



# **CITY OF RIVERGROVE COMPREHENSIVE PLAN**

(Attachment A to Ordinance No. 79-2011)

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## **INTRODUCTION**

Rivergrove is located in the lower Tualatin Valley in northwestern Oregon. It is bordered on the south by the Tualatin River, on the west by Interstate 5, on the east by the Oswego Canal, and for the most part by Childs Road to the north.

Rivergrove is flat in topography and is dominated by the Tualatin River which gives the City a rural and scenic character. It is a linear city about two miles in length with an average width of about .04 of a mile. Portland, which lies to the north, has a very strong influence over the lives of the residents of Rivergrove supplying them with jobs and a wide variety of services and consumer goods. Lake Oswego, Tualatin, Lake Grove, Tigard and Beaverton are also important employment and commercial centers servicing Rivergrove residents.

Rivergrove lies within the Metropolitan Service District (Metro) and Metro serves as the primary coordinator of land use plans in the region. Rivergrove is also situated in both Washington County and in Clackamas County. The City was incorporated in 1971 with a population of 319 residents. Preservation of the City's residential character was and continues to be one of the primary desires of the City and its residents.

The Comprehensive Plan of Rivergrove describes the intentions of the City to shape its future development. The plan expresses the desired patterns of land use and sets out provisions for supplying the support services necessary for future urban development. This plan should be considered by the citizens, developers and affected governments and agencies as the intent of public officials for the development of Rivergrove. It should guide officials in their administration of all applicable ordinances.

The plan is divided into a series of elements, each addressing one of the Statewide Goals. Within each element there is a discussion of the particular issues of concern and the relevant factual information. These discussions offer a summary of the background information which led to the formation of policies. The policies, which appear at the end of each element, are the City's attempt to achieve the Statewide Goals while meeting the special needs and expectations of the residents of Rivergrove.

The Rivergrove Comprehensive Plan is a city limits plan, meaning that the Urban Planning Area is contiguous with the present city limits of Rivergrove. Rivergrove's comprehensive plan does not cover any land outside City limits, because Rivergrove does not have its own Urban Growth Boundary (UGB). Rivergrove, 23 other cities, and three counties are within the Metropolitan Service District (Metro) UGB.

All land within Rivergrove is urban. Unincorporated land lies to the north of Rivergrove, while the City's east and west limits are contiguous with those of the Cities of Lake Oswego and Tualatin respectively. Rivergrove has entered into an Urban Planning Area Agreement with Clackamas County.

This plan, each of its elements, and the zoning ordinance shall be opened for amendments that consider compliance with the Goals and Objectives and Plans

of Metro or its successor, on an annual basis and may be so amended or revised more often than annually if deemed necessary by the City Council. Annual amendment and revision for compliance with the above regional goals, objectives and plans shall be consistent with any schedule for re-opening of local plans approved by the Department of Land Conservation and Development (DLCDC).

This provision is not to be construed as waiving any legal rights which the City may have to challenge the legality of a regional goal, objective or plan provision.

## AMENDMENT PROCESS – 2008-2010

The City of Rivergrove evaluated the need for an amendment to its Comprehensive Plan and began the process of citizen involvement in 2008. With planning assistance, a Community Survey was conducted in June 2008, followed by a series of public meetings that addressed different statewide goals and elicited comments from residents.

In 2009, a Citizen’s Action Group was formed to process community input. The Group submitted a draft amendment proposal to the Planning Commission in February 2010.

After DLCDC reviewers comments were added, the amendment was made available to the public in July 2010, and the first public hearing was scheduled for the August meeting of the Planning Commission.

## CITIZEN INVOLVEMENT

The Survey results and entire body of comments may be found in Appendix B-1 and B-2 respectively. Here is a sample:

On natural resources:

“The trees in Rivergrove are central to the feel and character of the community. As we develop the land and cut the trees, we are in danger of becoming just like the other developments in the area.”

“If we say we love trees—that trees are our greatest natural resource, then why aren’t we better guardians?? We need stronger tree ordinances and a way to enforce them.”

“Trees are a necessity of life, but if you chop down only a few, then you risk other trees falling during a windstorm. I would like to see more trees though.”

On air, water & land resources quality:

“Too many trees have been removed already! The river’s edge especially needs protection & trees should not be cut down. More trees... better for the water quality.”

Things that are best about the quality of life in Rivergrove? “Trees, biking, quietness”; “natural beauty, river access”; “environmental influences”; “quiet streets.”

66.2% of survey respondents strongly disagreed with the statement that “the environmental quality of the Tualatin River water quality is acceptable,” an indication of awareness of the problems.

92.5% of those responding to the Survey rated the livability of Rivergrove as “Very Good” or “Good.”

93.5% indicated that their primary mode of transportation was the auto, with only 3.2% listing bus as the primary mode.

In the 2008 Rivergrove City Survey, respondents were asked if they agreed with the following statement: “The environmental quality of the Tualatin River is acceptable.” Only 4.4% strongly agreed and 23.5% agreed, while 39.7% disagreed and 26.5% strongly disagreed. (5.8% didn’t know.)

#### On open spaces and recreation:

“If you are going to keep the park, make it more user friendly and esthetically pleasing. The space is nice and it would be a great place for kids and families if there were more things to do there.”

“Minor Park: add picnic tables, plant some shade trees.”

“Landscaping on Stark’s Boat Ramp needs to be maintained. There should be a no-parking designation directly across the street...as it is very difficult to maneuver a boat/trailer down the ramp when cars are parked on the street.”

#### On housing & land use:

In answering the survey, citizens indicated (questions 052 through 054) that they preferred the current variety of lot sizes, and did not feel that lot sizes were too large. However, they did not support a suggestion that lot sizes be *more* varied.

By strong majorities (questions 057 and 058), they felt that new homes were being built with yards that were too small, and they wanted to see a maximum footprint size for new construction.

Respondents indicated (questions 044 through 047) that townhouses and multi-family developments were not acceptable within the city limits, but they were not opposed to living near them (as some citizens do currently).

While a majority believe that the new houses and subdivisions are attractive, views were mixed as to whether there was good integration of home styles and neighborhood design (questions 36 through 43).

Overall, a large majority (92.5%) of respondents rated the City’s livability as

Good or Very Good and their comments showed an appreciation for the Rivergrove lifestyle and an eagerness for maintaining it.

On transportation:

“Speed limit is okay but people don’t obey it. Somewhat feel safe on pedpath, but it’s too close to the street.”

“We need ‘bumps’ down the edge of the pedway to make it safe.”

“Hold developers accountable in repairing roads they tear up, back to original condition.”

“We live on Childs Rd. in the school zone. Kids cross the crosswalk to go to school and I rarely see cars stop for them. Many kids are not with parents and it is an extremely dangerous area.”

“TriMet services are inconsistent or rather limited to only main roads and poor after 6 o’clock.”

“Bike paths are woefully inadequate. I am strongly in favor of the Tualatin River footbridge and would love to see it built....The condition of Childs Rd. west of 65<sup>th</sup> is terrible and needs repaving.”

POLICIES:

1. The City of Rivergrove will maintain an intergovernmental agreement with Clackamas County because the development of lands adjoining the City will affect lands within the City. This agreement is intended to provide the City with notice of development within certain specified areas as outlined in the agreement. The purpose of this agreement is to ensure that City concerns about adjoining development are available to the County.
2. The City of Rivergrove shall adopt a city Comprehensive Plan designation for any land which is annexed to the City at the time of the annexation. The City shall choose a designation that is (1) the closest to the Clackamas County plan designation for the parcel or parcels prior to annexation, and (2) consistent with the housing needs analysis in the City’s Comprehensive Plan.
3. The City of Rivergrove will maintain urban service agreements pursuant to ORS 195.085 with the cities of Lake Oswego and Tualatin for the purpose of providing sanitary sewer service to Rivergrove.

## **GOAL # 1: CITIZEN INVOLVEMENT**

**GOAL:** To develop and implement a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process.

### **CONTEXT:**

In preparing its comprehensive plan Rivergrove has adopted a Citizen Involvement Program which was subsequently approved by Oregon Department of Land Conservation and Development (DLCD). It makes provisions for citizen involvement, communication with officials, access to technical information, influence in the planning process, and mechanisms for obtaining feedback from officials. The plan and all relevant documents will be on file with the City Recorder.

The Rivergrove Planning Commission has been designated by the City as the Committee for Citizen Involvement.

### **POLICIES:**

1. The City shall implement its Citizens' Involvement Program.
2. The City shall involve other governmental agencies and districts in the local planning process, and shall give them the opportunity to propose plan changes or review and comment on any proposed plan changes
3. The citizens of Rivergrove shall be given the opportunity to propose plan changes or review and comment on any proposed plan changes.
4. The Planning Commission shall consider reviewing and updating the Comprehensive Plan every ten years, coincident with the US Census, and shall involve citizens in this regular process..



## **GOAL #2: LAND USE PLANNING**

**GOAL #2:** To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.

- Specifically, to identify land use activities and their effect on the public health, safety and welfare of Rivergrove citizens.
- To ensure orderly and efficient development.
- To establish a planning process, policies and factual basis for all decisions and actions related to the use of the land.

### **CONTEXT:**

The City of Rivergrove is comprised of single-family homes on lots that are generally 10,000 square feet or greater, with residential zoning. Larger lots have been partitioned or subdivided as sewers were constructed, although this has been a very gradual process.

The City has no urban growth boundary (UGB), because it is within the UGB of the Metropolitan Service District (Metro). Within Rivergrove's city limits, there are two very small landlocked properties that have not been annexed to the City: one is an access drive, and the other is a developed single family lot.

Rivergrove's Land Use decisions have been based upon the Rivergrove Land Development Ordinance (RLDO), adopted in March 1989 and amended as needed. In conjunction with the amendment of the City's Comprehensive Plan, the City of Rivergrove has begun a reformatting and revision of its RLDO.

### **CITIZEN RECOMMENDATIONS – GOAL # 2:**

Based upon citizen comments at a series of community meetings during 2008 to discuss the amendment of the City's Comprehensive Plan, comments submitted in the June 2008 City Survey, (see Appendix B), and through the work of the Citizens' Advisory Group, the following actions were also recommended:

1. Encourage and support other agencies to help implement the City's Comprehensive Plan.
2. Encourage and facilitate the exchange of information, data and assistance with neighboring and affected governmental units.
3. Create a vehicle for providing a coordinated approach to problems facing Rivergrove and its neighbors.

## POLICIES:

1. The Comprehensive Plan for the City of Rivergrove will be filed in the office of the City Recorder, and in the County Clerk's office in both Clackamas and Washington Counties.
2. The City of Rivergrove shall maintain an ongoing planning process that will facilitate federal agency, state agency, and county plans which are to be consistent with this comprehensive plan.
3. The Planning Commission shall review the entire Comprehensive Plan and implementing ordinances at least upon notice from DLCD, pursuant to OAR 660-19, Periodic Review. Decennial reviews shall occur as designated in Goal #1 of this Comprehensive Plan.
4. Comprehensive Plan map and text amendments may be initiated by the Planning Commission, City Council, a property owner, his or her authorized representative, or a resident of the City.
5. The City shall encourage communication with all local, state and federal agencies, to assure coordinated comprehensive planning and to exchange maps, data, and other pertinent information.
6. During all Comprehensive Plan Revisions, the City shall encourage the participation of affected persons and governmental entities, including property owners and citizens, as well as local, state and federal government units. All will be given an opportunity to review and comment prior to any changes in the Plan and implementation ordinances, with at least 30 days' notice of the public hearing on the proposed change.

## **EXEMPTED GOALS # 3 AND 4**

The City of Rivergrove has adopted exemptions to the following Statewide Planning Goals for the reasons indicated:

### **GOAL # 3: AGRICULTURAL LANDS**

The preservation of agricultural land is not at issue in this plan since the entire planning area is within established city limits.

### **GOAL # 4: FOREST LANDS**

Since Rivergrove is entirely within the adopted regional Urban Growth Boundary (UGB), preservation of commercial forest lands is not at issue.

## **GOAL #5: NATURAL RESOURCES, SCENIC & HISTORIC AREAS, OPEN SPACES**

**GOAL:** To protect natural resources and conserve scenic and historic areas and open spaces.

### **CONTEXT:**

If you ask Rivergrove residents to name the City's most precious natural resources—as was done in the *2008 Rivergrove City Survey*<sup>1</sup> and in the Citizen Involvement meetings held during summer and fall 2008<sup>1</sup>, the answer most often given cites the Tualatin River that forms the city's southern boundary, and the groves of Douglas fir and other species of large trees (predominantly evergreen) that still stand throughout the City.

The increase in development during the years 2000 through 2009—which saw the final plat approval of 4 subdivisions, preliminary approval for 2 other subdivisions plus additional partitions, and the construction of 30 new homes<sup>2</sup>—brought challenges to the City in its efforts to conserve and protect both trees and water quality.

During this decade, no new open spaces (such as parks, nature preserves and other public areas) were created. Density increased, with the advent of additional sewers through parts of the City, allowing the partitioning of larger tracts and creation of new subdivisions.

The question remains, however, can Rivergrove's Land Use Ordinance (RLDO) effectively encourage the conservation of open spaces as natural areas or for public use, and protect the City's remaining trees?

### **NATURAL RESOURCES:**

Fish and wildlife form an integral part of Rivergrove's desirable environment. Maintenance of the wide variety of fish and wildlife found in the City requires maintenance of the habitats on which they depend. Development pressures will be in direct conflict with the preservation of these habitats. However, judicious planning can assure that the anticipated growth of the City will have only minimal impacts on fish and wildlife.

The City is underlain by a formation of Columbia River Basalt which provides an excellent, high quality groundwater source. The Oswego Canal to the east and the Tualatin River to the south constitute the major surface water features in the planning area. The Tualatin River and the Oswego Canal drains the entire City.

There is a seasonal wetland in the eastern section of the City, as noted above. It is caused by a winter high water table. This area provides valuable nesting sites for ducks, and habitat area for other animals.

The most significant wildlife habitat in Rivergrove is the riparian area. It is

important in this area that natural conditions (especially the native vegetation) be maintained. The Tualatin River is an important fish habitat; however, the poor water quality of the river threatens the survival of some of the species. The Corps of Engineers has also identified wetlands centered on Sycamore between Childs and Dogwood.<sup>3</sup> These wetlands extend east of Sycamore into territory within the city limits of Lake Oswego. The wetlands border the Lake Oswego Bryant Woods Nature Park. Plan policies are intended to preserve these habitat areas.

The City addressed this issue in the year 2001, with the adoption of an ordinance establishing Water Quality Resource Areas (WQRAs)<sup>4</sup>, to protect environmentally sensitive lands from development.

There are no rare or endangered species of fish or wildlife known to exist in Rivergrove. A list of species of fish, amphibians, reptiles, birds and mammals known or suspected to reside in Rivergrove may be found in Appendix D.

Many of the trees in Rivergrove are second-growth Douglas fir, cedars, oaks and spruces estimated to be approximately 100 years old. These are predominantly Douglas fir, but other species are well represented. The City's tree-cutting ordinance has not prevented significant loss of these large trees, and, unfortunately, many fell victim to root rot, as a result of flooding in the late 1990s. Since the loss of edge trees will leave the grove weakened, the City's tree-cutting policy needs to focus on the needs of groves, as well as individual trees.

The central portion of the City was the site of the old Pilkington Nursery, and evidence of this can be seen in the varied species of trees and their placement in rows.

Rivergrove has no Historic Trees registry, and the creation of such could be of benefit to the preservation of significant specimens.

The WQRA ordinance adopted in 2001<sup>4</sup>, requires planting in sensitive riparian areas to consist solely of native plants. A list of plants native to the area can be found in Appendix D.

There are no significant mineral and aggregate resources<sup>5</sup> or significant fossil fuel resources known to exist in Rivergrove.

## **SCENIC & HISTORIC AREAS:**

Scenic views of the Tualatin River are limited, since the only public access to the river is from the City Boat Ramp on Dogwood Drive, and development has obscured the visibility.

There are no places in the City which are listed in the State Register of Historic Sites. However, an historic trail once ran just south of where Childs Road is currently located. A ferry crossing of the Tualatin was once just east of the present County boundaries.

According to tax records, two houses in the City, on Childs Road, were built in the year 1900, and a third in 1910. These are the oldest structures in Rivergrove.. There are no significant cultural areas in the City.

### OPEN SPACES:

Public open space within the City is limited to a City-owned park on Dogwood Drive between Marlin and Tualamere Avenues. The park includes a boat ramp and totals 1.11 acres. That parcel is the only point in the City with public access to the Tualatin River.

Within its city limits, Rivergrove presently contains privately owned open space (undeveloped land). The current density of development is approximately 1.46 dwelling units per acre. At this level of development, the City has a semi-rural quality characterized by as yet undeveloped land, although it should be noted that much of this land is in the riparian corridor/WQRA. This level of development would still allow for considerable open space in the community.

There are no wilderness areas or significant natural areas<sup>6</sup> designated within the City. The public open space and the riparian section constitute the major areas in the City which have open space or resource value. These areas have been protected from development pressures by the policies below.

### POLICIES:

1. Future acquisition of public lands shall be based on the needs of the residents and the physical capacity of the City to provide them. Land currently designated as public open space shall be preserved as such.
2. Wildlife and plant habitat considerations shall be integrated into the land use decision-making process.
3. Compliance with Metro's Title 13 for protection riparian areas and wildlife habitat; compliance with Title 13 meets Goal 5 requirements for these resources.
4. In order to preserve the riparian habitat, strict enforcement of the City's WQRA ordinance is vital. This ordinance meets METRO goals for environmentally sensitive areas.
5. Development adjacent to the Tualatin River and wetlands will be governed by Metro Guidelines as most recently specified in Rivergrove's WQRA Ordinance.
6. Make a commitment to complete a local wetland inventory to better inform future planning and development, and improve compliance with existing state and federal wetland regulations.
7. Identify the link between tree groves and wildlife habitat, and their link to water

and air quality. Understanding and documenting the habitat functions of groves will strengthen the City's ability to use Goal 5 to achieve protection of this resource.

8. Recognize the link between floodplain management and both riparian and habitat protection.
9. The maintenance of vegetative cover with native plant species is encouraged.
10. The public shall be encouraged to provide for wildlife on their home properties.
11. Rivergrove shall encourage open space designation for land within the Tualatin River greenway, and other areas of the City.
12. City shall revise its tree cutting ordinance to include stronger language to preserve Rivergrove's native trees.
13. The City shall identify historic trees and make efforts to preserve them.
14. The City shall make an effort to improve public access to the Tualatin River.
15. Encourage privately owned open spaces with public access in new subdivisions.
16. Rivergrove shall encourage the discovery and recording of its history, through interviews with long-time residents, and written documentation, in an attempt to identify historic areas.

#### **ENDNOTES – GOAL # 5:**

<sup>1</sup> 2008 Rivergrove City Survey Results and Citizen Involvement Meetings, see Appendix B

<sup>2</sup> Housing and land use statistics, see Appendix E.

<sup>3</sup> See map, Appendix D.

<sup>4</sup> Rivergrove Land Development Ordinance #73-2003

<sup>5</sup> Oregon Dept. of Geology & Mineral Industries and Columbia Region Association of Governments

<sup>6</sup> As determined by the Nature Conservancy's *Natural Heritage Program Inventory*.

## **GOAL # 6: AIR, WATER AND LAND RESOURCES QUALITY**

GOAL: To maintain and improve the quality of air, water and land resources.

### CONTEXT:

In the Rivergrove City Survey<sup>1</sup>, conducted in the spring of 2008, citizens and residents were asked to list three of the best things about life in Rivergrove. Time after time, the answers were trees, the river, or quiet surroundings. Those are the things most appreciated in this City, and it should be our goal to maintain these resources to the best of our ability.

We are fortunate that our City is situated in a state that values clean air and water, and freedom from pollution.

### AIR:

Rivergrove lies within the Portland/Vancouver Interstate Air Quality Maintenance Area (AQMA). In its *2008 Air Quality Conformity Determination*<sup>2</sup>, Metro prepared an air quality conformity determination for the federal component of the *2035 RTP* and *2008-11 Metropolitan Transportation Improvement Program* (MTIP), a requirement of state and federal law. The document shows that the metro area, including the 25 cities and the urban portions of three counties of the greater metropolitan region, will continue to meet federal and state air-quality standards to the year 2035.

The major source of air pollution in Rivergrove is motor vehicle exhaust. A large portion of an individual's carbon footprint comes from vehicle miles traveled (VMT). In addition to increased public transit use, promoting carpools and telecommuting are important strategies for reducing VMT.

Trees and tree groves sequester carbon dioxide. Identifying the link between trees and the preservation of air quality can inform policies for protecting trees and encouraging the planting of new trees.

### WATER:

Once considered Oregon's most polluted river<sup>3</sup>, the Tualatin, which flows along Rivergrove's southern boundary, has been the subject of considerable cleanup efforts. Stronger environmental enforcement, stringent WQRA ordinances, improved waste treatment upstream, the construction of water storage facilities to augment the meager summer flows, and an effort to educate citizens have all contributed to measurable improvement. However water quality is still far from acceptable.



According to the Department of Environmental Quality's *Willamette Basin Rivers & Streams Assessment, 2008-9*<sup>4</sup>:

The Tualatin subbasin had the greatest extent of stream length with poor to very poor OWQI [Oregon Water Quality Index] scores, indicating overall impaired water quality condition... Of the 12 subbasins, the Tualatin had the highest proportion of stream length impaired by low dissolved oxygen in the basin (41%) and the second highest extent of impairment for high levels of total solids (46% and nutrient enrichment. (>35%)

Rivergrove contributes minimally to the pollution of the Tualatin River, but two factors increase the city's contribution. First, older, failing septic tanks leach coli form bacteria into the surrounding soil. And second, the application of lawn and garden chemicals increases phosphates and other river pollution through surface water runoff.

The first factor can be mitigated by linking all homes in the City to a properly functioning sewerage facility. As for the second factor, surface water detention ponds for new subdivisions and improved storm water sewers (although there are relatively few in the City) have helped control runoff. Through public education of the dangers of over-fertilizing lawns and overuse of garden chemicals, citizen awareness can help improve water quality.

The Tualatin River's OWQI score<sup>5</sup> (at Boones Ferry Road in Tualatin, 2008-9, the closest monitoring site) was 54, a ranking of "Very Poor" and a trend considered "Declining." While Rivergrove inherits most of its river pollution from upstream, there are still greater efforts that can and should be made.

For more complete information on the water quality of the Tualatin River refer to Appendix E.

Trees and tree groves retain storm water. Identifying the link between trees and the preservation of water quality can inform policies for protecting trees and encouraging the planting of new trees.

#### LAND:

All solid waste produced in Rivergrove is residential waste. Hopefully, the historical trend of increasing per capita waste generation will be offset through source-separation, recycling and waste reduction. If so, increases in waste generation by Rivergrove will be no more than the proportional increases in population.

There are currently no significant threats to the quality of land in the City.

#### NOISE:

The City of Rivergrove enjoys a quiet, peaceful environment. Preservation of this quietude is essential to the preservation of the character of the community.

Noise pollution in Rivergrove is minimal, but has increased over the years with a rise in traffic on Interstates 5 and 205, as well as traffic along Childs Road. These constitute the major sources of noise in the city.

Further development in and around Rivergrove can be expected to increase traffic levels and thus increase noise levels. It is expected, however, that these levels will remain within acceptable standards, especially if the speed limit of 25 miles per hour is maintained and enforced on Childs Road. A 25 mph speed limit on the section of Pilkington Road within the City limits—from Dawn Street to Childs Road—would be desirable to increase safety and decrease noise, as vehicular traffic increases and a pedway is considered.

As residential growth continues in areas surrounding the City, construction noise has been and will likely continue to be a problem. Rivergrove will work to minimize construction noise, to the degree practical, within its own boundaries. In addition, Rivergrove should work with neighboring jurisdictions of Tualatin and Lake Oswego to minimize construction noise through the area.

#### POLICIES:

1. Evaluate trips within the City for the purpose of identifying ways to reduce VMT.
2. Until such time as control strategies are realized, Rivergrove shall use measures described in the DEQ handbook "Environmental Quality Elements of Oregon Local Comprehensive Plans" when planning any development activities having the potential to directly or indirectly affect air quality.
3. Rivergrove shall work with Tri-Met to increase mass transit ridership and reduce air pollution.
4. Should noise from automobiles reach unacceptable levels, Rivergrove shall work with the appropriate agencies to reduce the noise level.
5. Identify link between trees and the preservation of air and water quality.
6. Rivergrove shall cooperate with all affected agencies to extend sanitary and storm sewers throughout the City.
7. Rivergrove shall, through its newsletter, encourage solid waste recycling efforts in the City.
8. Rivergrove shall encourage a reduction in the use of fertilizers and other garden chemicals.
9. Rivergrove supports the clean-up of the Tualatin River.

10. The City will comply with all applicable state and federal air, water, solid waste, hazardous waste and noise regulations.
11. Final water detention facility design and use of materials shall be approved by the Planning Commission after approval by Water Environment Services (WES) and before construction.
12. Encourage reduction and control of light pollution that affects residents and wildlife.

### ENDNOTES – GOAL #6

<sup>1</sup> Comments, *Rivergrove City Survey*, June 2008

<sup>2</sup> METRO, *2008 Air Quality Conformity Determination*

<sup>3</sup> *The Student Rivershed Project*, Portland State University, 2003

<sup>4</sup> *Willamette Basin Rivers & Streams Assessment 2008-9*, Department of Environmental Quality

<sup>5</sup> Tualatin Riverkeepers *Newsletter*, Summer 2009

## **GOAL # 7: NATURAL DISASTERS AND HAZARDS**

**GOAL:** To protect life and property from natural disasters and hazards.

### **CONTEXT:**

Situated as it is—a skinny little city, built on the lowlands along the Tualatin River—Rivergrove is bound to have water problems! And indeed it does. Two significant floods, in 1996 and 1997, caused considerable damage, distress, and loss of property. Floodwaters in the area rose above FEMA’s existing 100-year flood level in some locations, and the agency has since then has issued new designated flood levels.

Long after the Tualatin had receded to its normal level, many of Rivergrove’s stalwart old Douglas Firs died from root rot disease that thrived in the wet soil. Enormous dead and dying trees posed a hazard in themselves, especially in windstorms.

Water has always been a challenge to Rivergrove, whether in the form of flooding or surface water, and would easily top the list of natural hazards.

### **FLOODING & SURFACE WATER ISSUES:**

Areas subject to flooding are identified in the Flood Insurance Studies prepared by the Federal Emergency Management Agency (FEMA) and are indicated on a flood plain map. The most current FEMA 100-year flood levels, which were adopted by the Rivergrove City Council in June 2008, can be seen on the Rivergrove Floodplain Map in Appendix D.

Many dwellings in the City are located in this floodplain. Consequently, the City participates in the flood insurance program developed by FEMA, which makes flood insurance available to homeowners. The purchase of flood insurance generally requires compliance with the Department of Housing and Urban Development (HUD) Flood Insurance Program Regulations. These regulations specify building criteria for structures built within the 100-year floodplain.

The year 2009 was the first time most Rivergrove residents realized that surface water issues are serious matters. That was the year the first noticeable detention pond was constructed along Childs Road. Its black chain link fence and concrete walls brought immediate comments. Others will follow as acreage is developed.

Yet some homeowners have been battling surface water runoff for years, as development has occurred, in Rivergrove or nearby. Non-pervious paving and structures have sent excess surface water running down through the City, toward the Tualatin River, flooding driveways and backing up roadside drainage ditches.

Careful management of surface water, through stringent land use ordinances and strict enforcement is needed to prevent this.

**GROUNDWATER CONTAMINATION:**

Groundwater contamination is possible if areas where ponding occurs are polluted. For this reason, septic tank development should not be allowed in areas with high water tables. Although there is a certain amount of development in such areas in Rivergrove, no problems of groundwater contamination have been noted.

Areas of Potential Groundwater Contamination can be noted on the map in Appendix D.

**SOILS HAZARDS:**

The following table summarizes the hazards of soils found in Rivergrove. Additional details of soils may be found in Appendix D-5, with a soil map in Appendix D-6.

**Characteristics & Constraints of Soils in Rivergrove<sup>1,2</sup>**

Number	Soil	Slope	Characteristics			Constraints	
			Shrink/ Swell	Drainage*	Erosion*	Dev.* Const.	SDS* Const.
<i>Clackamas County</i>							
56	McBee Silty Clay Loam	0-3%	Mod.	M	SL	SV	SV
84	Wapato Silty Clay Loam	0-3%	Mod.	P	SL	SL	SL
91A	Woodburn Silt Loam	0-7%	Mod.	MW	SL	M	SV
91B	Woodburn Silt Loam	3-8%	Mod.	M	SL	SV	SV
76B	Salem Silt Loam	0-7%	Low	W	SL	SL	SL
16	Chehalis Silt Loam	0-3%	Mod.	W	SL	SV	SV
<i>Washington County</i>							
9	Chehalis Silty Clay Loam	0-3%	Mod.	W	SL	SV	SV
21C	Hillsboro Loam	7-12%	Low	W	SL	SL	SL

Abbreviations: P=Poor, M=Moderate, MW=Moderately Well, W=Well, SV-Severe, SL=Slight

The most notable soil hazards are severe constraints to development and subsurface disposal systems (SDS). Severe constraints to development soils generally require major reclamations, design modifications, or special maintenance. The soils with a severe constraint to SDS have poor permeability and a high seasonal water table. Development on these soils should be at lower densities than on the moderate and slightly constrained soils. For more detailed information of the soils in the City and a soil map, refer to Appendix D.

## OTHER HAZARDS:

Slopes in the City are mild; therefore, landslide hazards are minimal.

There are no earthquake faults running under the city of Rivergrove, although the entire Pacific Northwest is subject to seismic activity.

Deposition in the Tualatin River appears to be balanced with channel scouring during high water flows and is thus not a problem. However, an additional problem in the City is erosion of the banks of the Tualatin River. The City will work with the State Marine Board and other responsible agencies, including the neighboring jurisdictions of Tualatin, Tigard, and Lake Oswego, to minimize bank erosion possibly by establishing limitations on speed or size of motor boat traffic on the Tualatin River.

## POLICIES:

1. Development in area of special flood hazard (Flood Management Area) shall be in accordance with the National Flood Insurance Program Regulations. The preferred use within the area of special flood hazard is open space.
2. Land use decisions shall consider their potential effect on flooding, drainage and soil erosion.
3. Development on soils with severe constraints to development or SDS shall be allowed only after appropriate safeguards have been taken.
4. Rivergrove shall encourage the preservation of natural drainage ways.
5. Encourage the use of individual pumping stations where needed for sewer connections.
6. Limited new single family residential development may be allowed within lands designated as Floodway Fringe areas on Federal Emergency Management Agency maps subject to the new structures meeting the standards specified in the Flood Damage Prevention Ordinance (Rivergrove Ordinance #52). All such structures shall be flood resistant.
7. If sanitary sewer is available, the maximum density allowed in the 100-year flood boundary should be one (1) house per 10,000 square feet.
8. Development in the floodway itself, as designated on Federal Emergency Management Agency Maps, should be aimed at enhancing the recreational use of this space, while mitigating environmental damage concerns.

## ENDNOTES – GOAL #7

<sup>1</sup> USDA , Natural Resources Conservation Service, *Rivergrove Soils Report*, July 2010

<sup>2</sup> Oregon Department of Environmental Quality (DEQ)

## **GOAL # 8: RECREATIONAL NEEDS**

**GOAL:** To satisfy the recreational needs of the citizens of the Rivergrove area and visitors.

### **CONTEXT:**

A variety of recreational opportunities are easily accessible to Rivergrove residents. Within the city limits, there is a 1.11 acre city park—Lloyd Minor Park—located on Dogwood Drive between Marlin and Tualamere Avenues.

Across from the park, on the river side of Dogwood Drive, a city-owned boat ramp provides public access to the Tualatin River. The river contains a variety of game fish and provides angling opportunities for Rivergrove residents.

There are no public camping, picnicking, and recreational lodging facilities in Rivergrove. No travel-ways, trails, or archeological sites are located within Rivergrove. No cultural events, winter sports events, or active and passive games and activities take place in Rivergrove. No hunting is allowed in the City.

Nearby, in Lake Oswego, other recreational sites are available for use by Rivergrove residents.

### **LLOYD MINOR PARK:**

Rivergrove residents love their park: 82.5% of respondents to the 2008 *Rivergrove City Survey* said that the park is a “great asset to Rivergrove.”<sup>1</sup> Yet only 27.4% felt that the park “has all the facilities needed to serve its users.”

In 2006, the City received a 60%/40% matching funds grant from the Oregon Lottery—the State’s share amounted to \$38,000—and the funds were used to construct a safe, fun and colorful playground structure. However, limited financial resources have delayed the further landscaping and development of the park.

### **STARK BOAT RAMP:**

The Leonard & Edith Stark boat ramp allows public access to the Tualatin River. 66.2% of respondents to the 2008 Rivergrove City Survey<sup>1</sup> said that the boat ramp “is a great asset to Rivergrove,” and 52.3% said that they “regularly access the river.”

A Citizens’ Advisory Committee was formed in 2009, to address not only the concerns of neighbors about noise and traffic issues relating to the boat ramp, but also future landscaping and development possibilities for the park as a whole.

## NEARBY RECREATIONAL ACTIVITIES:

Other recreational opportunities are in close proximity to Rivergrove. Three Lake Oswego city parks are located at or near Rivergrove's eastern border with Lake Oswego.

Sharing a contiguous border with Rivergrove, and just north of the City's easternmost area is Canal Acres, a 31-acre natural open space.

Bryant Woods Nature Park, a 17-acre nature conservancy, is located on the north side of Childs Road west of (and adjacent to) the Oswego Canal.

River Run Park, a 7-acre passive park site, is located to the east of Rivergrove across the Lake Oswego Canal.

North of central Rivergrove, Pilkington Park and Soccer Field, adjacent to River Grove Elementary School, offer additional recreational opportunities.

Citizens of Rivergrove are granted access to Oswego Lake for swimming and picnicking via the Lake Grove Swim Park.

## FUTURE PARKS IN RIVERGROVE:

Outdoor recreation facility standards for urban areas recommended by the State Parks and Recreation Department<sup>2</sup> and acreage requirements for Rivergrove are shown in the table below.

### **Acreage Requirements for Rivergrove Parks**

<b>Type of Park</b>	<b>Acreage per 1000 Pop.</b>	<b>Pop.= 350</b>	<b>Pop.= 450</b>
Neighborhood Park	2.5 acres/1000 persons	.9 acres	1.2 acres
Community Park	2.5 acres/1000 persons	.9 acres	1.2 acres
Regional Park	10.5 acres/1000 persons	3.7 acres	4.7 acres

From these figures it would seem that the City has provided marginally sufficient neighborhood park space for its citizens at current population levels. However, as our population grows in coming years, when subdivisions now in the approved or in planning stages are developed, the need for additional parks will grow. There are limited site opportunities for neighborhood and citywide park and recreation facility development because few vacant sites are of adequate size and have aesthetic value and a good location.

To accomplish this, the City of Rivergrove must first be certain to have a land use Code that allows for the dedication of open space.



There are limited site opportunities for neighborhood and citywide park and recreation facility development because few vacant sites are of adequate size and have aesthetic value and a good location. Moreover, local means to acquire and develop park sites are extremely limited.

The City has recently given preliminary approval for an application for density transfer in a large subdivision. By increasing the density of housing in the portion of the land outside the floodplain, the developer proposed the creation of an open space in the floodplain.

## POLICIES

1. Explore the potential for joint park development with Clackamas County.
2. Acceptance by Rivergrove of any land dedicated for park purposes shall be based upon its usefulness and adaptability to the City's park and open space system.
3. Cooperate with Lake Oswego and other jurisdictions in the development and maintenance of parks which are easily accessible to Rivergrove residents.
4. Work with affected agencies to improve the Tualatin River and allow access to its recreational opportunities.

## ENDNOTES - GOAL # 8:

<sup>1</sup>City of Rivergrove, 2008 Rivergrove City Survey.

<sup>1</sup>State Highway Division, Parks and Recreation Department, Oregon Outdoor Recreation, 1971.

## **GOAL # 9: ECONOMIC DEVELOPMENT**

**GOAL:** To provide adequate opportunities throughout the City for a variety of economic activities for the health, welfare and prosperity of Rivergrove and its citizens.

### **CONTEXT:**

Rivergrove is a residential community, and its citizens want to maintain the residential character of the area. There is no industrial development or commercial development. During the last decade, one commercial facility, a fitness gym/with swimming pool, was annexed to Rivergrove under the City's new conditional use ordinance. However that land use has now become residential.

Currently, most residents of Rivergrove find their employment in the Portland metropolitan area. Prospects to provide a commercial or industrial base in Rivergrove are not favorable due to the limited supply of buildable land, the lack of large parcels of buildable land, the existing residential development, and the lack of sewers accessible by many homes in the Clackamas County portion of Rivergrove.

Although the feasibility of providing sewers to this part of Rivergrove remains under study, there is very little Rivergrove can do to remove the other constraints to industrial and commercial development which exist in Rivergrove. The nearby cities of Tigard, Tualatin and Lake Oswego have more suitable and available land, and have included commercial and industrial development in their long-range planning.

Because Rivergrove is unsuited for commercial and industrial development and does not plan to provide for such development in the future, Rivergrove residents will continue to be dependent for their employment on the Portland metropolitan area.

### **POLICIES:**

1. Allow home businesses as specified in the Land Development Ordinance.
2. Encourage the interim use of vacant land for urban agriculture.
3. Rivergrove could explore the possibility of zoning a very small commercial "node," so that residents can buy some basic goods and services without having to drive to another city.

## **GOAL # 10: HOUSING**

**GOAL:** To provide for the housing needs of citizens of the City of Rivergrove; to encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Rivergrove households and allow for flexibility of housing location, type and density; and to ensure the efficient use of residential land within the Metro urban growth boundary consistent with Statewide Planning Goal 14 Urbanization; in a way that is consistent with the Metro Urban Growth Management Functional Plan, while at the same time, maintaining the characteristics that make Rivergrove unique and desirable to current and future residents.

### **CONTEXT:**

In the past 20 years, Rivergrove has seen many changes to its new housing stock as well as the value of land. This is due to many factors that include growth in the Portland Metropolitan Area, economic growth in the region, and an improvement in the water quality of the Tualatin River. Rivergrove has also benefited from its close proximity to major freeways, central location to jobs, and a scenic beauty that attracts residents.

While all of these amenities have made Rivergrove a desirable place to live, the city also lacks much of the infrastructure that would make it a candidate for denser development. That includes availability and frequency of mass transit, and commercial development within walking distance.

The sensitive ecological system that exists throughout much of the City's area is another deterrent. In Metro's 2040 Plan<sup>8</sup>, Rivergrove has been designated as a low-density residential area. This classification has also been adopted by both Clackamas and Washington Counties.

### **BUILDABLE LAND:**

Table F-2, in appendix F, shows the City's 2009 inventory of fully developed land (including dedicated park land), re-developable and vacant land. It should be noted that acreage of protected Goal 5 resource areas such as designated wetlands and riparian corridors, and Goal 7 hazard areas such as floodways (see Floodplain & Floodway Map, appendix D-3) has not been removed from the buildable land inventory. Development in such areas is restricted in the RLDO.

All land in the City is zoned Residential, with a minimum lot size of 10,000 square feet for land outside the Flood Hazard District and 0.5 acre within the Flood Hazard District. Higher density is achieved in two ways: (1) The City allows the lot size calculation for subdivision lots on private streets to include the square footage of the street when connected to sewers; and (2) the Rivergrove Land Use Development Ordinance allows duplexes, triplexes and accessory dwelling units on lots that meet the minimum square footage.

Development in the City shall be subject to urban development standards consistent with Statewide Planning Goals 10, 11 and 14, and with the Metro Urban Growth Management Functional Plan, in order to encourage infill development and redevelopment to meet the City's current and future housing needs. These development standards will not require property owners to partition or redevelop their land; they will merely allow them to do so if they wish.

### DEVELOPMENT HISTORY:

During the past decade (2000 through 2009), the City has approved 32 development applications for new houses and 19 for renovation of existing homes.

### LAND USE INVENTORY AND COST:

Rivergrove's land use inventory is summarized in Appendix F, in Map F-1, and Table F-2, using statistics from the most recent census<sup>1</sup> and tax assessment data.<sup>2</sup> The inventory shows vacant, developed and re-developable land.

Table F-3, in Appendix F shows the distribution of Rivergrove households among ranges of monthly housing values from the most recent census<sup>1</sup> and tax assessment data.<sup>2</sup>

Rivergrove, as part of the Lake Oswego School District, is fortunate to have an outstanding school system. And as a result of this, citizens enjoy other benefits such as access to the Lake Grove Swim Park and participation in the City of Lake Oswego's recreation program, all factors that contribute to the value of property in the City.

All of this information is updated with the latest census data when it is available in Appendix F.

### HOUSEHOLD INCOME:

Please refer to table F-4 in Appendix F for the most current income data.

### HOUSING AFFORDABILITY:

The need for affordable housing in the Portland metropolitan region is well documented.

In the year 2009, a house at Rivergrove's median value of \$359,411 would have required a household income of approximately \$54,000 to \$64,000. Table F-3 in Appendix F gives the figures used to calculate this.

## POPULATION PROJECTION:

Rivergrove has not grown nearly as rapidly as Metro's earlier projected figure of 450 by 2000<sup>2</sup>. Since incorporation in 1971, the population has increased by only 5 persons, from 319 to 324 in 2000<sup>1</sup>. The primary reasons for the slow growth are the lack of large parcels of buildable land free of environmental obstacles (wetlands, floodway, floodplain, surface water management) and the expense of bringing sewers to some difficult sites.

While the years 2003 through 2008 saw a rapid increase in development activity in the City<sup>5</sup>, the subsequent recession has left developed subdivision land standing vacant or only partially built.

At the time of the US Census 2000, Rivergrove had a population of 324 (297 in Clackamas County, 37 in Washington County). The median age was 34.

Metro's population growth forecast<sup>7</sup> estimates a growth range for the Portland Metropolitan Area of between 1.37% and 1.70% over the period 2000 to 2030. Based on this estimate, Rivergrove's population for the year 2030 would be within the range of 444 to 550 citizens.

## DEMOGRAPHIC OVERVIEW:

[Note: Census 2010 data will be substituted when it becomes available in 2011.]

The U.S. Bureau of the Census' Census 2000<sup>1</sup> provides the following profile of Rivergrove households:

- 69.6% of all households are comprised of married couples
- Average household size is 2.77 individuals
- 51.5% of residents are female, 48.5% male
- 88% own their homes, 12% are renters
- 75.2% of households have school-age children

For additional census figures, see Appendix F.

## HOUSING DEMAND:

The 32 new homes built between the years 2000 and January 1, 2010 accommodate approximately 174 new residents, based on Metro's current household size estimate of >2.6 persons per household.

In addition, 54 lots have been approved for development. Using Metro's current household size estimate of >2.6 persons per household<sup>7</sup> these lots should bring Rivergrove's population to 548, just two short of the estimated population range high, assuming single family homes are constructed on each lot. (The RLDO allows duplexes or triplexes.)

Many of these lots are in new subdivisions with private streets. Therefore, the square footage of the street has been included in each lot's total area, bringing the buildable portion of the lot to less than the minimum 10,000 square feet.

### FUTURE GROWTH:

With the exception of two very small parcels of developed land, Rivergrove has now annexed all pockets of land within its city limits. Since it is bounded by the Tualatin River on the south, and the cities of Lake Oswego and Tualatin, or unincorporated land within the Metro urban growth boundary on all other sides, there is no room for future growth outside its existing city limits.

Therefore, growth in population must be accommodated through development of vacant land, infill and duplexes or triplexes as currently allowed under the Rivergrove Land Development Ordinance.

### ADDRESSING HOUSING NEEDS:

DLCD's State Housing Goal discusses the need for affordable housing and the provision of diverse housing which meets the characteristics of statewide housing demand while satisfying local housing demand.

The location of new residential development in Rivergrove is severely limited due to the lack of vacant, buildable land, and the small size of the City. Thus, new residential development in Rivergrove is basically an in-fill situation and this restricts the degree to which the methods to promote lower housing costs and housing diversity can be applied.

There is little a small jurisdiction such as Rivergrove can do to affect the major determinants of housing costs: prime interest rate, labor costs and state and local regulations. However, until urban conditions develop, there are some things Rivergrove can do to reduce housing costs.

Strategies, actions and measures that Rivergrove has adopted or may consider, to encourage infill housing development that will meet the City's future housing needs analysis include:

- allowing accessory dwelling units ( currently allowed by the RLDO);
- allowing duplexes and triplexes (currently allowed by the RLDO);
- allowing for smaller than 10,000 square foot lots where urban services are available (currently allowed on private streets);
- permitting outright, through a site plan review or conditional use, townhouses and cottage housing.

## POLICIES:

1. Encourage a city-wide effort to bring sewers to the entire community at a reasonable cost.
2. Explore ways to increase density without sacrificing the lifestyle that is important to Rivergrove citizens, and without sacrificing environmental quality standards.
3. Encourage the "filling-in" of vacant and underdeveloped land unless precluded by environmental constraints.
4. Update Rivergrove's subdivision and development process for developers and builders in an effort to reduce application costs, legal costs, and other permit processing expenses.
5. Take into consideration how a development application affects the overall character of the neighborhood.

## ENDNOTES – GOAL # 10

<sup>1</sup> U.S. Bureau of the Census, *Census 2000*

<sup>2</sup> Tax assessment/valuation data from Clackamas County and Washington County Assessors, 2009.

<sup>3</sup> City of Rivergrove, *Rivergrove Housing Survey*, November, 1977.

<sup>4</sup> Clackamas and Washington County, Oregon, property tax data.

<sup>5</sup> City of Rivergrove archives.

<sup>6</sup> City of Rivergrove Survey June 2008.

<sup>7</sup> Metro Council's *20 and 50-Year Population and Employment Range Forecasts*, 2009

<sup>8</sup> *MetroScape Gen 2.3 – Year 2030*, Metro regional government, Portland Oregon, 2008.

## **GOAL # 11: PUBLIC FACILITIES AND SERVICES**

**GOAL:** To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve planning area development.

### **CONTEXT:**

Rivergrove does not have a sufficient revenue source to directly provide many public facilities and services to its residents. Instead, the City has entered into Intergovernmental Agreements with other governmental units, to receive sewer and emergency services. Contractual franchise agreements with utilities, communication companies and waste collection services bring these amenities to homes in Rivergrove.

The city of Rivergrove has residents living in both Washington, and Clackamas County, Oregon. Some public facilities and services serving the residents span both counties; others depend on the geographic location within Rivergrove itself.

### **EDUCATION:**

Children of Rivergrove residents attend schools within the Lake Oswego School District. Those children attend Rivergrove elementary School, Waluga Middle School, and Lakeridge High School.

### **POLICE:**

**In an emergency, residents should call 911 and emergency services will be dispatched accordingly.**

Rivergrove is under the jurisdiction of the Clackamas County Sheriff's office. For all non-emergency questions or concerns, residents should contact the Sheriff's office directly.

### **FIRE PROTECTION:**

**In an emergency, residents should dial 911 and inform the operator of the type of emergency and location for appropriate dispatch.**

The city of Rivergrove has a franchise agreement with Tualatin Valley Fire and Rescue, which offers sufficient fire and rescue services, with secondary response assistance from neighboring communities such as Lake Grove Fire and Rescue.

For answers to questions or for a summary of emergency services available, residents are advised to contact the fire districts periodically to keep abreast of the services and equipment available for emergency deployment such as cardiac-equipped rescue vehicles, emergency rescue, etc.



## WATER:

Rivergrove has urban service agreements with both the Rivergrove Water District and the city of Tualatin, to provide water respectively for homes in Clackamas and Washington Counties respectively. Both supply ample amounts of high quality water for the district.

Residents should be advised the water does have mineral content at low levels and the installation and use of a water softener is recommended merely as a convenience to maintaining your home and fixtures.

## SEWER:

Public Sewer is supplied through Lake Oswego Sewer district and Tualatin United Sewerage Agency.

Many Rivergrove residents still do not have access to a public sewer, but instead rely on septic systems. Many of the city's older systems are failing and the expense of bringing sewer to a single residence can be substantial.

See Appendix G-3 for a map of the areas served by the two public sewer systems to determine which agency should be contacted for questions or to address any problems.

## HEALTH SERVICES:

There are many private health service providers in the area surrounding Rivergrove.

Public health services are available in both Clackamas and Washington Counties (see Appendix G-1).

For a list of available private and public health providers, residents are urged to research those required in the Yellow Pages, or through a search on the internet at home or through a public library.

## ENERGY AND COMMUNICATIONS SERVICES:

Rivergrove residents are supplied electricity through Portland General Electric. Natural gas is available through Northwest Natural Gas. Communications and television services are available through the private corporations Comcast and Verizon, with whom the City has entered into a franchise agreement.

## TRANSPORTATION SERVICES:

Rivergrove has access to public transportation through TRI-MET at several stops along Childs Rd. There is no city-operated public transportation system.

## GOVERNMENTAL SERVICES:

Rivergrove has a volunteer Mayor, City Council and Planning Commission, and a paid City Recorder and City Manager.

The City Council is responsible for approval of issues relating to the city and the goals of the city.

The Planning Commission reviews and approves applications for development within the city limits. These applications may include requests for conformance to zoning and city design requirements for the purpose of building, remodeling, demolishing, or moving homes, installing services such as sewer, water, etc. and for the removal of trees that may be required for such building, moving, etc.

## POLICIES:

1. The City shall continue to cooperate with the City of Lake Oswego in development of any future sewerage master plans. This plan shall be coordinated with all effected sewerage planning authorities with whom agreements shall be reached and maintained to continue to provide Rivergrove with sewerage services.
2. Where full public facilities and services are available, no urban-level development shall occur without the provision for public facilities and services.
3. Where sewerage service is not available, private approved individual sewage disposal systems shall be allowed at lower densities. Development on private sewage disposal systems shall not preclude urban level development when public sewerage service is available.
4. The City shall cooperate and maintain agreements with the districts and agencies which provide its residents with special services so as to continue and improve those services.

## **GOAL # 12: TRANSPORTATION**

**GOAL:** To provide and encourage a safe, convenient and economical transportation system.

### **CONTEXT:**

The principle streets in Rivergrove are Childs Road and Pilkington Road, which are classified as *secondary arterials* in the Clackamas County Plan. Lake Oswego and Rivergrove share planning responsibility with Clackamas County for these roads. Lake Oswego classifies Childs road as a *major collector*. Rivergrove's position is that the sections of Childs road and Pilkington road in our city should be classified as *neighborhood collectors*.

Traffic counts (Keech 1992) show that Childs Road has 1,900 ADT west of Pilkington, and 3000 east of Pilkington, and Pilkington Road has no current figures. The City's streets are adequate for present traffic volumes, and should have adequate capacity through the planning period. However, City residents have expressed concern about traffic safety on Childs Road. Clackamas county and Lake Oswego both have adopted plans which include turn lanes on Childs Road at its intersection with Pilkington. The turn lanes are a long range project and not expected to happen for 11 to 20 years.

In recent years, when Childs Road properties are partitioned or subdivided, Clackamas County has required a 10' dedication for the eventual widening the road. Since the creation of several new subdivisions along Childs near Pilkington, the roadway in that area has become significantly wider than the remainder of Childs and concerns about speeding and safety have increased. Sections of the pedway have fallen into disrepair as the County has not required developers to re-install raised safety bumps when repaving. Rivergrove has reservations about any widening of Childs Road and is considering steps to give the City a role as an active participant in the planning process.

All other streets are local. Clackamas County maintains all public roads within Rivergrove, except Childs Road west of 65<sup>th</sup> and West Road. In the past decade, Clackamas County has declined to accept responsibility for maintenance of new roads. Therefore, since that time, all streets in new subdivisions are privately owned by the individual property owners. These streets are open for public access, but not public parking.

In order to promote efficient vehicular and pedestrian circulation throughout the city, subdivisions and site developments of more than one acre should provide street connectivity whenever possible. Street connectivity is consistent with the Oregon Transportation Planning Rule (TPR) and satisfies Metro's street design guidelines that is described in Metro document entitled Creating Livable Streets, page 27 that reads in part:

*“An interconnected internal street system that provides multiple routes to local destinations, as well as between adjacent developments, allow local trips to stay off the arterial network. Streets that converge at nodes and*

*transit stops provide pedestrians with the option of walking for some trips in a safe and comfortable environment. Those who chose to drive may exit to the arterial system or find a shorter and more direct route to a nearby destination on local streets. With an interconnected street system that provides multiple routes to local destinations, any single street will be less likely to be overburdened by excessive traffic. Police and fire response also benefits from a well-connected road system.”*

## VEHICLES:

The automobile is and will continue to be the major source of transportation for residents of Rivergrove, because other available transportation modes offer only limited access to their employment, shopping and recreation destinations. A recent survey indicated that, as their primary means of transportation to work, 75% of Rivergrove residents drove their car alone, while 9% carpooled, 8% rode the bus, 1% walked, and 7% worked at home.<sup>1</sup> Median travel time is 20-24 minutes.<sup>2</sup>

## BUS SERVICE:

Tri-Met services Rivergrove with line #36, the Oregon City-South Shore bus route. Tri-Met has no plans to increase bus service to Rivergrove, but has taken actions to increase the number of areas easily accessible from Rivergrove. The institution of a Transit Center in Tualatin has connected Rivergrove to Tualatin, Tigard and Legacy Meridian Park Hospital, with express service to downtown Portland. Residents presently have access to Lake Oswego and Oregon City As service continues to improve and as automobile travel increases in cost, Tri-Met bus service will become an increasingly important mode of transportation for residents of Rivergrove.

Tri-met also supplies a necessary and important transportation service for disabled citizens of Rivergrove<sup>3</sup>. Regular bus service is an important means of travel for these citizens who cannot own or operate a private automobile. All buses are now fully accessible, and are equipped with either a boarding ramp or power lift to offer service to citizens confined to wheelchairs. Most buses have automatic systems that announce or illuminate the names of stops. Tri-Met operates the LIFT service for those unable to use standard buses.

## BICYCLES & PEDESTRIANS:

Bikes have predominantly been used by Rivergrove residents for recreation rather than for transportation. However, as fuel prices continue to climb the bike will become a more attractive alternative to the automobile. Walking and biking on Childs and Pilkington roads has always been of concern, since enforcement of the 25-hour speed limit is not constant.

The construction of a bike\pedway along the south side of Childs, from Sycamore to Terry Street was a step in the right direction. A pathway has been planned by Clackamas County and the City of Lake Oswego for Pilkington Road

from Childs north to Jean. Rivergrove is committed to working with Clackamas County and Lake Oswego on these projects.

However, safety concerns on Childs Road continue. Clackamas County's own recent (November 1993) gave Childs Road the dubious distinction of, "the most dangerous road to walk on in Clackamas County ." The bike/pedway, completed during the 1990s has provided a smoother place to walk, but maintenance by Clackamas County has been poor. Developers installing sewers were allowed to repave without replacing safety bumps, and the City should be more vigilant in this regard.

Because of Rivergrove's distance from its major employment and service centers walking to a commercial or retail destination is not a major transportation mode for its residents. However, walking for fitness and sheer enjoyment has increased since the construction of the pedway. Walking safety is likely to improve as the planned subdivisions are constructed, bringing sidewalks to replace the level pedway, and quieter connecting streets to stroll through.

Bicycling, though, will become an increasing concern on Childs Road, as the bike/pedway has become intermittent, as it is replaced by pedestrian-only sidewalks. The City must address this issue and encourage Clackamas County to provide a safe route for bicycles.

## POLICIES:

1. The City shall continuously participate in transportation and circulation systems planning for the East Washington County and West Clackamas County areas to maintain a safe transportation system based on a functional mix of automobile, mass transit, bicycle, and pedestrian modes of travel for local and regional transportation requirements.
2. Roadways within Rivergrove shall be classified as and meet the specifications as described in the Standards Document and the classification shall be coordinated with the Interim Transportation Plan and plans of abutting jurisdictions.
3. The City shall cooperate with Tri-Met to increase mass transit ridership within the City, and shall publicize the availability of programs for the transportation disadvantaged citizens of Rivergrove.
4. The City should work with Metro, Lake Oswego, and Clackamas County to provide a safe bike route into Rivergrove along Childs and Pilkington Roads.
5. Childs Road is designated as a preferred location for a pedestrian/bicycle path from Lake Oswego Canal to 65th Street.
6. The City of Rivergrove will address bicycle issues through a bike & pedestrian plan for the City that connects with neighboring communities.

7. The City should embark on a study of its roads, including jurisdiction and maintenance agreements, to determine the best solution for long-term care and upkeep. Pending a best solution determination for maintenance, the City will consider private street approval that allows public access, with road maintenance provided by a homeowner's association or other means acceptable to the City. The City will utilize the private street design and construction standards adopted for Clackamas County.
8. The City should develop a Transportation System Plan (TSP) to define the City's needs and requirements for its roads.
9. The City should encourage and/or implement traffic control improvements or alterations aimed at improving pedestrian and bicycling safety.
10. The City should promote street connectivity as a principal design guideline in approving new subdivisions and site developments of more than one acre.
11. Improvements to transportation facilities should adequately and attractively transition to existing facilities.
12. Rivergrove's position is that the portions of Childs Road and Pilkington within the city limits should continue to be classified as neighborhood collectors.

#### ENDNOTES – GOAL # 12:

<sup>1</sup> City-Data.com, *Means of Transportation to Work (City of Rivergrove)* 2008.

<sup>2</sup> City-Data.com, *Travel Time to Work (City of Rivergrove)* 2008.

<sup>3</sup> TriMet, *Information for Seniors & People with Disabilities*, <http://trimet.org/access/index.htm>

## **GOAL # 13: ENERGY CONSERVATION**

**GOAL:** To manage and control land and uses developed on the land, so as to maximize the conservation of all forms of energy, based upon sound economic principles.

### **CONTEXT:**

The role of the land use planning process with regard to energy conservation is to minimize the consumption of all forms of energy by managing and controlling land uses. Local governments can play an important role in this process by educating residents to the short-term and long-term benefits of energy conservation, and by making information available on alternative energy sources.

The City's existing pattern of land use is not as energy-efficient as it might be. Single family dwelling units on large individual lots are the primary land use. Commercial uses are located approximately one mile from the city limits, but the lack of safe, designated pedestrian paths or bikeways to those areas discourages access by these modes of travel. The lack of employment opportunities in Rivergrove encourages automobile commutes to distant employment centers.

Rivergrove produces none of its own energy supply and has no fossil fuel resources. As the main fuel source for heating homes, natural gas is predominant, used in 77% of Rivergrove's houses, followed by electricity (15 %), oil (7 %), and wood (2 %).<sup>1</sup>

### **ALTERNATIVE ENERGY SOURCES:**

In 2009, the City issued a development permit for the City's first geothermal heat pump, for a private home under construction. This is an example of an alternative source of energy that may prove to be well suited to Rivergrove's damp soils. In spite of the large stands of trees throughout parts of the City, there are plenty of residences where solar energy might be an option.

The Rivergrove newsletter and public meetings are excellent forums to educate citizens about energy conservation programs and tax credits for alternative energy equipment and energy-efficient appliances and building materials.

### **POLICIES**

1. Support programs for household energy conservation.
2. Continue to encourage residents to conserve energy through articles in Rivergrove newsletters and other media.
3. Modify the Land Development Ordinance when necessary to enforce land use patterns, building forms, or siting practices which in common practice will reduce energy consumption or improve energy efficiency.

4. Find ways to encourage the use of alternative energy sources in Rivergrove homes.
5. Encourage the "filling-in" of vacant land.
6. Support development of a network of well-defined, safe pedestrian and bicycle paths.
7. Support use of mass transit (Tri-Met) and carpooling when possible for work and shopping trips.
8. Maintain the city park and boat ramp, and encourage Rivergrove residents to use these and other nearby recreational facilities.
9. Consider modifications to permitting fees for development applications on new or remodeled housing that include energy conservation or alternative energy use.
10. The City should encourage the use of geothermal, solar and other energy-saving methodologies.

#### ENDNOTE – GOAL # 13

<sup>1</sup> City-Data.com, *Heating Fuel in Houses (City of Rivergrove)* 2008.



## **GOAL #14: URBANIZATION**

**GOAL 14:** To provide for an orderly and efficient transition from rural to urban land use, to accommodate urban population and urban employment inside urban growth boundaries, to ensure efficient use of land and to provide for a livable community.

### **CONTEXT:**

The role of the land use planning process with regard to energy conservation is to minimize the consumption of all forms of energy by managing and controlling land uses. Local governments can play an important role in this process by educating residents to the short-term and long-term benefits of energy conservation, and by making information available on alternative energy sources.

### **POLICIES:**

1. The City of Rivergrove is part of the Metro region and is subject to Metro's Urban Growth Boundary (UGB). The City will coordinate Goal 14 Land Use Issues with Metro pursuant to ORS 195.025.

## **EXEMPTED GOALS # 15 THROUGH 19**

The City of Rivergrove has adopted exemptions to the following Statewide Planning Goals for the reasons indicated:

### **GOAL # 15: WILLAMETTE RIVER GREENWAY**

The protection of the Willamette River Greenway is not at issue in this plan, since the entire planning area is outside the established Willamette River Greenway area.

### **GOAL # 16: ESTUARINE RESOURCES**

The protection of Estuarine Resources is not at issue in this plan, since the entire planning area does not include or lie adjacent to Estuaries or their associated wetlands.

### **GOAL # 17: COASTAL SHORELANDS**

The conservation of Coastal Shorelands is not at issue in this plan, since the entire planning area does not include Coastal Shoreland areas.

### **GOAL # 18: BEACHES AND DUNES**

The conservation of Beaches and Dunes is not at issue in this plan, since the entire planning area does not include Beaches or Dunes.

### **GOAL # 19: OCEAN RESOURCES**

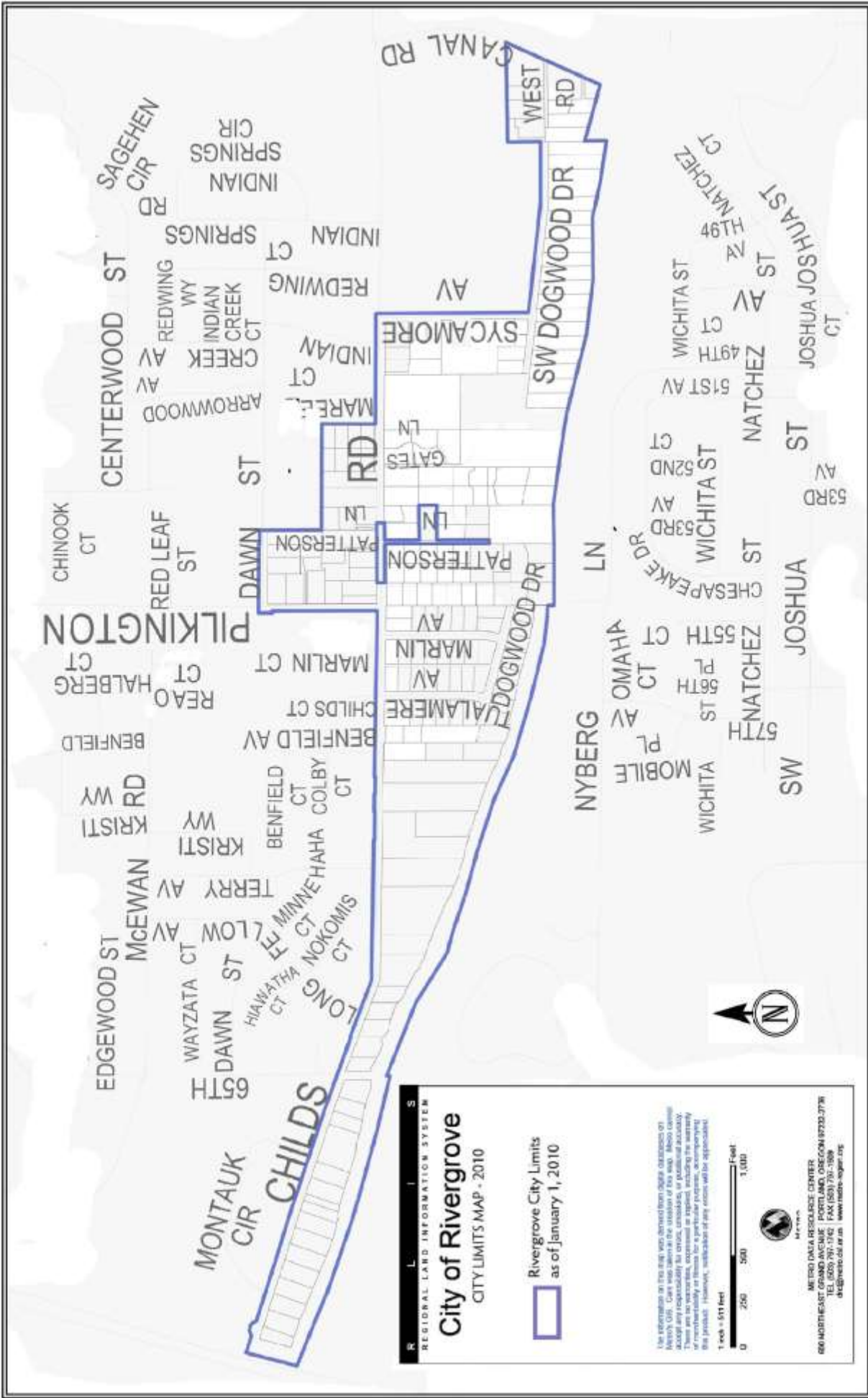
The protection of Marine Resources is not at issue in this plan, since the entire planning area does not include or lie adjacent to the Pacific Ocean.

## **APPENDICES**

Appendix A: City Map  
Appendix B: Citizen Involvement  
Appendix C: Open Spaces & Recreation  
Appendix D: Natural Resources & Natural Hazards  
Appendix E: Air, Water & Land Resources Quality  
Appendix F: Housing & Population  
Appendix G: Public Services

## **MAPS**

Appendix A-1: Rivergrove City Limits Map  
Appendix C-1: Open Spaces & Recreation  
Appendix D-4: Floodplain & Floodway  
Appendix D-5: Groundwater Hazards  
Appendix D-7: Soils in Rivergrove  
Appendix F-1: Land Use Inventory  
Appendix G-3: Sanitary Sewer Availability



## APPENDIX B: CITIZEN INVOLVEMENT

### 2008 Rivergrove City Survey Results – B-1

<b>TRANSPORTATION</b>						
		Auto	Bus	Bike	Walk	Other
Q1	What is your primary mode of transportation from home to work?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	93.5% (56)	3.2% (2)	0% (0)	0% (0)	3.2% (2)
Q2	If you have a secondary mode of transportation, what is it?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	13.9% (5)	11.1% (4)	25% (9)	38.9% (14)	11.2% (4)
<b>Please indicate whether you agree or disagree with the following statements</b>						
		Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Q3	The average vehicle speed on Childs Rd is too fast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	29.7% (19)	29.7% (19)	29.7% (19)	6.3% (4)	4.7% (3)
Q4	Vehicles travel too fast on my street	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	39.1% (25)	31.3% (20)	23.4% (15)	4.7% (3)	1.6% (1)
Q5	I feel safe walking in Rivergrove during the day.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	34.8% (23)	59.1% (39)	3% (2)	1.5% (1)	1.5% (1)
Q6	I feel safe walking in Rivergrove at night.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	18.2% (12)	51.5% (34)	18.2% (12)	6.1% (4)	6.1% (4)
Q7	Trimet bus service is adequate for my needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	10.9% (7)	25% (16)	17.2% (11)	4.7% (3)	42.2% (27)
Q8	I feel safe biking in Rivergrove.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	8.2% (5)	49.2% (30)	19.7% (12)	6.6% (4)	16.4% (10)
Q9	Rivergrove needs bikepaths.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	38.7% (24)	29% (18)	16.1% (10)	3.2% (2)	12.9% (8)
Q10	Rivergrove needs more sidewalks and paths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	41.5% (27)	33.8% (22)	18.5% (12)	3.1% (2)	3.1% (2)
Q11	There is adequate street lighting in Rivergrove.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	12.3% (8)	56.9% (37)	24.6% (16)	3.1% (2)	3.1% (2)
Q12	There is adequate landscaping along streets in Rivergrove.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	6.2% (4)	44.6% (31)	33.8% (22)	7.7% (5)	7.7% (5)
Q13	New streets in Rivergrove are adequate to meet traffic needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	10.9% (7)	48.4% (31)	12.5% (8)	7.8% (5)	20.3% (13)
Q14	Is there something else you would like to add about transportation in Rivergrove or any ideas or suggestions for improvements?					
<b>NATURAL RESOURCES</b>						
<b>Please indicate whether you agree or disagree with the following 15 statements</b>						
		Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Q16	Minor Park is a great asset to Rivergrove	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	34.9% (22)	47.6% (30)	3.2% (2)	3.2% (2)	11.1% (7)
Q17	Minor Park has all the facilities needed to serve its users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	9.7% (6)	17.7% (11)	25.8% (16)	16.1% (10)	30.6% (19)
Q18	Minor Park is used primarily by Rivergrove residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	13.4% (9)	41.8% (28)	4.5% (3)	3% (2)	37.3% (25)
Q19	Stark Boat Ramp is a great asset to Rivergrove.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	23.1% (15)	43.1% (28)	7.7% (5)	4.6% (3)	21.5% (14)
Q20	Stark Boat Ramp is used primarily by Rivergrove residents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	4.5% (3)	18.2% (12)	21.2% (14)	12.1% (8)	43.9% (29)
Q21	Access to the Tualatin River meets my needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	27.7% (18)	53.8% (35)	7.7% (5)	7.7% (5)	3.1% (2)
Q22	I regularly access the Tualatin River	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	20.6% (13)	31.7% (20)	25.4% (16)	17.5% (11)	4.8% (3)
Q23	The environmental quality of the Tualatin River is acceptable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	4.4% (3)	23.5% (16)	39.7% (27)	26.5% (18)	5.8% (4)
Q24	My recreational needs are met in Rivergrove	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

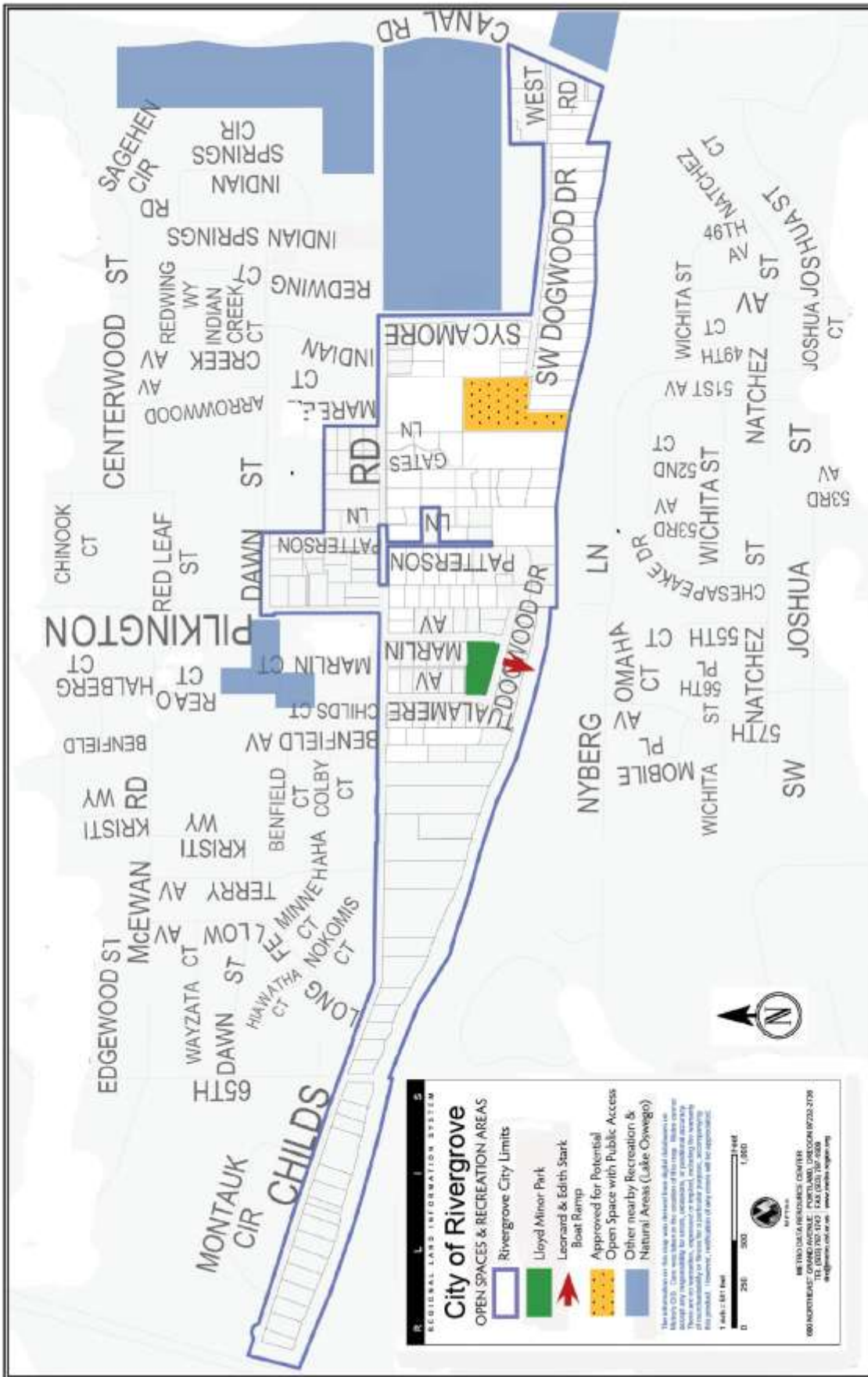
Q26	Landscaping in Minor Park is attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	0% (0)	23% (14)	39.3% (24)	21.3% (13)	16.4% (10)
Q27	Landscaping in the public right of way on streets is attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	3.2% (2)	24.2% (15)	41.9% (26)	16.1% (10)	14.5% (9)
Q28	Landscaping in Stark Boat Ramp is attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	0% (0)	16.9% (11)	40% (26)	18.5% (12)	24.6% (16)
Q29	Trees are a significant resource in Rivergrove	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	50% (33)	40.9% (27)	3% (2)	0% (0)	6.1% (4)
Q30	Preservation of Trees should be a priority for Rivergrove	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	43.3% (29)	38.8% (26)	13.4% (9)	3% (2)	1.5% (1)
Q31	Developers and property owners should be required to preserve trees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	41.2% (28)	35.3% (24)	16.2% (11)	2.9% (2)	4.4% (3)
Q32	Is there something else you would like to add about natural resources in Rivergrove?					

#### LAND USE

		Yes	No			
Q33	Has there been any new residential development near your home? (new homes built, new additions on existing homes, extensive land disturbance for new development, etc.)	<input type="radio"/>	<input type="radio"/>			
	Percent & Total # of Responses	90.5% (57)	9.5% (6)			
	<b>How do you rate the new development in Rivergrove on the following?</b>					
		Very Good	Good	Bad	Very Bad	Don't Know
Q34	Attractiveness of Landscaping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	16.9% (10)	45.8% (27)	11.9% (7)	15.3% (9)	10.2% (6)
Q35	Attractiveness of Stormwater Management (i.e., ponds, outfalls)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	1.6% (1)	19.7% (12)	27.9% (17)	19.7% (12)	31.1% (19)
Q36	Attractiveness of Subdivision Design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	8.2% (5)	41% (25)	29.5% (18)	8.2% (5)	13.1% (8)
Q37	Attractiveness of homes constructed (if any)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	13.1% (8)	57.4% (35)	14.8% (9)	8.2% (5)	6.6% (4)
Q38	Attractiveness of Roadways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	4.9% (3)	52.5% (32)	24.6% (15)	9.8% (6)	8.2% (5)
Q39	Overall Attractiveness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	5% (3)	56.7% (34)	20% (12)	6.7% (4)	11.7% (7)
Q40	Integration with existing neighborhood home styles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	7% (4)	36.8% (21)	33.3% (19)	19.3% (11)	3.5% (2)
Q41	Integration with existing neighborhood design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	8.3% (5)	31.7% (19)	38.3% (23)	15% (9)	6.7% (4)
Q42	Integration with existing traffic patterns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	6.6% (4)	42.6% (26)	23% (14)	14.8% (9)	13.1% (8)
Q43	Overall Integration of the new development into your neighborhood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	6.5% (4)	38.7% (24)	32.3% (20)	11.3% (7)	11.3% (7)
	<b>Please indicate whether you agree or disagree with the following statements</b>	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Q44	Town homes and other multifamily dwellings in Rivergrove are acceptable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	4.5% (3)	13.6% (9)	25.8% (17)	54.5% (36)	1.5% (1)
Q45	Are there townhomes or other multifamily houses near your home?	Yes	No	Don't Know		
	Percent & Total # of Responses	21.5% (14)	72.3% (47)	6.2% (4)		
Q46	Is there accessory housing (garage apartments, mother-in-law apartments, etc.) near your home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
	Percent & Total # of Responses	16.7% (11)	57.6% (38)	25.8% (17)		
Q47	Would townhomes or other multifamily homes be acceptable near your home?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
	Percent & Total # of Responses	7.7% (5)	63.1% (41)	29.2% (19)		
Q48	Do you have specific Comments regarding housing density in Rivergrove?					

		Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Q49	Current subdivision signage is acceptable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	3.6% (2)	56.4% (31)	23.6% (13)	3.6% (2)	12.7% (7)
Q50	Current signage on public property (boat ramp, Minor Park, and Rivergrove welcome sign) is acceptable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	9.2% (6)	46.2% (43)	13.8% (9)	1.5% (1)	9.2% (6)
Q51	Do you have specific Comments regarding signage in Rivergrove?					
Q52	Lot sizes in Rivergrove are too large.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	1.6% (1)	6.3% (4)	47.6% (30)	42.9% (27)	1.6% (1)
Q53	Lot sizes in Rivergrove should be the same throughout the City	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	6.3% (4)	26.6% (17)	42.2% (27)	14.1% (9)	10.9% (7)
Q54	Lot sizes in Rivergrove should be more varied.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	1.7% (1)	27.6% (16)	43.1% (25)	12.1% (7)	15.5% (9)
Q55	Do you have specific Comments regarding lot sizes in Rivergrove?					
Q56	A building's "footprint" is the amount of space it takes up on the property (lot) Do you feel there should be a maximum building footprint in Rivergrove?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	28.1% (18)	43.8% (28)	15.6% (10)	7.8% (5)	4.7% (3)
Q57	The yard sizes of new homes being built in Rivergrove are too small	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Percent & Total # of Responses	40.6% (26)	31.3% (20)	17.2% (11)	1.6% (1)	9.4% (6)
Q58	Is there something else you would like to add about Land use in Rivergrove?					
<b>About You</b>						
Q59	What is your gender?	Male	Female			
	Percent & Total # of Responses	44.6% (29)	55.3% (36)			
Q60	How long have you lived in Rivergrove?	Less than 2 years	2 to 5 years	6 to 9 years	10 years or more	
	Percent & Total # of Responses	4.5% (3)	19.7% (13)	16.7% (11)	59.1% (39)	
Q61	How many people live in your household including yourself.	Number				
Q62	Are you an owner or renter?	Owner	Renter	Other (please explain)		
	Percent & Total # of Responses	100% (66)	0% (0)			
Q63	What type of house do you live in?	Single-family	Duplex	Multi-family	Other (please explain)	
	Percent & Total # of Responses	100% (65)	0% (0)	0% (0)	0% (0)	
Q64	Overall, how do you rate the livability of Rivergrove?	Very Good	Good	Bad	Very Bad	Don't Know
	Percent & Total # of Responses	56.1% (37)	36.4% (24)	3% (2)	3% (2)	1.5% (1)
Q65	List the three best things about the quality of life in Rivergrove					
Q66	List three things that could be improved					

**APPENDIX C: OPEN SPACES & RECREATION**



APPENDIX C-1  
 City of Rivergrove - 2010  
 OPEN SPACES & RECREATION AREAS MAP



## APPENDIX D: NATURAL RESOURCES & NATURAL HAZARDS

### FISH OF THE TUALATIN RIVER – D-1

The following species of fish are thought to inhabit the Tualatin River:

<u>SPECIE</u>		<u>STATUS</u>
<b>Game Fish</b>		
Fall Chinook Salmon	Oncorhynchus tshawytscha	S
Coho Salmon	Oncorhynchus kisutch	M
Winter Steelhead Trout	Salmo gairdneri	M
Cutthroat Trout	Salmo clarki	M
Channel Catfish	Ictalurus punctatus	R
Brown Bullhead	Ictalurus nebulosus	R
Yellow Perch	Perca flavescens	R
Largemouth Bass	Micropterus salmoides	R
Warmouth Bass	Lepomis gulosus	R
Bluegill	Lepomis macrochirus	R
White Crappie	Pomoxis annularis	R
Black Crappie	Pomoxis nigromaculatus	R
Pumpkinseed	Lepomis gibbosus	R
Crayfish	Pacifacastacus sp.	R
Rainbow Trout	Oncorhynchus mykiss	S
<b>Non-game Fish</b>		
Carp	Cyprinus carpio	R
Northern Pike Minnow	Ptychocheilus oregonensis	R
Largescale Sucker	Catostomus macrocheilus	R
Redside Shiner	Richardsonius balteatus	R
Sculpins	Cottus sp.	R
Pacific Lamprey	Lampetra tridentate	R
Brook Lamprey	Lampetra planeri	R
Dace, Speckled	Rhinichthys osculus	R
Dace, Longnose	Rhinichthys cataractae	R
Mosquitofish	Gambusia affinis	R

M = Migratory

S = Suspected

R = Resident

Source: Oregon Department of Fish and Wildlife, updated 2010

## **Wildlife Resources - D-2**

The following is a list of Wildlife Species Present (Known or Suspected) in the City of Rivergrove, Oregon:

Status Key: FSOC = Federal Species of Concern, ST = State Listed Threatened, SS-C = State Sensitive Critical, SS-V = State Sensitive Vulnerable, OCS = Oregon Conservation Strategy species

### **Amphibians**

<b>Common Name</b>	<b>Habitat / Special Needs</b>	<b>Status</b>
Northwestern salamander	Riparian	
Long-toed salamander	Riparian	
Pacific giant salamander	Riparian	
Ensatina	Riparian	
Roughskin newt	Riparian	
Western red-backed salamander	Riparian	
Western toad	Wetlands, ponds, lakes for breeding	SS-V, OCS
Pacific treefrog	Wetlands	
Red-legged frog	Ponds and wetlands with emergent plants for breeding, moist forest for over-wintering	FSOC, SS-V, OCS

### **Reptiles**

<b>Common Name</b>	<b>Habitat / Special Needs</b>	<b>Status</b>
Western painted turtle	Ponds, lakes, slow-moving rivers/streams; open ground for nesting, basking structures	SS-C, OCS
Western pond turtle	Ponds	FSOC, SS-C, OCS
Northern alligator lizard	Brush	
Southern alligator lizard	Brush	
Western fence lizard	Varied, woodland, grassland	
Western skink	Open moist land	
Rubber boa	Varied, grassland, forest	
Racer	Oak woodland, grasslands, brush	
Ringneck snake	Wet meadows, conifers, mixed forest	
Gopher snake	Dry brush	
Western terrestrial garter snake	Fields, brush	
Northwestern garter snake	Fields, brush, gardens	
Common garter snake	Fields, brush, gardens	

### **Birds**

<b>Common Name</b>	<b>Habitat</b>	<b>Status</b>
Great blue heron	Ponds, marshes, rivers	
Green heron	Ponds, marshes, rivers	
Canada goose	Ponds, grassy fields	
Wood duck	Riparian	
Mallard	Ponds, marshes, riparian	
Pintail	Ponds, marshes, riparian	

Northern shoveler	Ponds, marshes, riparian	
Blue-winged teal	Ponds, marshes, riparian	
Cinnamon teal	Ponds, marshes, riparian	
Hooded merganser	Ponds, marshes, riparian	
Common merganser	Ponds, marshes, riparian	
Turkey vulture	Open fields, forested area	
Osprey	Open fields, forested area	
Bald eagle	Open areas, some trees, near water	ST, OCS
Northern harrier	Varied, fields, marshes open woods	
Sharp-shinned hawk	Coniferous forests near open areas	
Cooper's hawk	Brushy areas	
Red-tailed hawk	Open fields	
American kestrel	Open fields	
Peregrine falcon	Open fields	SS-V, OCS
California quail	Brushy lowlands, riparian, open	
American coot	Marshes, riparian	
Killdeer	Grassy areas near water	
Common snipe	Wet meadows	
Gulls spp.	Agricultural lands, water, garbage	
Band-tailed pigeon	Forested areas	FSOC, OCS
Mourning dove	Douglas fir groves, open areas, brush	
Barn owl	Open, semi-open areas, suburban	
Western screech owl	Brushy areas	
Great horned owl	Brushy areas	
Barred owl	Deep, moist forests, swampland	
Common nighthawk	Forest, open areas	SS-C, OCS
Vaux's swift	Chimneys, old growth forests	
Anna's hummingbird	Flowering plants	
Rufous hummingbird	Flowering plants	
Belted kingfisher	Riparian	
Red breasted sapsucker	Douglas fir, other treed areas	
Downy woodpecker	Deciduous forest, riparian	
Hairy woodpecker	Mature deciduous or mixed woods	
Northern flicker	Forested areas, riparian	
Pileated woodpecker	Mature stands of mixed woods	
Olive-sided flycatcher	Open, older coniferous forest, riparian forest; snags/prominent trees	FSOC, SS-V, OCS
Western wood-pewee	Deciduous, coniferous woods, riparian	
Little willow flycatcher	Brushy patches of vegetation adjacent to water for nesting and foraging	SS-V, OCS
Pacific-slope flycatcher	Brush, riparian	
Tree swallow	Varied	
Violet-green swallow	Varied	
Northern rough-winged swallow	Varied	
Cliff swallow	Varied	
Barn swallow	Varied	
Steller's jay	Brush	
Western scrub-jay	Brush	
American crow	Open areas	
Black-capped chickadee	Deciduous trees	
Chestnut backed chickadee	Conifers	
Bushtit	Brush	
Red breasted nuthatch	Conifers	
Slender-billed nuthatch	Mature oak trees for foraging, nesting	SS-V, OCS

Brown creeper	Woodlands	
Bewick's wren	Brush	
House wren	Brush	
Winter wren	Brush	
Marsh wren	Wetlands	
Golden-crowned kinglet	Conifers	
Swainson's thrush	Conifer and deciduous trees	
American robin	Varied	
Varied thrush	Brush, forest	
Cedar waxwing	Brush, open areas	
Cassin's vireo	Coniferous, mixed forest, riparian	
Hutton's vireo	Pine, oak, mixed forest	
Warbling vireo	Tall deciduous shade trees	
Western bluebird	Woodlands near clearings	SS-V, OCS
Orange-crowned warbler	Brush	
Nashville warbler	Open, second-growth deciduous woods	
Yellow warbler	Riparian	
Yellow-rumped warbler	Brush, riparian	
Black-throated gray warbler	Dry deciduous, coniferous scrub	
MacGillivray's warbler	Low brush	
Common yellow throat	Brush, wet areas	
Wilson's warbler	Dense riparian areas	
Western tanager	Open conifers	
Black-headed grosbeak	Brush, riparian	
Lazuli bunting	Brush, open areas	
Spotted towhee	Dry brush with diverse plants	
Chipping sparrow	Open areas of herbaceous understory for foraging; oak woodlands	OCS
Oregon vesper sparrow	Open fields, scattered trees	FSOC, SS-C, OCS
Savannah sparrow	Fields with grass or weed cover	
Song sparrow	Brush patches	
White-crowned sparrow	Woodlands	
Dark-eyed junco	Forests	
Red-winged blackbird	Fields	
Brewer's blackbird	Wooded swampland	
Brown headed cowbird	Open areas	
Bullock's oriole	Shade trees	
Purple finch	Conifer	
House finch	Shrubs, cropland	
Pine siskin	Conifers	
Lesser goldfinch	Trees, brush, weeds	
American goldfinch	Trees, brush, weeds	
Evening grosbeak	Seeded trees	

### Mammals

Common Name	Habitat	Status
Vagrant shrew	Riparian, wet meadows, grasslands	
Pacific marsh shrew	Riparian areas with mature trees	
Coast mole	Forests	
Townsend's mole	Moist organic soil	
California myotis	Varied, open areas	SS-V, OCS
Yuma myotis	Dry forests	FSOC
Little brown myotis	Varied, moist areas	

Long-legged myotis	Forests	FSOC, SS-V, OCS
Fringed myotis	Dry forests	FSOC, SS-V, OCS
Long-eared myotis	Coniferous forests	FSOC
Silver haired bat	Forests	FSOC, SS-V, OCS
Big brown bat	Forests	
Hoary bat	Treed areas near water	SS-V, OCS
Brush rabbit	Brush, riparian	
Black-tailed jackrabbit	Open grasslands	SS-V
California ground squirrel	Brush, cropland	
Western gray squirrel	Mature oaks	SS-V, OCS
Douglas squirrel	Coniferous forests	
Northern flying squirrel	Mature forests	
Western pocket gopher	Open grassy areas	
Camas pocket gopher	Sandy areas	FSOC
American beaver	Riparian	
Deer mouse	Varied	
Dusky-footed woodrat	Douglas fir	
Bushy-tailed woodrat	Varied, coniferous forest	
Western red-backed vole	Mature Douglas fir	
Gray-tailed vole	Grasslands	
Townsend's vole	Meadows	
Muskrat	Riparian	
Porcupine	Douglas fir, woodland	
Coyote	Woodlots, riparian	
Red fox	Fields, brush	
Raccoon	Riparian	
Long-tailed weasel	Riparian	
Mink	Riparian	
Western spotted skunk	Forest, woodlands	
Striped skunk	Brush, riparian	
Northern river otter	Riparian	
Bobcat	Brush, broken forest, swamps, grassland	
Black-tailed deer	Woodlots, riparian	

**Non-native Invasive Species**

American bullfrog  
Red eared slider turtle  
Common snapping turtle  
Ring-necked pheasant  
Rock dove (pigeon)  
Eurasian collared-dove  
European starling  
English house sparrow  
Mute swan  
Virginia opossum  
Eastern cottontail  
Eastern fox squirrel  
Eastern gray squirrel  
House mouse  
Norway rat  
Nutria

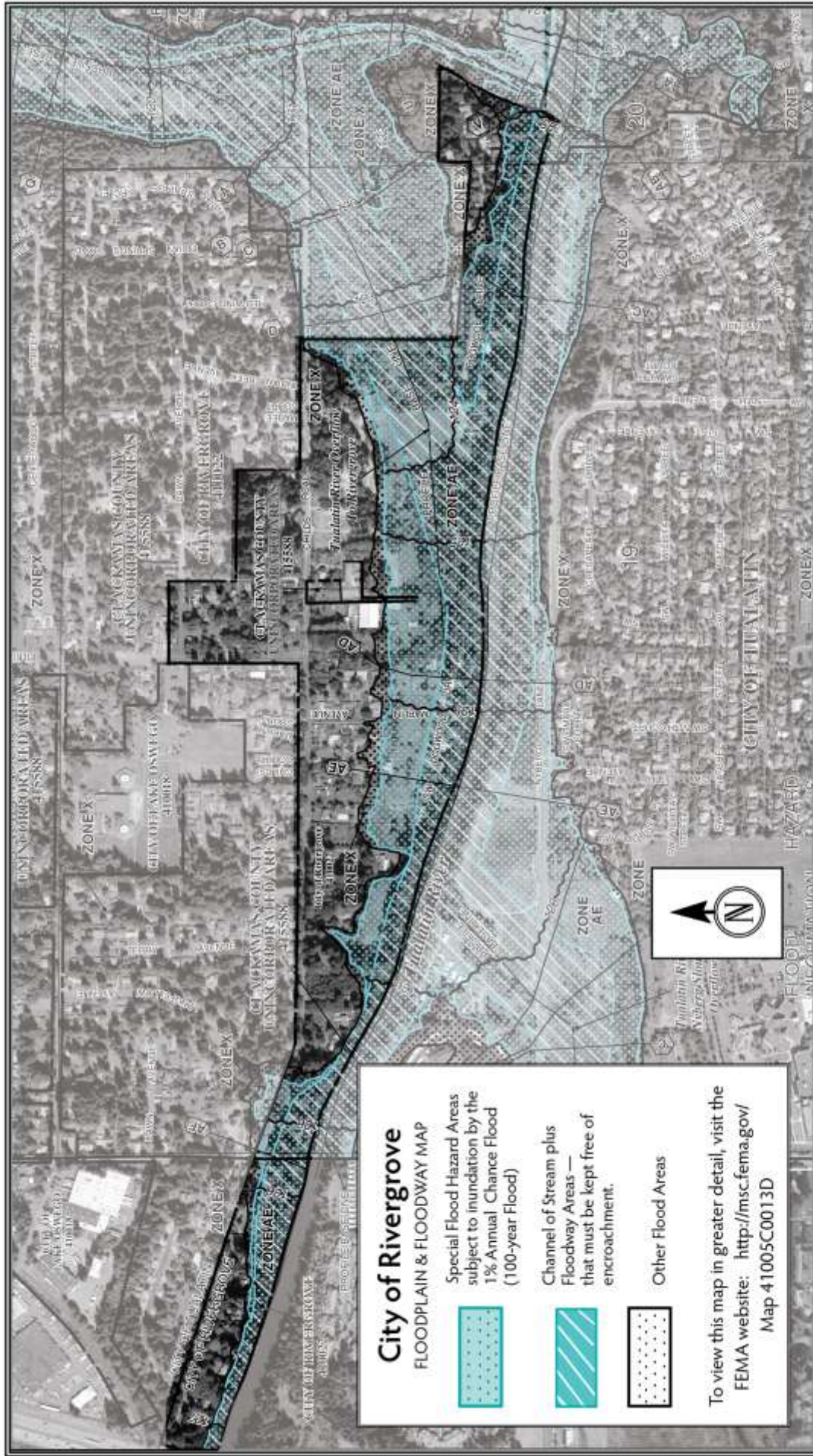
Source: Oregon Department of Fish and Wildlife, updated 2010

## **Native Plant Inventory - D-3**

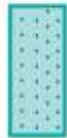


A complete, detailed list of native plants for the Portland Metropolitan Area can be found at the following website:

<http://www.portlandonline.com/bps/index.cfm?c=45131>

Scroll down for links to lists in pdf format of Native Plants and Invasive Plants.

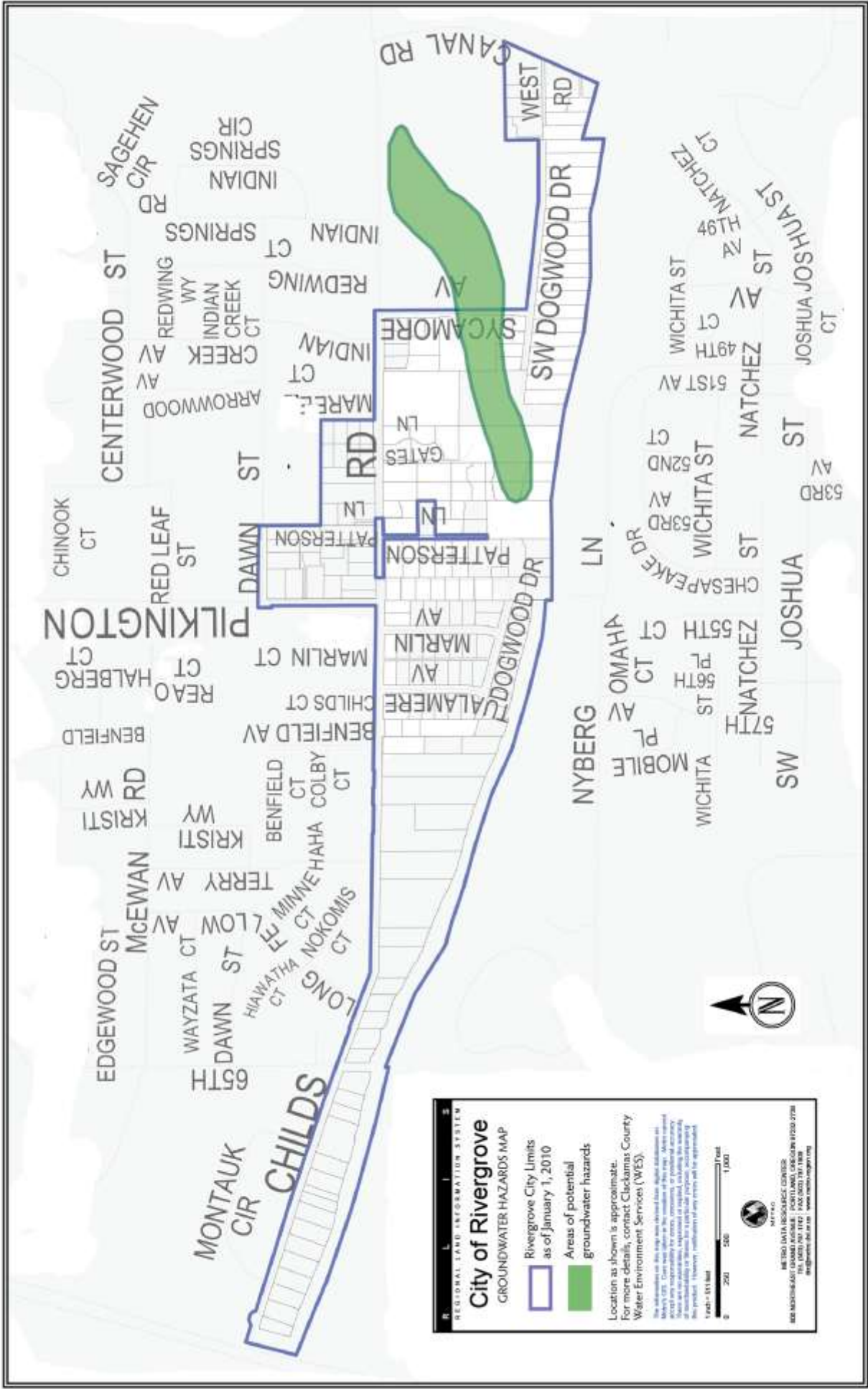


**City of Rivergrove**  
**FLOODPLAIN & FLOODWAY MAP**

-  Special Flood Hazard Areas subject to inundation by the 1% Annual Chance Flood (100-year Flood)
-  Channel of Stream plus Floodway Areas — that must be kept free of encroachment.
-  Other Flood Areas

To view this map in greater detail, visit the FEMA website: <http://msc.fema.gov/>  
 Map 41005C0013D

**APPENDIX D-4**  
**City of Rivergrove Floodplain & Floodway Map**  
 Federal Emergency Management Agency (FEMA)  
 June 17, 2008  
 FIRM - Flood Insurance Rate Map 41005C0013D



REGIONAL LAND INFORMATION SYSTEM

**City of Rivergrove**  
GROUNDWATER HAZARDS MAP

- Rivergrove City Limits as of January 1, 2010
- Areas of potential groundwater hazards

Location as shown is approximate. For more details, contact Clackamas County Water Environment Services ("WES").

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0 250 500 1,000 Feet

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## **SOILS IN RIVERGROVE - D-6**

The following soils are found in Rivergrove. They are mapped on the following page.  
Data: U.S. Department of Agriculture, National Resources Conservation Service, July 2010

### **Clackamas County, Oregon**

#### **16—Chehalis silt loam**

##### **Map Unit Setting**

*Elevation:* 50 to 1,200 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 52 to 54 degrees F

*Frost-free period:* 165 to 210 days

##### **Map Unit Composition**

*Chehalis and similar soils:* 85 percent

*Minor components:* 2 percent

##### **Description of Chehalis Setting**

*Landform:* Flood plains

*Landform position (three-dimensional):* Talf

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

##### **Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.57 to 1.98 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Occasional

*Frequency of ponding:* None

*Available water capacity:* High (about 11.4 inches)

##### **Interpretive groups**

*Land capability classification (irrigated):* 2w

*Land capability (non-irrigated):* 2w

##### **Typical profile**

*0 to 7 inches:* Silt loam

*7 to 44 inches:* Silty clay loam

*44 to 60 inches:* Stratified fine sandy loam to silty clay loam

##### **Minor Components**

###### **Wapato**

*Percent of map unit:* 2 percent

*Landform:* Flood plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

## 56—McBee silty clay loam

### Map Unit Setting

*Elevation:* 50 to 1,200 feet

*Mean annual precipitation:* 40 to 60 inches

*Mean annual air temperature:* 52 to 54 degrees F

*Frost-free period:* 165 to 210 days

### Map Unit Composition

*McBee and similar soils:* 85 percent

*Minor components:* 4 percent

### Description of McBee

#### Setting

*Landform:* Flood plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

### Properties and qualities

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 24 to 36 inches

*Frequency of flooding:* Occasional

*Frequency of ponding:* None

*Available water capacity:* High (about 11.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* 2w

*Land capability (non-irrigated):* 2w

### Typical profile

*0 to 15 inches:* Silty clay loam

*15 to 48 inches:* Silty clay loam

*48 to 60 inches:* Clay loam

### Minor Components

#### Wapato

*Percent of map unit:* 3 percent

*Landform:* Flood plains

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

#### Aquolls

*Percent of map unit:* 1 percent

*Landform:* Flood plains

## 76B—Salem silt loam, 0 to 7 percent slopes

### Map Unit Setting

*Elevation:* 200 to 650 feet

*Mean annual precipitation:* 40 to 60 inches  
*Mean annual air temperature:* 50 to 54 degrees F  
*Frost-free period:* 165 to 210 days

**Map Unit Composition**

*Salem and similar soils:* 85 percent

**Description of Salem**

**Setting**

*Landform:* Stream terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

**Properties and qualities**

*Slope:* 0 to 7 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* Low (about 4.6 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2s  
*Land capability (non-irrigated):* 2s

**Typical profile**

*0 to 8 inches:* Silt loam  
*8 to 24 inches:* Gravelly clay loam  
*24 to 60 inches:* Very gravelly loamy sand

**84—Wapato silty clay loam**

**Map Unit Setting**

*Elevation:* 100 to 1,500 feet  
*Mean annual precipitation:* 40 to 60 inches  
*Mean annual air temperature:* 52 to 54 degrees F  
*Frost-free period:* 165 to 210 days

**Map Unit Composition**

*Wapato and similar soils:* 85 percent  
*Minor components:* 10 percent

**Description of Wapato**

**Setting**

*Landform:* Flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 0 to 6 inches

*Frequency of flooding:* Frequent

*Frequency of ponding:* Frequent

*Available water capacity:* High (about 10.3 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 3w

*Land capability (non-irrigated):* 3w

**Typical profile**

*0 to 18 inches:* Silty clay loam

*18 to 45 inches:* Silty clay loam

*45 to 60 inches:* Silty clay

**Minor Components****Cove**

*Percent of map unit:* 6 percent

*Landform:* Flood plains

*Landform position (three-dimensional):* Dip

*Down-slope shape:* Linear

*Across-slope shape:* Linear

**Humaquepts**

*Percent of map unit:* 4 percent

*Landform:* Flood plains

**91A—Woodburn silt loam, 0 to 3 percent slopes****Map Unit Setting**

*Elevation:* 150 to 400 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 52 to 54 degrees F

*Frost-free period:* 165 to 210 days

**Map Unit Composition**

*Woodburn and similar soils:* 85 percent

*Minor components:* 6 percent

**Description of Woodburn****Setting**

*Landform:* Terraces

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Stratified glaciolacustrine deposits

**Properties and qualities**

*Slope:* 0 to 3 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 25 to 32 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* High (about 12.0 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 2w  
*Land capability (non-irrigated):* 2w

#### **Typical profile**

*0 to 16 inches:* Silt loam  
*16 to 38 inches:* Silty clay loam  
*38 to 60 inches:* Silt loam

#### **Minor Components**

##### **Huberly**

*Percent of map unit:* 3 percent  
*Landform:* Swales on terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

##### **Dayton**

*Percent of map unit:* 2 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

##### **Aquolls**

*Percent of map unit:* 1 percent  
*Landform:* Flood plains

## **91B—Woodburn silt loam, 3 to 8 percent slopes**

#### **Map Unit Setting**

*Elevation:* 150 to 400 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 52 to 54 degrees F  
*Frost-free period:* 165 to 210 days

#### **Map Unit Composition**

*Woodburn and similar soils:* 90 percent  
*Minor components:* 4 percent

#### **Description of Woodburn**

##### **Setting**

*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Stratified glaciolacustrine deposits

##### **Properties and qualities**

*Slope:* 3 to 8 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Moderately well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* About 25 to 32 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* High (about 12.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability (non-irrigated):* 2e

**Typical profile**

*0 to 16 inches:* Silt loam  
*16 to 38 inches:* Silty clay loam  
*38 to 60 inches:* Silt loam

**Minor Components**

**Huberly**

*Percent of map unit:* 2 percent  
*Landform:* Swales on terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

**Aquolls**

*Percent of map unit:* 1 percent  
*Landform:* Flood plains

**Dayton**

*Percent of map unit:* 1 percent  
*Landform:* Terraces  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

**Washington County, Oregon**

**9—Chehalis silty clay loam, occasional overflow**

**Map Unit Setting**

*Elevation:* 100 to 300 feet  
*Mean annual precipitation:* 40 to 60 inches  
*Mean annual air temperature:* 52 to 54 degrees F  
*Frost-free period:* 165 to 210 days

**Map Unit Composition**

*Chehalis, occasional flooding, and similar soils:* 85 percent  
*Minor components:* 4 percent

**Description of Chehalis, Occasional Flooding Setting**

*Landform:* Flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear

*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium

#### **Properties and qualities**

*Slope:* 0 to 3 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* Occasional  
*Frequency of ponding:* None  
*Available water capacity:* High (about 11.5 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* 2w  
*Land capability (non-irrigated):* 2w

#### **Typical profile**

*0 to 16 inches:* Silty clay loam  
*16 to 45 inches:* Silty clay loam  
*45 to 60 inches:* Silt loam

#### **Minor Components**

##### **Wapato**

*Percent of map unit:* 4 percent  
*Landform:* Flood plains  
*Landform position (three-dimensional):* Tread  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear

## **21C—Hillsboro loam, 7 to 12 percent slopes**

#### **Map Unit Setting**

*Elevation:* 160 to 240 feet  
*Mean annual precipitation:* 40 to 50 inches  
*Mean annual air temperature:* 52 to 54 degrees F  
*Frost-free period:* 165 to 210 days

#### **Map Unit Composition**

*Hillsboro and similar soils:* 90 percent

#### **Description of Hillsboro**

##### **Setting**

*Landform:* Terraces  
*Landform position (three-dimensional):* Riser  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Silty and loamy old alluvium

#### **Properties and qualities**

*Slope:* 7 to 12 percent  
Custom Soil Resource Report

*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water capacity:* High (about 10.6 inches)

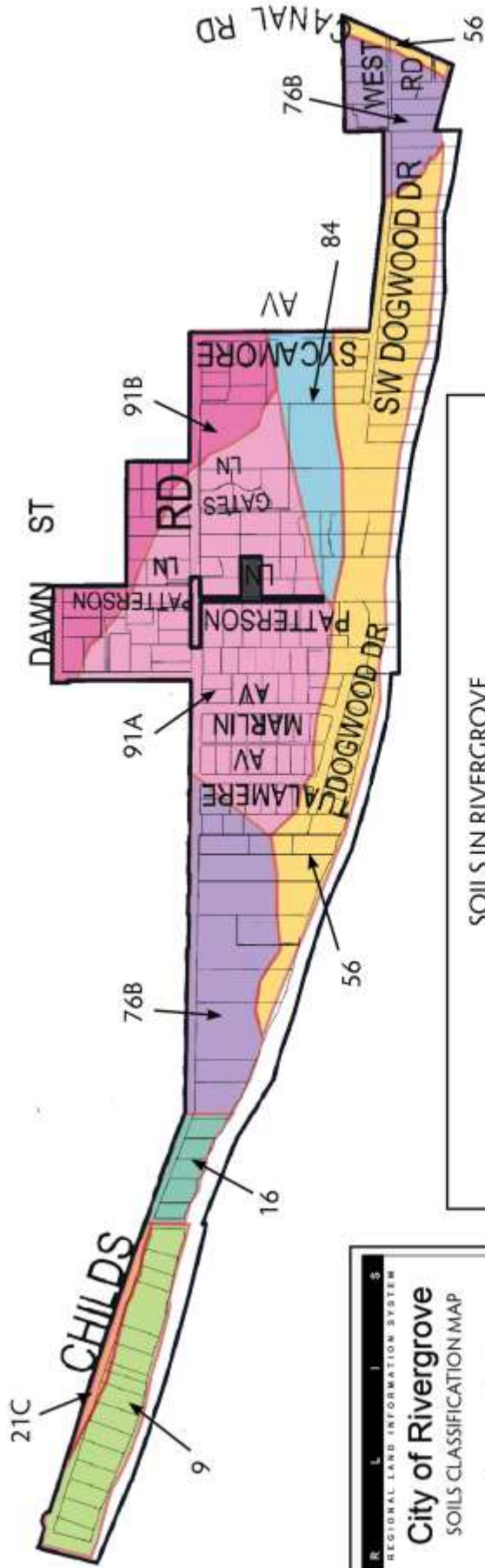
**Interpretive groups**

*Land capability classification (irrigated):* 2e  
*Land capability (non-irrigated):* 2e

**Typical profile**

*0 to 15 inches:* Loam  
*15 to 48 inches:* Loam  
*48 to 57 inches:* Fine sandy loam  
*57 to 81 inches:* Fine sand





**SOILS IN RIVERGROVE**

**Clackamas County:**

- 56 - McBee Silty Clay Loam
- 84 - Wapato Silty Clay Loam
- 91A - Woodburn Silt Loam  
0-7% slopes
- 91B - Woodburn Silt Loam  
3-8% slopes

**Clackamas (continued):**

- 76B - Salem Silt Loam  
0-7% slopes
- 16 - Chehalis Silt Loam


**Washington County:**

- 9 - Chehalis Silty Clay Loam  
- occasional overflow
- 21C - Hillsboro Loam  
7-12% slopes

Classification of soil may differ by County.

**R E G I O N A L L A N D I N F O R M A T I O N S Y S T E M**

**City of Rivergrove**  
**SOILS CLASSIFICATION MAP**

 Rivergrove City Limits  
as of January 1, 2010

Locations of soil types shown on this map are approximate. To view a detailed soils map, visit the USDA website:

<http://websoilsurvey.nrcs.usda.gov/app/>

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1 inch = 511 feet  
0 250 500 1,000 Feet



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## **APPENDIX E: AIR, WATER & LAND RESOURCES QUALITY**

### **WATER RESOURCES E-1**

#### **Tualatin River**

The Tualatin River originates approximately 75 miles to the west in the Coast Range. The watershed of the river includes the entire planning area and has a total acreage of 712 square miles. The river flows into the Willamette River .

#### **Water Quality**

Status of compliance with DEQ water quality standards:

- Temperature - does not comply
- Dissolved oxygen - does not comply
- Coliform bacteria - does not comply
- Turbidity - complies
- pH - complies

As the above information suggests, the Tualatin River has generally poor water quality. There are several reasons for this disturbing fact.

Up to 34 sewerage facilities have discharged their often poorly treated waste into the river simultaneously. Additionally, many septic tanks near the river are not functioning properly and thus contribute to the degradation of the water quality in the river.

These problems are aggravated by low summer flows. During summer months, more water is owed out in consumption withdrawal rights than flows thru the channel. Therefore, while winter flows average 1500 cubic feet per second, summer flows decrease to as low as 10 cfs.

The low summer flows are directly responsible for high summer temperatures (recorded as high as 78 degrees F.). These very high temperatures coupled with the high levels of phosphates and nitrogen from the sewerage discharge are responsible for the profusion of algae characteristic of the river. The algae consume the dissolved oxygen in the river.

The end result of the low water quality is the threatened survival of many of the fish specie in the river. Temperature over 68 degrees have a detrimental effect on many fish species, and dissolved oxygen is a necessary element for their survival.

Improperly functioning septic tanks in Rivergrove contribute to the water quality problems of the Tualatin River. Many of the septic tanks in the City are located on soils for which they are not suited or at densities which are greater than the soil's ability to treat the discharge.

The water quality of the Tualatin River has improved in recent years. This improvement is attributed primarily to the improved treatment of sewerage discharged by facilities located along the river, and to a new storage reservoir at Scoggins Creek which has augmented the meager summer flows.

Rivergrove can aid the improvement of the water quality of the Tualatin River by linking into a properly functioning sewerage facility. Until then, septic tank permits should be issued only if soil conditions at their proposed locations can ensure their sanitary functioning.

### Groundwater

A formation of Columbia River Basalt forms an aquifer which underlies the entire planning area. This formation is very porous and thus is an excellent source of groundwater.

The groundwater source is recharged by the percolation of water through the soil. Wetlands and periodic flooding are important mechanisms in the recharging of groundwater supplies. Development creates impervious surfaces which inhibit the recharge potential of the soils. Loss of vegetation also decreases the recharge of groundwater by increasing the rate of surface runoff of the soils.

Only a small proportion of the land in Rivergrove is developed. The 110 dwelling units in the City and the roads total approximately 16 acres of impervious surface (based on 2000 square feet per unit). This constitutes approximately 15 percent of the total land in the City. Further development will increase this ratio and decrease the recharging capability of the soils.

Groundwater hazards are realized either by the contamination of the water or by the depletion of the source which can cause sinking of the soils above it. At present, neither of these potential hazards are a problem in the planning area. However, some of the subsurface disposal systems in the City are located in areas with a high water table and they are thus potential sources of contamination.

**TUALATIN RIVER QUALITY – E-2**  
**Tualatin RiverKeepers Newsletter Summer 2009**

THE GREEN HERON HERALD

**Watershed Watch / Citizen Action**

**DEQ Report Shows Tualatin River Leads State in Water Quality Decline**

A report from Oregon Department of Environmental Quality (DEQ) states that three monitoring sites on the Tualatin River show the biggest decline in Water Quality Index of the 127 sites analyzed over a ten year period.

The Oregon Water Quality Index (OWQI) is a single number that expresses water quality by integrating measurements of eight water quality variables: temperature, dissolved oxygen, biochemical oxygen demand, pH, ammonia+ nitrate nitrogen, total phosphorus, total solids, and E. coli. Its purpose is to provide a simple and concise method for expressing the ambient water quality of Oregon's streams. The index allows users to easily interpret data. The OWQI improves comprehension of general water quality issues, communicates water quality status, and illustrates the need for and effectiveness of protective practices.

Of the 127 sites with sufficient data to measure trends, seven had significant increases in water quality and 31 had significant

decreases in water quality, while the rest showed no significant trend in either direction. Five of the six monitored sites in the Tualatin basin showed significant declines in water quality. The Rood Bridge site showed no trend in water quality.

It is important to note that all data used in this report were collected before the Wapato Lake Discharge that caused the toxic cyanobacteria outbreak and cost the Joint Water Commission over \$285,000 in extra filtration costs.

Scores on the OWQI range from 10 to 100. Scores that are less than 60 are considered very poor; 60-79 poor; 80-84 fair; 85-89 good; and 90-100 excellent. To account for differences in water quality between low flow summer months (June - September) and higher flow fall, winter, and spring (October - May), average values for these two periods were calculated and compared.

**OWQI Status and Trends Summary for Tualatin Basin Sites**

Site	Score	Category	Trend	Magnitude
Beaverton Creek at Cornelius Pass Road (Orengo)	53	Very Poor	Declining	-5.0
Fanno Creek at Bonita Road (Tigard)	63	Poor	Declining	-5.0
Tualatin River at Boones Ferry Road	54	Very Poor	Declining	-19.0
Tualatin River at Elsner Road	59	Very Poor	Declining	-24.3
Tualatin River at HWY 210 (Scholls)	56	Very Poor	Declining	-28.1
Tualatin River at Rood Bridge	80	Fair	No Trend	No Trend

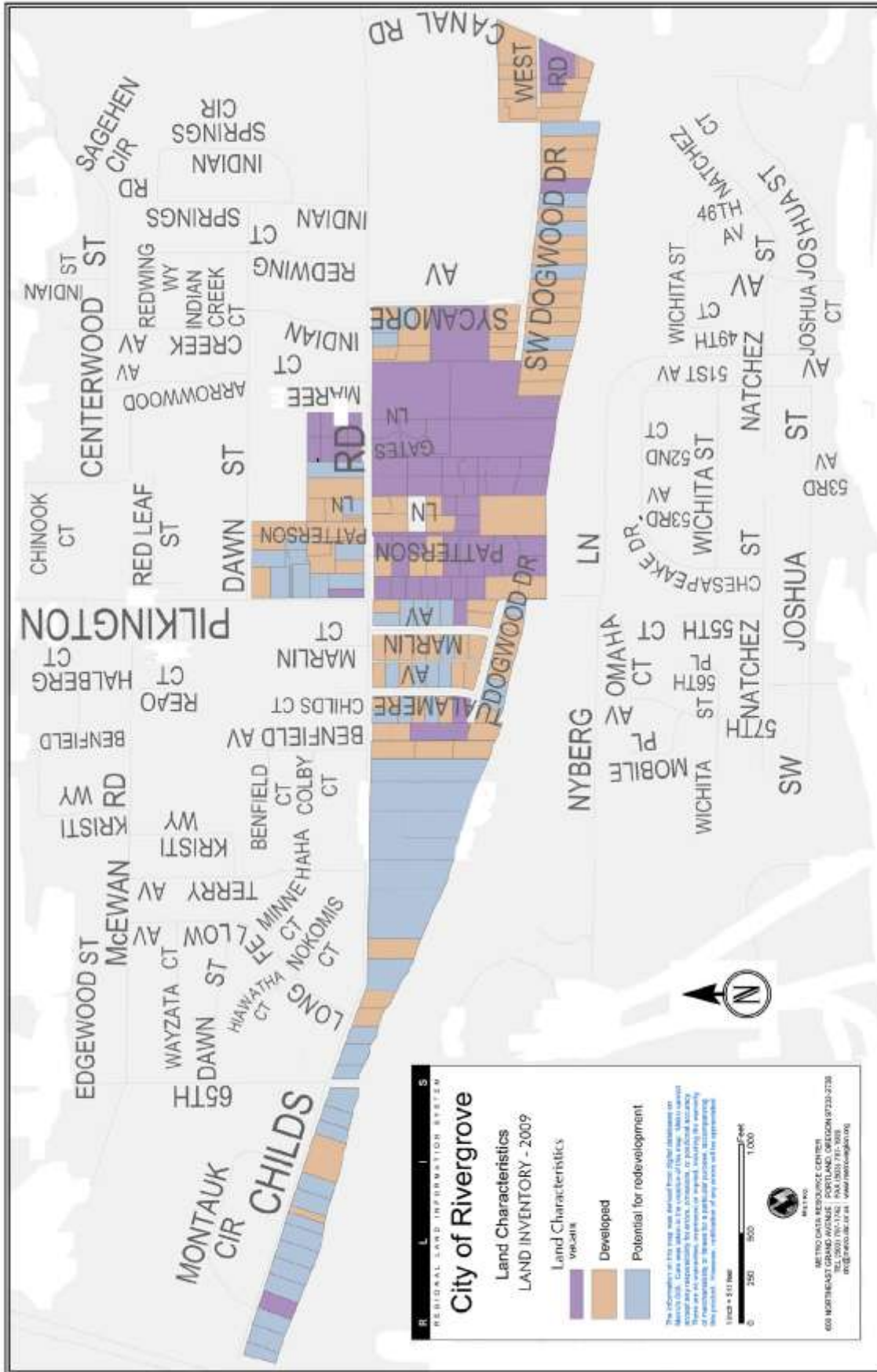
When asked which parameters of the OWQI were leading the decline for the Tualatin River, DEQ staff had no explanation. Tualatin Riverkeepers Citizen Action Committee is examining the data provided by DEQ to answer this question. Links to the DEQ data and OWQI report are posted at [www.tualatinriverkeepers.org/advocacy.html](http://www.tualatinriverkeepers.org/advocacy.html).

**Citizen Action Committee Investigates Declining Water Quality Trends**

On June 24 Tualatin Riverkeepers Citizen Action Committee will meet to discuss our investigation of a significant decline in the Water Quality Index on the Tualatin River as measured by Oregon Department of Environmental Quality. The meeting starts at 6:30pm and is held at Max's Fanno Creek Brew Pub, 12562 SW Main Street in Tigard. The public is welcome.



**APPENDIX F: HOUSING & POPULATION**



APPENDIX F-1  
 City of Rivergrove - 2009  
 LAND INVENTORY MAP

## **Land Inventory Data - F-2**

This Land Inventory, as of 2009, was prepared by Metro for the City of Rivergrove.

### **Methodology:**

1. Tax lots within the City of Rivergrove were identified
2. Where building value did not equal 0, a ratio was calculated of land value/building value
3. The lots whose ratio was greater than 1, the assumption for potential redevelopment was made

"TYPE" field definitions:

- 1 = Vacant
- 2 = Developed (including those under construction in 2009)
- 3 = Potentially redevelopable

Data Sources: RLIS, 2009 Vacant Land Inventory, Clackamas & Washington County assessment records

June 10, 2010

### **Summary statistics for City of Rivergrove tax lot analysis**

Number of vacant lots = 61

Area of vacant lots = 31.72 acres

Number of developed lots = 90

Area of developed lots = 39.28 acres

Number of lots with potential for redevelopment = 54

Area of lots with potential for redevelopment = 24 acres

Number of lots within the City of Rivergrove = 205

Total area of the tax lots in the City of Rivergrove = 96 acres

### **Notes:**

Acreages do not include street rights -of -way or areas of water.

Parks in Metro's definition are counted as Developed

## **Rivergrove Housing Data & Values – 2009 – F-3**

### **Data Sources:**

Clackamas & Washington County Tax Assessors 2009  
U.S. Census 2000

### **Housing Data:**

Houses built between 1900 and 2000: 107  
Houses built between 2000 and 2009: 30

**Total homes in Rivergrove (2009): 137**

(This calculation took into account homes that were demolished and rebuilt. The total shown---137---was the actual number of homes in Rivergrove in summer of 2009.)

### **Housing Values 2000 & 2009:**

<b>Value</b>	<b>2000 (% of total in each range)</b>	<b>2009</b>
\$100,000 to \$199,000	36.7%	0%
\$200,000 to \$299,000	31.6	23.4
\$300,000 to \$499,000	27.6	41.6
\$500,000 to \$999,000	4.0	28.0
\$1,000,000 or more	0	6.0
<b>Median value:</b>	\$232,500	\$359,411

### **Affordability:**

Based on the median value of a home in Rivergrove in 2009, using a standard mortgage formula, the income needed to purchase here are two estimates, based on down payments of \$20,000 and \$10,000 respectively:

- With 20% down and no other debts a purchaser would have needed an income of about \$54,000 per year and credit scores of 730 for a 4.625% 30 year fixed mortgage with a P&I payment of \$1480 plus \$400 taxes and insurance.
- With 10% down they would have a P&I payment of \$1665 plus \$400 Taxes, Insurance and \$140 mortgage insurance. They would need closer to \$64k to qualify using 40%/40% ratios.

## **Median Income – F-4**

The most recent actual Census income data source for the City of Rivergrove was the 2000 Census, which showed a median household income of \$85,000. Rivergrove has too small a population to be included in other surveys, so it is necessary to calculate the current figure.

### **Methodology:**

Using the Census 2000 figures for other larger areas in proximity to Rivergrove, and comparing each location with income results from the American Community Survey (ACS) 2006-2008, the ratio of income gain for each, over that time period, was calculated. Selecting the location most culturally and economically like Rivergrove (the City of Lake Oswego), that ratio (1.16) was used to estimate Rivergrove's median income for 2008.

<b>Calculations:</b>	Clackamas County	Washington County	Lake Oswego	Tualatin	Rivergrove
Census 2000	\$52,080	\$52,122	\$71,597	\$55,762	\$85,000
ACS 2006-8	\$63,093	\$64,202	\$83,486	\$65,317	n/a
Gain ratio	1.21	1.23	1.16	1.17	n/a

Applying this ratio to Rivergrove's 2000 figure gives an estimated median household income of \$98,600 for the year 2008.



## SELECTED DATA FROM THE US CENSUS 2010

Rivergrove, Oregon - Overview	2010 Census		2000 Census		2000-2010 Change	
	Counts	Percentages	Counts	Percentages	Change	Percentages
<b>Total Population</b>	289	100.00%	348	100.00%	-59	-16.95%
<b>Population by Race</b>						
Asian alone	9	3.11%	8	2.30%	1	12.50%
Some other race alone	1	0.35%	5	1.44%	-4	-80.00%
Two or more races	7	2.42%	7	2.01%	0	0%
White alone	272	94.12%	328	94.25%	-56	-17.07%
<b>Population by Hispanic or Latino Origin (of any race)</b>						
Persons Not of Hispanic or Latino Origin	282	97.58%	339	97.41%	-57	-16.81%
Persons of Hispanic or Latino Origin	7	2.42%	9	2.59%	-2	-22.22%
<b>Population by Gender</b>						
Female	131	45.33%	177	50.86%	-46	-25.99%
Male	158	54.67%	171	49.14%	-13	-7.60%
<b>Population by Age</b>						
Persons 0 to 4 years	15	5.19%	21	6.03%	-6	-28.57%
Persons 5 to 17 years	46	15.92%	77	22.13%	-31	-40.26%
Persons 18 to 64 years	175	60.55%	225	64.66%	-50	-22.22%
Persons 65 years and over	53	18.34%	25	7.18%	28	112.00%

## Rivergrove, Oregon Registered Voters - Overview Statistics and Quick Facts

▼ Total	Counts	Percentages
▼	▼	▼
total	276	100.00%

▼ Political Party	Counts	Percentages
▼	▼	▼
Democratic	120	43.48%
Libertarian	2	0.72%
Non-Partisan	64	23.19%
Other	2	0.72%
Registered Independent	16	5.80%
Republican	71	25.72%
Working Family Party	1	0.36%

▼ Gender	Counts	Percentages
▼	▼	▼
Female	142	51.45%
Male	129	46.74%
Unknown	5	1.81%

▼ Marital Status	Counts	Percentages
▼	▼	▼
Married	138	50.00%
Non-Traditional	18	6.52%
Single or Unknown	120	43.48%

▼ Broad Ethnic Groupings	Counts	Percentages
▼	▼	▼
East and South Asian	19	6.88%
European	219	79.35%
Hispanic and Portuguese	5	1.81%
Unknown	33	11.96%

▼ Individual Ethnic Categories	Counts	Percentages
▼	▼	▼
Chinese	8	2.90%
Dutch (Netherlands)	6	2.17%
English/Welsh	106	38.41%
French	6	2.17%
German	19	6.88%
Hispanic	5	1.81%
Irish	38	13.77%
Italian	9	3.26%
Japanese	4	1.45%
Korean	2	0.72%
Norwegian	1	0.36%
Polish	7	2.54%
Scots	21	7.61%
Swedish	6	2.17%
Unknown	33	11.96%
Vietnamese	5	1.81%

## Households and Families in Rivergrove 2010 Census

▼ \$10,000 to \$14,999 Families	Counts	Percentages
▼		
1%-2%	251	90.94%
2%-3%	25	9.06%
▼ \$10,000 to \$14,999 Households	Counts	Percentages
▼		
2%-3%	251	90.94%
4%-5%	25	9.06%
▼ \$100,000 to \$149,999 Families	Counts	Percentages
▼		
21%-22%	251	90.94%
22%-23%	25	9.06%
▼ \$100,000 to \$149,999 Households	Counts	Percentages
▼		
17%-18%	276	100.00%
▼ \$15,000 to \$24,999 Families	Counts	Percentages
▼		
4%-5%	276	100.00%
▼ \$15,000 to \$24,999 Households	Counts	Percentages
▼		
7%-8%	251	90.94%
8%-9%	25	9.06%
▼ \$150,000 to \$199,999 Families	Counts	Percentages
▼		
10%-11%	251	90.94%
8%-9%	25	9.06%
▼ \$150,000 to \$199,999 Households	Counts	Percentages
▼		
10%-11%	251	90.94%
7%-8%	25	9.06%
▼ \$200,000+ Families	Counts	Percentages
▼		
11%-12%	251	90.94%
7%-8%	25	9.06%
▼ \$200,000+ Households	Counts	Percentages
▼		
10%-11%	251	90.94%
5%-6%	25	9.06%
▼ \$25,000 to \$34,999 Families	Counts	Percentages
▼		
5%-6%	251	90.94%
6%-7%	25	9.06%
▼ \$25,000 to \$34,999 Households	Counts	Percentages
▼		
7%-8%	251	90.94%
8%-9%	25	9.06%
▼ \$35,000 to \$49,999 Families	Counts	Percentages
▼		
6%-7%	25	9.06%
9%-10%	251	90.94%
▼ \$35,000 to \$49,999 Households	Counts	Percentages
▼		
12%-13%	251	90.94%
13%-14%	25	9.06%
▼ \$50,000 to \$74,999 Families	Counts	Percentages
▼		
14%-15%	276	100.00%
▼ \$50,000 to \$74,999 Households	Counts	Percentages
▼		
17%-18%	251	90.94%
18%-19%	25	9.06%
▼ \$75,000 to \$99,999 Families	Counts	Percentages
▼		
15%-16%	251	90.94%
16%-17%	25	9.06%
▼ \$75,000 to \$99,999 Households	Counts	Percentages
▼		
13%-14%	25	9.06%
14%-15%	251	90.94%

▼ Estimated Home Value Range	Counts	Percentages
▼	▼	▼
\$175K to \$199K	4	1.45%
\$200K to \$249K	7	2.54%
\$250K to \$299K	24	8.70%
\$300K to \$399K	102	36.96%
\$400K to \$499K	26	9.42%
\$500K to \$749K	78	28.26%
\$750K to \$999K	27	9.78%
\$1000K to 1M and over	8	2.90%

▼ Estimated Income Range	Counts	Percentages
▼	▼	▼
\$1,000-\$14,999	15	5.43%
\$15,000-\$24,999	1	0.36%
\$25,000-\$34,999	5	1.81%
\$35,000-\$49,999	8	2.90%
\$50,000-\$74,999	52	18.84%
\$75,000-\$99,999	112	40.58%
\$100,000-\$124,999	9	3.26%
\$125,000-\$149,999	25	9.06%
\$175,000-\$199,999	8	2.90%
\$200,000-\$249,999	9	3.26%
\$250,000 and up	32	11.59%

▼ Estimated Net Worth	Counts	Percentages
▼	▼	▼
\$1-4999	3	1.09%
\$5000-9999	4	1.45%
\$25000-49999	3	1.09%
\$50000-99999	1	0.36%
\$100000-249999	32	11.59%
\$250000-499999	79	28.62%
\$499999+	36	13.04%
Unknown	118	42.75%

▼ Median Years of Education	Counts	Percentages
▼	▼	▼
12	25	9.06%
14	251	90.94%

**APPENDIX G: PUBLIC SERVICES**

**RIVERGROVE PUBLIC SERVICES – G-1**

<b>SERVICE</b>	<b>AREA SERVED</b>	<b>PURVEYOR</b>	<b>REMARKS</b>
Schools	All of Rivergrove	Lake Oswego School District	
Police	All of Rivergrove	Clackamas County Sheriff's Dept.	
Fire	All of Rivergrove	Tualatin Valley Fire and Rescue	
Garbage collection	All of Rivergrove	Allied Waste	
Sewer	Clackamas county	Lake Oswego	
	Washington county	United Sewerage Agency - Tualatin	
Water	Clackamas County	Rivergrove Water District	
	Washington County	City of Tualatin	
Health	Clackamas County	Clackamas County Health Dept. Clinic	1425 Beaver creek Rd. Oregon City
	Washington County	Washington County Health Dept. Clinic	12250 SW 2 <sup>nd</sup> Ave. Beaverton 97214
	All of city	Meridian Park Hospital	19300 SW 65th Tualatin
Governmental Services	All of city	Rivergrove, Washington and Clackamas counties	

## **AFFECTED AGENCIES - G-2**

### **State:**

Department of Land Conservation and Development

Oregon State Highway Division, Metropolitan Section  
5821 NE Glisan, Portland, Oregon 97213

Department of Transportation  
525 Trade Street SE, Salem, Oregon 97310

Department of Environmental Quality  
1234 SW Morrison Street, Portland, Oregon 97205

Department of Fish and Wildlife  
P.O. Box 3503, Portland, Oregon 97208

### **Regional:**

Metropolitan Service District  
527 SW Hall Street, Portland, Oregon 97201

Tri-Met  
520 SW Yamhill Street, Portland, Oregon 97204

### **County:**

Washington County Planning Department  
150 N First Street, Hillsboro, Oregon 972123

Clackamas County Department of Environmental Services  
902 Abernathy Road, Oregon City, Oregon 97034

### **Local:**

Lake Oswego School District  
2455 SW Country Club Road, Lake Oswego, Oregon 97034

Tualatin Rural Fire District  
P.O. Box 127, Tualatin, Oregon 97062

Rivergrove Water District  
17725 SW Boones Ferry Road, Lake Oswego, Oregon 97034

Clackamas County Sheriff's Department  
2223 Kaen Road, Oregon City, Oregon 97034

City of Lake Oswego  
348 N. State Street, Lake Oswego 97034

City of Durham  
P.O. Box 23483, Tigard, Oregon 97223

