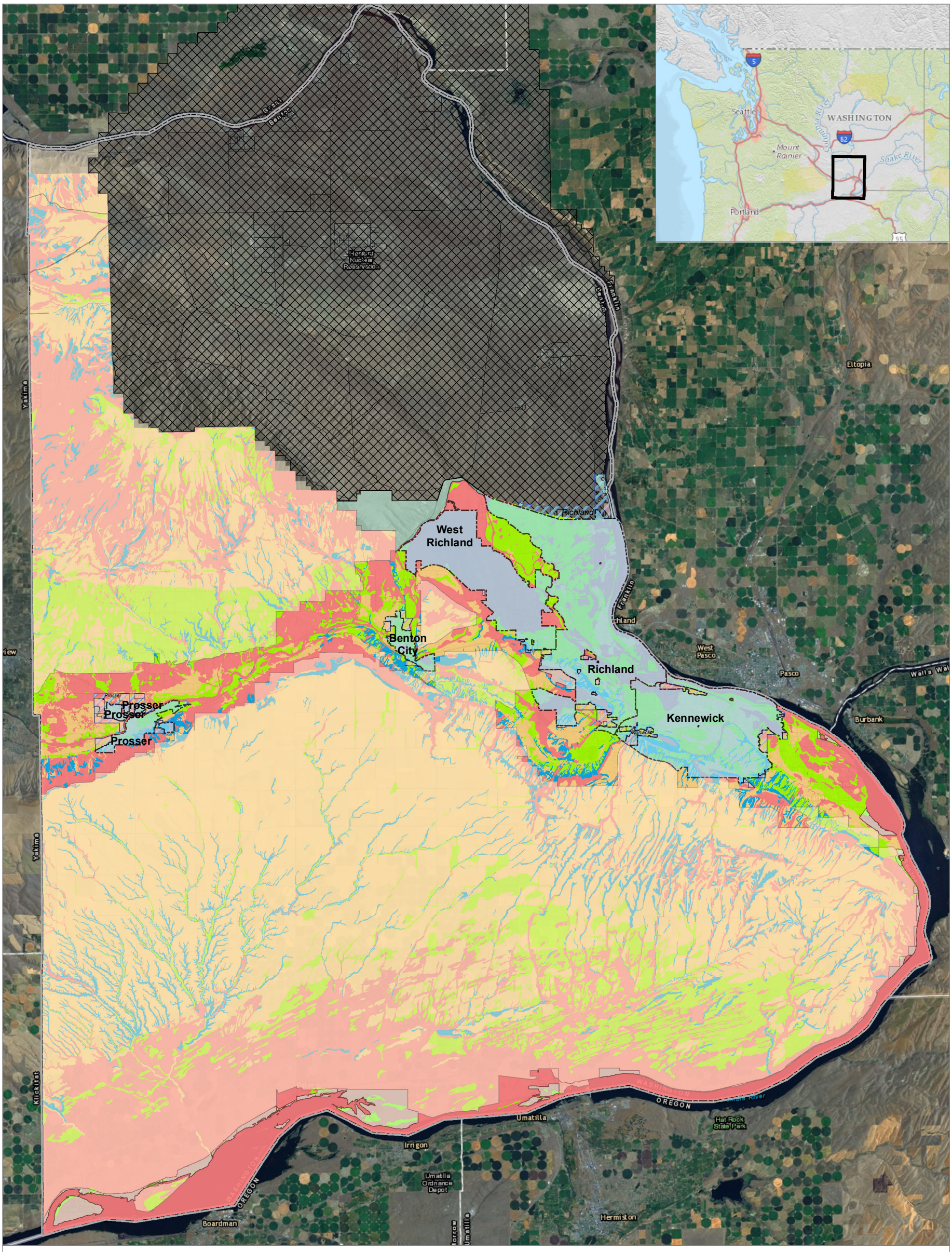

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Figure 9
Prime Farmland Designation
Benton County
Agricultural Resource Land Reclassification

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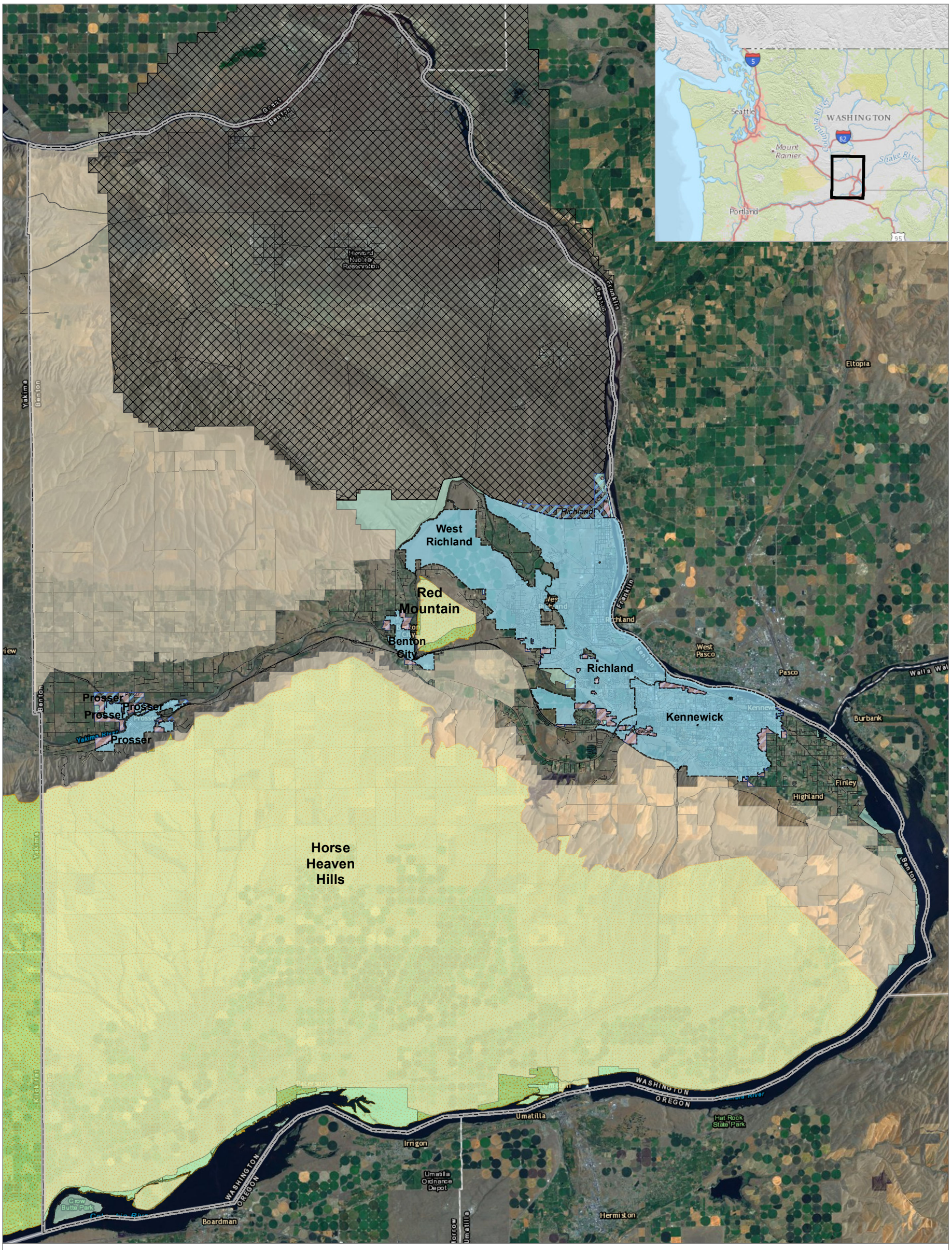

LEGEND:

- Roads
- City Limits
- UGA
- County Boundary
- Hanford Site
- American Viticultural Area (AVA)

Land Use (2011)

District

- PARK DISTRICT
- UGA
- GMA AG

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Figure 10
American Viticultural Areas
Benton County
Agricultural Resource Land Reclassification

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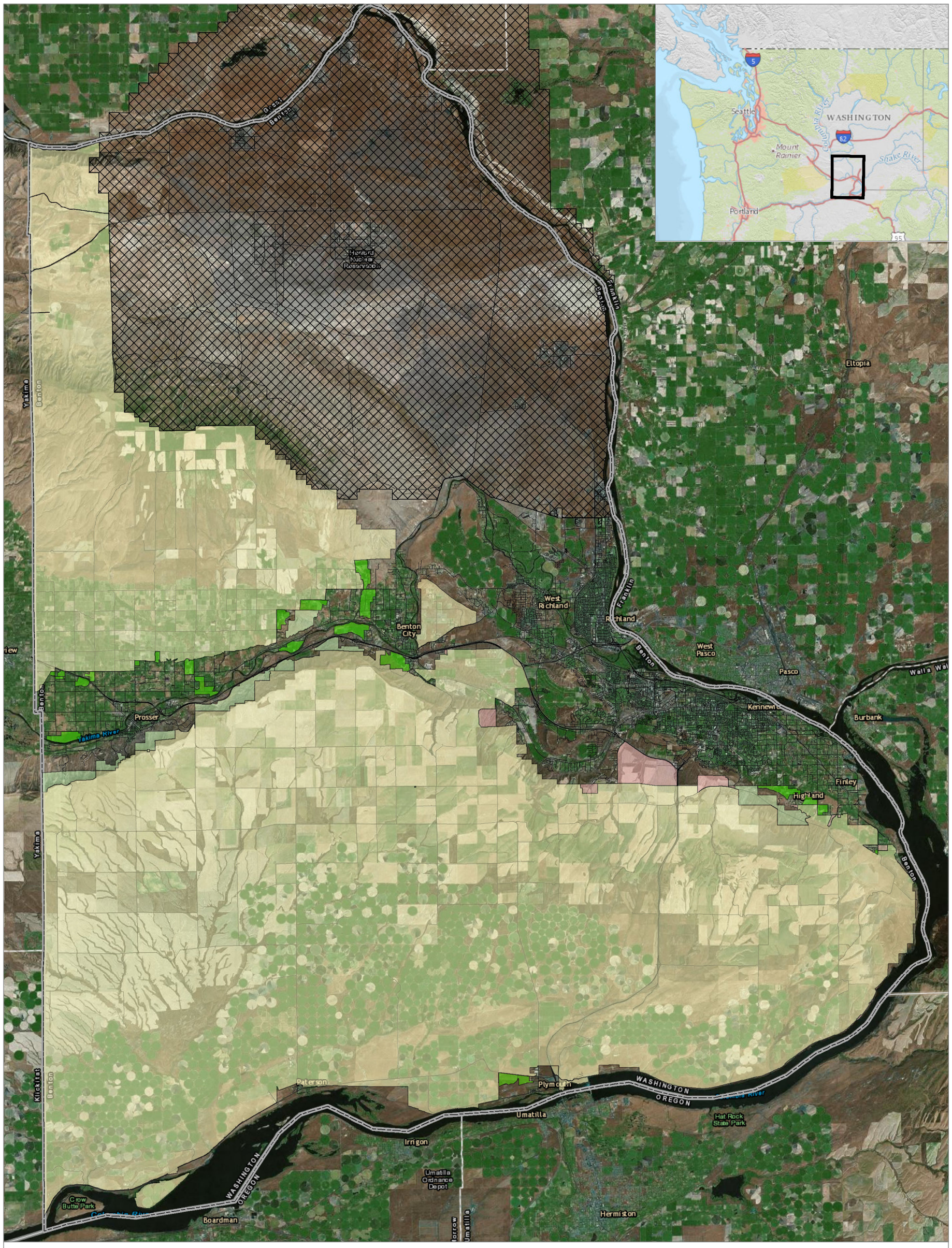

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Figure 11
Proposed Changes to Agricultural Resource Land Designations
Benton County
Agricultural Resource Land Designation