

FINAL Environmental Impact Statement

for the

Comprehensive Growth Management Plans

of

**Clark County,
Battle Ground, Camas, La Center, Ridgefield,
Vancouver, Washougal, and Yacolt**

Volume 1:

*Summary and Analysis of the
Preferred Alternative*

Volume 2:

*Responses to Comments
on the DEIS*



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CLARK COUNTY
WASHINGTON

May 4, 2007

FINAL ENVIRONMENTAL IMPACT STATEMENT

for the

Comprehensive Growth Management Plan
of Clark County,
Battle Ground, Camas, La Center, Ridgefield,
Vancouver, Washougal and Yacolt

Volume 1: Summary and Analysis of the Preferred Alternative

Volume 2: Comments on the DEIS with Responses

Volume 3: Revised DEIS

(Volumes 1 and 2 are in a single document, as is Volume 3.
The CD contains all three volumes)

Notice of Availability

Final Environmental Impact Statement (FEIS)
Comprehensive Growth Management Plans for:
Clark County and the
Cities of Battle Ground, Camas, La Center, Ridgefield, Vancouver, and Washougal, and the
Town of Yacolt

Lead Agency: Clark County

Proponents: Clark County
City of Battle Ground
City of Camas
City of La Center
City of Ridgefield
City of Vancouver
City of Washougal
Town of Yacolt

Description: Clark County is in the process of updating the 2004 Comprehensive Growth Management Plan. In addition, the cities of Battle Ground, Camas, La Center, Ridgefield, Vancouver and Washougal and the Town of Yacolt are also updating their comprehensive plans. The update will meet the requirements of a 10-year review under GMA.

The FEIS evaluates two land use alternatives proposed to accommodate the population and employment growth projected over the next 20 years in Clark County. The alternatives consist of a No Action alternative and an urban growth boundary (UGB) expansion (Preferred) alternative. The No Action alternative would keep the existing UGBs. The FEIS discloses the potential impacts of the No Action and Preferred Alternatives on elements of the environment as identified in the Scoping Notice for the EIS issued in October 2005. The FEIS evaluation will assist Clark County in choosing where to expand UGBs if a decision is made to do so.

The FEIS will be available on **May 4, 2007**, on compact disk or in hard copy from Clark County at Permit Services, 1300 Franklin, 1st Floor, Vancouver, Washington. The cost for the Revised DEIS hard copy is \$37.00. The cost for the Final EIS with DEIS comments hard copy is \$32.00. The cost for a CD for all volumes is \$5.00. It will also be published on the county's website at <http://www.clark.wa.gov/longrangeplan/review/eis-scoping.html>.

A public hearing on updating the Clark County comprehensive plan, including any UGB expansions is scheduled for June 5 and 6, 2007. Planning Commission deliberations and Board of County Commissioner deliberations will separately follow the public hearing.

For more information, contact Clark County Community Planning,
(360) 397-2280 x 4558.

FACT SHEET

- (a) Title** Clark County Comprehensive Growth Management Plan
- Purpose:** Adopt revised comprehensive plan that meets the requirements of RCW 36.70A regarding growth management.
- (b) Proponents:** Clark County Community Planning
- (c) Lead Agency:** Clark County, Washington
- Responsible Official:** Marty Snell, Director
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Mark Harrington of the Southwest Washington Regional Transportation Council.
- (f) Draft FEIS Date of Issue:** May 4, 2007
- (g) Time and Place of Public Hearings:** Public hearings on the FEIS are planned for June 2007. The County Board of Commissioners will consider comments in adopting a final Preferred Alternative. This selection may be preceded by either public meetings or public hearings.
- (h) Anticipated Date of Final Action:** June 2007

(i) Nature of Final Action: Adoption of comprehensive plan and related programs

(j) Type and Timing of any Subsequent Environmental Review: None

(k) Documents Incorporated by Reference:

- 1) Plan Monitoring Report, 2002-2004, Clark County Department of Community Development
- 2) Metropolitan Transportation Plan (2005), Southwest Washington Regional Transportation Council
- 3) Environmental Impact Statement for the Comprehensive Growth Management Plans of Clark County, Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal, and Yacolt (September 2003)
- 4) City of La Center Final Environmental Impact Statement for the La Center Comprehensive Plan Amendment (December 19, 2006)
- 5) City of Ridgefield Supplemental Environmental Impact Statement for the Comprehensive Growth Management Plan (September 14, 2005)

Documents 1 through 3 are available for review at Clark County Community Planning, 1300 Franklin Street, Vancouver, Washington. Document 4 is available through the City of La Center. Document 5 is available through the City of Ridgefield.

(l) Cost per Copy: Cost of reproduction

Contents

FACT SHEET.....i

SUMMARY..... 1

5 I. What is being proposed?..... 1

II. What is this document?..... 2

III. What are the differences between the No Action and Preferred Alternatives? 3

IV. How do all of the environmental impacts under the alternatives compare?..... 5

PROJECT DESCRIPTION..... 16

10 I. What is being proposed?..... 16

A. What is the purpose of the proposal? 16

B. What is the schedule for reviewing the proposal?..... 16

II. What comprehensive plan alternatives are being considered? 17

B. Are the assumptions behind the No Action and Preferred alternatives different? 21

III. How has the public been involved in the growth management update? 21

15 IV. What must growth management plans contain?..... 22

A. Are there state legal requirements? 22

B. What are the local requirements for Growth Management Plans? 23

WHAT ARE THE POTENTIAL IMPACTS OF THE GROWTH MANAGEMENT ALTERNATIVES? 24

20 I. What does this section evaluate and why? 24

II. How are the evaluations made? 24

A. What is an “impact”?..... 24

B. How are impacts evaluated for their significance?..... 24

C. What is “mitigation”?..... 25

III. How is the FEIS organized?..... 25

25 EVALUATION OF POTENTIAL IMPACTS ON THE ENVIRONMENT 27

I. Earth 27

A. How might growth management plans affect the soils, geology, and topography of Clark County? 27

B. How do the potential impacts between the alternatives compare? 27

C. How do the growth management plans and development regulations of the cities and Clark County
reduce the potential impacts? 31

30 II. Air 32

A. How can growth management plans affect the climate and air quality in Clark County? 32

B. How do the potential impacts between the alternatives compare? 32

C. How do the growth management plans and development regulations of the cities and Clark County
reduce the potential impacts? Do other options for mitigation exist? 33

35 III. Water 34

A. How can growth management plans affect surface and ground waters in Clark County?..... 34

B. How do the potential impacts between the alternatives compare? 34

C. How do the growth management plans and development regulations of the cities and Clark County
reduce the potential impacts? Do other options for mitigation exist? 40

40 IV. Priority Fish and Wildlife Habitat 41

A. How can growth management plans affect plant, fish, and wildlife habitats?..... 41

B. How do the potential impacts between the alternatives compare? 41

C. How do the growth management plans and development regulations of the cities and Clark County
reduce the potential impacts? Do other options for mitigation exist? 45

45 V. Energy Conservation..... 46

A. How can growth management plans affect energy conservation in Clark County? 46

B. How do the potential impacts between the alternatives compare? 46

C. How do the growth management plans and development regulations of the cities and Clark County
reduce the potential impacts? Do other options for mitigation exist? 46

50 VI. Scenic Resources 47

A. How can growth management plans affect scenic resources in Clark County?..... 47

B. How do the potential impacts between the alternatives compare? 47

C. How do the growth management plans and development regulations of the cities and Clark County
reduce the potential impacts? Do other options for mitigation exist? 47

55 VII. Noise..... 47

A. How can growth management plans affect the creation of noise in Clark County? 47

B. How do the potential impacts between the alternatives compare? 48

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist? 48

VIII. Land Use 48

5 A. How can growth management plans affect urban land uses and growth in Clark County and its cities?.. 48

B. How do the potential impacts between the alternatives compare? 49

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist? 61

10 IX. Rural and Resource Lands 61

A. How can growth management plans affect the rural and resource lands of Clark County?..... 61

B. How do the potential impacts between the alternatives compare? 61

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist? 63

15 X. Economy..... 63

A. How can growth management plans affect the economy of Clark County? 63

B. How do the potential impacts between the alternatives compare? 64

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist? 65

20 XI. Historic and Cultural Resources 65

A. How can growth management plans affect historic and cultural resources in Clark County?..... 65

B. How do the potential impacts between the alternatives compare? 66

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist? 67

25 XII. Transportation 68

A. How can growth management plans affect the transportation network in Clark County?..... 68

B. How can growth management plans affect the transportation network in Clark County?..... 70

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist? 80

30 XIII. Public Facilities and Utilities..... 87

A. Fire Protection..... 87

B. Police Protection..... 89

C. Public Schools..... 91

D. Parks and Recreation..... 96

E. Libraries 98

35 F. General Government 99

G. Solid Waste 100

H. Public Water Systems 100

I. Sanitary Sewer..... 102

J. Electrical system 104

40 XIV. Are there adverse impacts that cannot be avoided? 105

XV. How do the proposed revised comprehensive plans conform with the Growth Management Act? 105

ACRONYMS..... 107

DEFINITIONS..... 111

LIST OF TABLES

5 **Table 1.** Compliance with BOCC Principles and Values 6

Table 2. Summary of Impacts..... 9

Table 3. Summary of Mitigation..... 13

Table 4. Schedule for Updating the Clark County Comprehensive Plan..... 16

Table 5. Alternative 1 Population and Job Allocations 18

Table 6. Soils with Limitations to Foundations, Alternative 1 and Preferred Alternative..... 28

10 **Table 7.** Soils with Limitations to Septic Sewer Systems, Alternative 1 and Preferred Alternative..... 29

Table 8. Prime Agricultural and Forest Soils, Alternative 1 and Preferred Alternative..... 29

Table 9. Geological Hazard Areas, Alternative 1 and Preferred Alternative..... 30

Table 10. Comparison of Impacts on Streams, Alternative 1 and Preferred Alternative 35

Table 11. Floodplains and Shoreline Environments, Alternative 1 and Preferred Alternative..... 36

15 **Table 12.** Total Impervious Surface, Alternative 1 and Preferred Alternative (acres)..... 37

Table 13. Impervious Surface by Watershed, Alternative 1 and Preferred Alternative (acres) 37

Table 14. New Impervious Surface by Land Use, Alternative 1 and Preferred Alternative..... 38

Table 15. Critical Aquifer Recharge Areas, Alternative 1 and Preferred Alternative..... 39

Table 16. Zones of Contribution, Alternative 1 and Preferred Alternative 39

20 **Table 17.** Priority Habitat and Priority Species, by Alternative 1 and Preferred Alternative..... 42

Table 18. Identified Wetlands, Alternative 1 and Preferred Alternative (acres) 44

Table 19. Projected Urban Population and Dwelling Units, Alternative 1 and Preferred Alternative.... 52

Table 20. City Overrides, Alternative 1 and Preferred Alternative 53

Table 21. Projected Rural Population and Dwelling Units, Alternative 1 and Preferred Alternative..... 58

25 **Table 22.** Land Added to City UGAs by Rural Designation, Alternative 1 and Preferred Alternative.. 59

Table 23. Land Added to City UGAs by Urban Designation, Alternative 1 and Preferred Alternative 60

Table 24. Rural Lands, Alternative 1 and Preferred Alternative 62

Table 25. Resource Land Subtracted from UGAs, Alternative 1 and Preferred Alternative 62

Table 26. Projected Job Creation by Employment Sector, Alternative 1 and Preferred Alternative 65

30 **Table 27.** Areas of Archeological Predictability, Alternative 1 and Preferred Alternative..... 66

Table 28. Historic Sites in Expanded UGAs..... 67

Table 29. Performance Measures , Alternative 1 and Preferred Alternative 71

Table 30. Major Transportation Corridors: Estimated LOS, Alternative 1 and Preferred Alternative.... 71

Table 31. Washington State Transportation System PM Peak Deficiencies 72

35 **Table 32.** Capacity Project Needs by Alternative 82

Table 33. Proposed Transportation Mitigation Measures..... 83

Table 34. Proposed County Mitigation Projects..... 84

Table 35. County Transportation CFP Summary 85

Table 36. County Transportation Cost / Revenue Summary, Alternative 1 (No Action)..... 85

40 **Table 37.** County Transportation Cost / Revenue Summary, Preferred Alternative 86

Table 38. Estimated Urban Population Served, Alternative 1 and Preferred Alternative 87

Table 39. Needed Sworn Law Enforcement Officers, Alternative 1 and Preferred Alternative..... 89

Table 40. Needed School Facilities, Alternative 1 and Preferred Alternative 92

Table 41. Estimated Parkland Needs, Alternative 1 and Preferred Alternative..... 96

45 **Table 42.** Public Water Demand, Alternative 1 and Preferred Alternative 101

Table 43. Public Sewer Demand, Alternative 1 and Preferred Alternative 102

Table 44. Projected Costs of Sanitary Sewer Systems, Preferred Alternative 103

LIST OF FIGURES

All figures can be found at the back of the document. Figures which did not change following publication of the DEIS can be found in the DEIS.

5

1. Regional Location

2. Alternative 1 (No Action)

3. Preferred Alternative

10

4. Battle Ground UGA

5. Camas UGA

6. La Center UGA

7. Ridgefield UGA

8. Vancouver, Northeast UGA

15

9. Vancouver, Northwest UGA

10. Washougal UGA

11. Town of Yacolt

12. Soil Limitations to Foundations

13. Soil Limitations to Septic Sewer Systems

20

14. Soil Capabilities for Agricultural Use

15. Clark County Regional Transportation System

16. Level of Service for Regional Transportation System, Alternative 1

17. Level of Service for Regional Transportation System, Preferred Alternative

25

SUMMARY

I. What is being proposed?

Clark County and the cities and towns of Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal, and Yacolt are proposing to revise their Comprehensive Growth Management Plans (the Plans) to comply with the requirements of the Growth Management Act (GMA)¹. The revisions focus on changes to the Urban Growth Areas (UGAs²) to accommodate projected growth out to 2024. The FEIS evaluates the potential environmental impacts of two alternatives.

The No Action Alternative, also referred to as Alternative 1, would not change the current UGAs and instead would change zoning to accommodate future growth. The DEIS did not specify where that changed zoning would occur, only that dwellings for about 21,000 additional households would need to be added. The FEIS includes population allocations to each of the cities, and specifies how those additional households would be accommodated by changes to existing zoning in the existing UGAs.

The Preferred Alternative was developed from the land use expansion areas proposed under both Alternatives 2 and 3 that were evaluated in the DEIS. The Preferred Alternative would expand the UGAs by 12,063 acres to accommodate growth. The total expansion area is somewhat larger (12,063 acres) than Alternative 2 (10,858 acres) in the DEIS.

The County's objective for the final adopted 2007 Plan is to accommodate the projected demand for jobs and housing by 2024 based on new growth assumptions, to implement land use patterns that reflect local principles and values, and to minimize impacts on the environment, schools, and the cost of infrastructure by fine-tuning the location of expansion areas. Table 1 contains a discussion of the principles and values that the Board of County Commissioners (BOCC) used in developing and evaluating the alternatives in both the DEIS and the FEIS.

The planning assumptions for the alternatives are:

- A total population of 584,310 by 2024, from an annual growth rate of 2.0 percent, with 2.2 percent assumed in 2004-2010 for capital facilities planning purposes (2004 Plan: annual rate of 1.67 percent);
- Population growth of 192,635; 90 percent of the population would live in urban areas; 10 percent in rural areas;
- A residential market factor of 10 percent; no market factor for commercial, industrial or business park (2004 Plan: 25 percent for business park and commercial; 50 percent for industrial);
- 66,939 new dwelling units needed for households in urban areas and 138,312 new jobs by 2024;
- Currently built land would be redeveloped, absorbing five percent of the projected population and job growth (same as 2004 Plan);

¹ The Growth Management Act (GMA) was enacted by the state legislature in 1990. It requires high population counties and fast-growing counties to develop comprehensive plans to balance the needs of housing and jobs with preservation of resource lands (for agriculture, forestry and mining) and critical areas (such as habitat, wetlands and areas subject to flooding).

² What are UGAs? They are areas where urban growth will be encouraged. Counties and cities planning under GMA must cooperatively establish the urban growth areas and cities must be located inside urban growth areas. Growth outside urban growth areas must be rural in character.

- 2.59 persons per household (2004 Plan: 2.69 pph);
- 20 employees per commercial acre; 9 employees per industrial acre; and 20 employees per business park acre (same as 2004 Plan);
- 5 • Average residential densities in urban areas would be 8 units per net acre for Vancouver, 4 units per net acre for La Center, 6 units per net acre for Battle Ground, Ridgefield, Camas and Washougal, and no minimum for the town of Yacolt (same as 2004 plan);
- Infrastructure factor of 27.5 percent for residential development and 25 percent for industrial and commercial development;
- No expansion of Yacolt or Woodland UGAs; and
- 10 • No more than 75 percent of any product type of detached/attached housing.

II. What is this document?

15 The State Environmental Policy Act (SEPA) requires public agencies to evaluate the potential adverse impacts that projects or non-project actions might have on the environment. Significant impacts require the most analysis, typically in the form of an environmental impact statement (EIS). EISs require agencies to compare impacts from the proposed action against impacts from one or more alternatives, of which one of the alternatives must be the option of not doing the project. The expansion of urban growth boundaries (a non-project action) requires a greater level of analysis, which is why the County has prepared an EIS.

20 This Final Environmental Impact Statement (FEIS) is the second part of the Environmental Impact Statement (EIS). The first part was a Draft Environmental Impact Statement (DEIS) published on August 25, 2006. The 2006 DEIS analyzed three alternative ways to accommodate growth: one would not have expanded the UGAs and the second and third would have expanded the UGAs, but in different places. The BOCC and County staff used the DEIS and the public process to help solicit input on and develop a Preferred Alternative that is being evaluated in this FEIS and is likely to inform the final adopted 2007 Plan.

The purpose of the SEPA process is to disclose potential impacts. By disclosing the potential impacts of the alternatives and by soliciting public and agency input through the EIS process, Clark County and its cities expect to adopt a plan that is consistent with local values and consistent with the requirements of the GMA.

30 An EIS consists of a summary of impacts and mitigation (Tables 2 and 3), followed by a discussion of existing conditions, methodologies, specific impacts expected from a proposal, the available mitigating measures that could reduce impacts, any unavoidable adverse impacts, and a discussion of cumulative impacts and irretrievable loss of resources. For a non-project action, SEPA allows that generally expected or acknowledged impacts rather than a quantitative analysis can be sufficient for analyzing the potential adverse impacts. This FEIS for growth management update consists of three volumes:

- Volume 1: Summary and Analysis of the Preferred Alternative
- Volume 2: Comments on the DEIS with Responses
- Volume 3: Revised DEIS

40 The DEIS presented an abbreviated evaluation of the broad impacts that would be expected under each of the alternatives. A Technical Document attached to the DEIS provided more in-depth background on existing conditions for all of the elements of the environment. It also analyzed the typical types of environmental impacts that growth can have in addition to the more specific, quantified impacts of the DEIS alternatives where those were available.

This FEIS relies on the Technical Document in the DEIS for documentation of the following, unless new information has become available:

- A discussion of the Growth Management Act and updates since 2000;
- Background information on previous growth management plans and activities in the county;
- 5 • Context for the current round of updates to the comprehensive plans for the cities and the County;
- Planning assumptions for the development of alternatives for growth, the main one being an annual growth rate of 2.0 percent requiring 66,939 new dwelling units needed for households in urban areas and 138,312 new jobs by 2024;
- Existing conditions for all elements of the environment;
- 10 • Methodology of evaluating impacts;
- Generally-accepted types of impacts that population and job growth, and urbanization of rural lands can have on the elements of the environment;
- A comprehensive list of the existing policies and ordinances used as mitigation; and
- Cumulative and irretrievable and irreversible conversion of resources.
- 15 For the above information, context for the present document, and discussion of the original alternatives, reviewers are directed to the DEIS and the Technical Document. New information not previously available and the analysis of the new alternatives are presented directly in the FEIS.

III. What are the differences between the No Action and Preferred Alternatives?

- 20 Both alternatives assume the same 2 percent rate of growth of population and employment. Between 2004 and 2024 it is expected that about 192,000 more people will live in Clark County (for a total population of about 584,000). About 90 percent of these (173,000) will settle in urban areas, with the remaining 10 percent moving to rural areas. The growth would require about 67,000 new dwelling units in urban areas (Table 19) and the need for about 138,000 new jobs (Table 26). (For current urban and rural county zoning, refer to Figure 41, of the DEIS, Clark County 2004 Zoning Map.)
- 25

The main difference between the alternatives is that the urban growth would occur solely inside existing UGAs under Alternative 1 and both inside and outside the existing UGAs under the Preferred Alternative.

- 30 **Alternative 1** is the No Action Alternative. Under Alternative 1, urban growth areas would not be expanded (see Figure 2). This means that an expected 173,000 new residents (67,000 new dwelling units) and 138,000 jobs would need to be accommodated in the current UGAs. Using the County's vacant and buildable lands model and the development assumptions adopted by the BOCC, the urban areas would fall short of land to accommodate 19,735 dwelling units. To make up the shortfall there would need to be a change in assumptions about the density of development and redevelopment or changes to zoning to allow greater densities. The DEIS did not allocate where those changes to residential zoning could occur, but accepted cities' suggestions where additional redevelopment will be and could be done at higher densities (Table 20).
- 35

This FEIS uses an allocation of jobs and population to each city (Table 5). Cities were asked how and where they wanted to accommodate these additional dwelling units and jobs. All city overrides were

accepted (Table 20); if target densities were not reached or locations unspecified, densities were increased on vacant and buildable lands. With city suggestions and a different allocation of dwelling units and jobs to areas where vacant land is available, there is additional capacity of 21,889 dwelling units and 12,329 jobs. This exceeds the target of dwelling units, but leaves the county short in planned job numbers.

5 For Battle Ground, Camas, La Center, and Ridgefield, the increase in residential density for these cities could be considered equivalent to townhouse or medium density residential development occurring on lands currently designated for low density residential uses, where lots are currently undeveloped or underdeveloped.

10 For the Vancouver UGA, all city-proposed overrides (12,369 dwelling units and 34,225 new jobs) were included. The overrides include-city-initiated redevelopment plans for specific subareas, and private developer proposals, and formulaic increases to residential densities. An additional 5,000 dwelling units allocated to Vancouver were assumed to result from higher densities on vacant residential lands.

15 In Washougal, household and job growth is focused in the downtown and the Riverwalk site (that is, within existing incorporated areas) where the City expects redevelopment at significantly higher densities (zoned for 30 or more units/acre).

20 In terms of potentially positive impacts, compact growth generally uses resources more efficiently and economically, provided that the capacity of existing facilities is not exceeded. Current infrastructure (for roads, parks, schools, wastewater and water supply) benefit from not having to serve a larger geographical area, and preserving existing rural lands and the resources on those lands. Natural resources experience less pressure from urbanization because the overall “footprint” of growth is smaller.

25 In terms of potentially negative impacts, existing land uses may experience pressure from changes to zoning or zoning densities that were not anticipated by residents or agencies involved in planning for infrastructure. The introduction of more intense uses, or different uses adjacent to each other in established neighborhoods, may negatively affect compatibility or livability and require mitigation, such as additional amenities and design and/or development standards, to offset. Upzoning and changes in the uses in areas that have not developed under existing zoning is likely to have less impact on compatibility.

30 It is expected that under this alternative that transportation impacts would include a lower number of total person trips, congested lane miles, vehicle hours of delay and vehicle miles traveled; and a somewhat higher share of transit and non-motorized modes, as compared to the Preferred Alternative. The number of all day Columbia River Bridge crossings is slightly higher than for the Preferred Alternative. The I-5 and I-205 bridges would be operating at or near failing levels of service at a.m. peak times, which would back up onto the ramps and affect the flow of traffic at interchanges and connecting streets. Transportation capital projects and programs are estimated to cost \$840 million (2006-2024). Additional projects to mitigate congested corridors would cost \$208 million (Table 35) for both the No Action and the Preferred Alternatives. There would be a deficit in transportation funding of \$292.6 million (see Table 36).

40 The **Preferred Alternative** is the action alternative proposed by the County (see Figure 3). As shown on the Preferred Urban Growth Area map, all of the cities of Clark County would expand their UGAs. The new UGAs would add 12,063 acres, enough vacant and buildable land for 67,658 new urban dwelling units and 132,893 new jobs. In addition, the BOCC has accepted city and county overrides that are likely to accommodate an additional 2,674 dwelling units-

Given the planning assumptions for growth rate and jobs/acre, the 12,063 acres is a slightly larger area of land than needed to accommodate the planned population and job growth by 2024. Even though the

planning assumptions are the same for both the No Action and the Preferred Alternatives, the impacts from this alternative will be different depending on the resource affected. The reason is that the Preferred Alternative is projected to have a similar capacity for population growth as the No Action Alternative, while consuming more land.

- 5 Impacts on the environment consist primarily in bringing urban levels of development to land that is currently non-urban. Building urban types of development in expanded UGAs would result in new impacts to the environment in those (currently rural) areas, but would not result in as much upzoning in the existing UGAs and so could avoid some of those related impacts cited under the No Action Alternative.
- 10 Development would occur on some land currently known to contain prime agricultural and forest soils. Fifty-two stream miles of surface water and 860 acres flood hazard areas would be added to UGAs. Given proposed land uses, there is a potential increase over impacts under Alternative 1 of 6,297 acres of impervious surface.

- 15 The Preferred Alternative would create a slightly higher number of congested lane miles, vehicle hours of delay and vehicle miles traveled, and a somewhat lower share of transit and non-motorized modes, all as compared to Alternative 1. I-5 and I-205 and the mainline approaches would both be operating at or near LOS F conditions. Because of the impacts on the mainlines, ramps leading to I-5 and I-205 are expected to queue and spill back onto the intersecting arterials. The Preferred Alternative has 6,601 fewer daily bridge crossings, a 1.9 percent difference. Transportation capital projects and programs are estimated to
- 20 cost \$840 million (2006-2024). Additional projects to mitigate congested corridors would cost \$208 million. There would be a deficit in transportation funding of \$259.5 million (Table 37).

IV. How do all of the environmental impacts under the alternatives compare?

- 25 SEPA requires every EIS to summarize the impacts and mitigation for each alternative. The FEIS contains a summary of impacts of the No Action and Preferred Alternatives shown in Tables 2 and 3, beginning on page 9.

Table 1. Compliance with BOCC Principles and Values³

Principle or Value	Alternative 1 (No Action)	Preferred Alternative	Comments
Expansion area (acres)	0	12,063	
Maintain county tax base:	●	●	All vacant areas that would be developed, other than those dedicated for parks/open space or government office would increase the tax base.
Balance between the cities:	○	●	Each of the cities would have additional employment and residential land under the Preferred Alternative. Current development patterns would continue in cities under Alternative 1.
Equalize land allocation and jobs/populations ratio so that cities have equitable share of jobs – diverse job base:	○	●	2000-2004 land absorption rates show that most jurisdictions are developing vacant land as planned with vacant land still available in existing UGAs.
Job lands close to transportation so that capacity is provided to job opportunities:	●	●	Most job-producing land is along I-5 or SR-503, with some in Camas and Washougal
Ground-truth where residential and jobs “make sense”:	N/A	●	Staff worked with city planners on developing city proposals for jobs and housing.
Resulting tax-base (e.g., jobs, residential that doesn’t result in greater school demand) needs to be equitable for school districts. Tax base equitably distributed between residential and job-producing lands:	○	●	Job-producing land has been added to all UGAs with industrial land added in La Center, Ridgefield and Vancouver. Residential land is added to all cities.
Breaks/Green spaces between communities – natural borders:	●	●	There are still greenspaces between UGAs. Urban reserve designations would connect Ridgefield with Vancouver and La Center.
Minimize the conversion of productive farmland – those lands which have long-term commercial agriculture viability: Is it being used today for commercial agriculture? Balance goals e.g. economic development versus agricultural land preservation.	●	○	Agriculturally designated lands have been included in the expanded UGAs. An assessment of their potential to remain viable will be completed prior to plan adoption.
Ensure good geographic distribution of commercial lands:	N/A	●	Commercial land which includes Commercial, Mixed Use, Employment Center, and Employment Campus has been added to some extent in all cities under the Preferred Alternative.

³ LEGEND

Meets BOCC principle or value ●

Partially meets BOCC principle or value ○

Does not meet BOCC principle or value ○

In progress to meet BOCC principle or value I/P

Does not apply N/A

Principle or Value	Alternative 1 (No Action)	Preferred Alternative	Comments
Build on the work done for the January 2004 plan map proposal:	N/A	●	The Board chose a growth rate that is believed to be more realistic. The DEIS proposal began with the January 2004 plan map.
Prioritize lands that are most likely to provide “family-wage jobs” as defined in the comprehensive plan policies:	●	●	Land identified for industrial uses was added in areas located close to major transportation routes and on land with few constraints.
La Center needs greater economic diversification opportunities and multi-family land use designations:	○	●	The Preferred Alternative would add land for industrial and commercial uses near the La Center/I-5 interchange. Medium density residential land has also been added.
Ridgefield needs greater population (to balance employment opportunities). Meeting 75:25 housing type split may be an issue:	○	●	The Preferred Alternative would add residential land to the north, south, and east side of the urban growth area. Density or housing split goals would be assessed at the time proposed zoning is available.
Vancouver UGA – bring in job producing reserve lands into the boundary:	○	●	Industrial urban reserve land has been added along 1) SR 503, and 2) I-5 north of 199th Street (the Discovery Corridor).
Camas density needs to meet 6 units/acre:	●	●	Density and housing split goals will be assessed when zoning is proposed.
Ground-truthing is extremely important for employment:	●	●	Staff has reviewed the land within the proposed boundaries. In most cases, this occurred in field work made in conjunction with city staff.
Lands with few if any restraints (“easy”) should be allocated first for employment:	●	●	Industrial land that was relatively flat, large parcels, near transportation corridors have been identified along SR 503, La Center, and Ridgefield junctions. Land with major constraints was removed from the boundary east of NE 162nd Avenue.
Population and employment allocation should be guided by the values identified:	○	●	The Board took the first cut at addressing this principle and staff followed up wherever possible as discussed in this table.
Ground-truthing would clarify/define the allocation (versus “assigned”):	N/A	N/A	Most of the areas identified are appropriate for the land uses proposed.
Vancouver UGA: minimize residential growth, with some residential growth at lower densities (R1-10 or R1-20):	○	○	The application of zoning districts will determine this.
Need creative opportunities for communities (e.g. form-based zoning, performance zoning):	N/A	I/P	It is up to the cities to develop zoning regulations to achieve this objective and that meet county-wide planning assumptions.
New growth needs to blend well with existing neighborhoods:	N/A	I/P	It is up to the cities and the county to develop zoning regulations to achieve this objective.
Maintain Focus Public Investment Areas – “hubs” of job growth that can be serviced effectively:	●	●	All of the primary focused public investment areas have been expanded or continue to be included in proposed UGAs.

Principle or Value	Alternative 1 (No Action)	Preferred Alternative	Comments
Maintain a mix of housing options (a variety of housing densities – large, medium and small lots):	●	●	Urban low, medium and high density residential has been added in all cities in the Preferred Alternative, although the majority is urban low density. There are county policies that require a variety of housing types.
Identify school sites inside the new residential areas:	I/P	I/P	The school districts would need to identify general areas for new schools.
Maximize the potential for the county's railroad as a job-creating asset:	○	●	The Preferred Alternative includes a portion of the railroad as industrial and as industrial urban reserve.
Identify "real" urban reserve lands that could be readily capable of being converted to urban uses in the next 10:	●	●	The Preferred Alternative proposes urban reserve lands adjacent to the Vancouver, Ridgefield, La Center, Battle Ground and Yacolt UGAs. Urban reserve is removed north of Salmon Creek southwest of the Fairgrounds.
Use an integrated view in examining the proposed boundaries and plan map:	N/A	●	The needs for residential, commercial, and industrial land have been addressed. Further review through the Capital Facilities Plan will provide additional information the Board can use in deciding on the final UGA boundaries.
Identify areas which should never be urban. All other factors being equal, select the area that has fewest critical areas.	○	○	Critical areas have been designated by the county and are shown in the figures. Development regulations are in place for each critical area type. Some of the existing urban reserve has been removed due to the unlikelihood of urbanization.

Table 2. Summary of Impacts**Earth, Air**

	Alternative 1 (No Action)	Preferred Alternative
Size of Subarea		
EARTH		
Soils and Geology:		
Acres of land with: Soils with severe limitations to foundations	22,109	22,109 + 3,944
Prime agricultural soil prime forest soil	51,856	51,856 + 7,054 (3,099 of which are zoned for agriculture)
	38,604	38,604 acres + 7,770 acres
Topography:		
Acres of land with:	6,139 acres	6,139 + 929
Earthquake zone E: 2 nd highest hazard zone ⁴	947 acres	947 + 1,091
Steep slopes over 40% slope	3,631 acres	3,631 + 766
Landslide hazard areas	3,900 acres	3,900 + 963
Erosion hazard areas		
AIR		
Both alternatives have the potential to affect the air quality and climate. Impacts can be related to the balance between emissions from automobile use (vehicle miles traveled or VMT), emissions from unregulated private sources (e.g. gas lawnmowers), federal regulations through the Clean Air Act, and conversion of rural and resource land to urban land with less vegetative cover. For differences in VMT (full build-out capacity, not planned growth) see Transportation Impacts. For conversion of rural to urban land see the Rural and Resource land impacts.		

Water, Plants and Animals

	Alternative 1 (No Action)	Preferred Alternative
WATER		
Surface waters: miles of streams	194	194 + 52
Stormwater: Acres of new impervious surface	17,277	17,277 + 6,297
Shorelines: Acres of environment affected	6,414	6,414 + 346
Flood hazard areas: Acres in UGAs	14,525	14,525 + 860
Groundwater:		
Acres of Category 1 Critical Aquifer Recharge Areas in new UGAs	4,010	4,010 + 417
Acres in 1-Yr Zones of Contribution in new UGAs	4,373	4,373 + 9.2
PLANTS AND ANIMALS		
Acres with Priority Species in new UGAs	7,384	7,384 + 328
Acres of Non-Riparian Priority Habitat Conservation Area	2,256	2,256 + 230
Acres of Riparian Priority Habitat Conservation Area	7,314	7,314 + 1,803
Wetlands in new UGAs	15,807	15,807 + 1,873

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⁴ None of the land proposed for UGAs in Alternative 2 contains Zone F land, which is the greatest hazard zone.

Energy Conservation, Environmental Health

	Alternative 1 (No Action)	Preferred Alternative
ENERGY CONSERVATION	Impacts on energy and natural resource conservation are not quantitatively comparable. Total energy impacts are more determined by overall growth and consumption by type of use, less so from patterns of expansion. Planned growth is the same for both No Action and the Preferred Alternative, although there could be slightly more impact from the greater capacity for urban growth under the Preferred Alternative. Impacts from VMT on energy (petroleum) use based on capacity for growth (full build-out) can be found in Transportation Impacts.	
ENVIRONMENTAL HEALTH		
Scenic Resources The Preferred Alternative would convert rural and resource land to urban uses, affecting scenic values adjacent to the new UGAs.	Where increased densities occur in cities' limits, it would have no impact on rural areas; where increased densities could occur adjacent to rural areas, there would be some impacts on scenic values.	Conversion of about 12,000 acres to urban use would result in some loss of agricultural, forest, and rural lands that have scenic and visual values
Noise	Impacts from noise cannot be quantitatively compared. Higher noise impacts expected from increased traffic (see Transportation), from expansion of diverse urban uses into formerly rural areas.	

Land Use, Economy, Historic and Cultural Resources

	Alternative 1 (No Action)	Preferred Alternative
LAND USE		
Urban residential land capacity: Difference between number of planned dwelling units and number of dwelling units at build-out; actual land capacity Planned new urban population: 173,372 (190,709 with 10% market factor) Planned dwelling units: 66,939 (73,633 with 10% market factor)	69,093 dwelling units could be accommodated: exceeds planned growth by 2,154 dwelling units But short of targeted market factor growth by 4,540 dwelling units	70,332 dwelling units could be accommodated: exceeds planned growth by 3,393 dwelling units But short of targeted market factor growth by 3,301 dwelling units
Rural residential land capacity Difference between number of planned dwelling units and number of dwelling units at build-out; actual land capacity Planned new rural population: 19,264 Planned new rural dwelling units: 7,438	9,045 dwelling units could be accommodated: Exceeds planned growth by 1,607 dwelling units	7,387 dwelling units could be accommodated: Short of planned growth by 51 dwelling units
Rural Lands: Acres of rural land into new UGAs	0	4,027
Agricultural land	0	4,572
Forest land	0	155
Mineral land	0	0
Resource Lands: Acres into new UGAs	0	4,727

ECONOMY		
Planned jobs to population ratio	1:1.39	1:1.39
Planned new jobs	138,312	138,312
Land capacity for employment	139,484 jobs	132,893 jobs
Industrial land (acres)	3,462	3,462 + 1,883
Employment Center/Employment Campus (acres)	12,102	12,102 + 870
Commercial land (includes mixed use) (acres)	7,732	7,732 + 997
Employment capacity (% of land used for planned jobs)	May have capacity for 101% of planned employment growth if all all overrides achieve assumed job densities	Has actual capacity for 96% of planned employment growth
HISTORIC AND CULTURAL RESOURCES		
	As urban development densities increase could add pressure to redevelop less developed sites in high probability areas and on non-registered historic structures on underdeveloped sites. Rural high probability areas would not be affected by urban development. Existing UGAs have 33,508 acres with moderate to high probability for cultural resources and 289 identified historic sites.	As urban development expands into rural areas, could result in loss of unregistered historic structures. Rural high probability areas risk being affected by urban development. Existing and new UGAs have 42,596 acres with moderate to high probability for cultural resources and 298 identified historic sites.

Transportation

	Alternative 1 (No Action)	Preferred Alternative
TRANSPORTATION		
Projected Vehicle hours of delay	3,685	3,699
Projected Vehicle Miles Traveled (VMT)	1,096,954	1,117,794
Projected lane miles at LOS E/F	176	202
Transportation costs to maintain LOS D	Capital projects and programs: \$840 million Mitigation projects: \$208 million Project revenue deficit: \$292.6 million	Capital projects and programs: \$840 million Mitigation projects: \$208 million Project revenue deficit: \$259.5 million

Public Facilities

	Alternative 1 (No Action)	Preferred Alternative
PUBLIC FACILITIES & UTILITIES		
Fire Protection	No new urban geographic areas to serve.	Change in urbanization of areas will impact Fire Districts 11, 12, and East County FD by more than doubling population to be served, while decreasing population to be served by other districts by 3% to 25%
Police Protection	Additional staff and facilities for County Sheriff; new county jail est. cost \$90-100 million; possible increased response times. Additional sworn officers needed: 925.	Additional staff and facilities for County Sheriff; new county jail est. cost \$90-100 million; possible increased response times Additional sworn officers needed: 992.
Public Schools	New facilities: 29 schools, 82 portables Costs: \$798.5 million.	New facilities: 34 schools, 78 portables Costs: \$947.6 million.
Parks and Recreational Facilities	Need for new park and recreation facilities for population growth; more efficient use of existing facilities 4,241 acres of additional parks needed.	Need for new park and recreation facilities for population growth; less efficient use of existing facilities 4,637 acres of additional parks needed.
Libraries	New library facilities needed for growth; more dense growth could increase competition for land for new facilities.	New library facilities needed for growth; UGA expansions could allow more options for siting facilities.
General government	Need for facilities for staff growth more related to program mandates than to population growth. No difference between alternatives.	
Solid waste	Slight difference between alternatives in population capacity: more capacity for growth in Preferred Alternative likely to generate more waste. Current landfill sites have excess capacity for planning period.	
Public water supplies: Additional water demand at capacity build-out Cost to build facilities to meet demand	Some additional transmission lines and water capacity (wells) may be required due to increased densities. Projected costs: \$202 Million	Additional transmission lines and sewer capacity will be needed to serve the added land areas. Projected costs: \$307 million
Sewer: Additional sewer demand at capacity build-out Cost to build facilities to meet demand	Some additional transmission lines and sewer capacity (wells) may be required due to increased densities. Projected costs (2004 plan): \$392 million	Additional transmission lines and sewer capacity will be needed to serve the added land areas. Projected costs: \$504 million
Electricity	CPU expects to be able to expand the electrical system to serve development, no matter which alternative is selected.	

Table 3. Summary of Mitigation

Element	Mitigation Measures
Soils	Comprehensive plan policies and ordinances of Clark County and the cities protect resource land soils and restrict development where there are soil limitations.
Geology and Topography	Comprehensive plans of Clark County and the cities have policies for regulating development within geologically hazardous areas, which are implemented through local geological hazard ordinances.
Climate	Climate change is indirectly addressed and mitigated through federal and state air quality. Choosing an alternative that converts the least amount of undeveloped vegetated areas to impervious surfaces and reduces vehicle emissions through more efficient development are available forms of mitigation to avoid impacts to climate.
Air Quality	Protection of air quality occurs through federal and state regulations on automobiles, small engine equipment, fireplaces, and wood stoves. All of the comprehensive plans recognize the importance of maintaining good air quality. Some have policies in their Transportation, Economic Development, and/or Environmental Element to mitigate impacts to air quality from vehicle and industrial emissions.
Surface Water	Comprehensive plan policies and development regulations provide for the protection of surface water quality throughout the county. Generally, mitigation consists of the identification and protection of critical areas and floodplains through local ordinances, protection of shorelines through Shoreline Master Programs, and through stormwater management and erosion control ordinances.
Groundwater and Aquifer Recharge Areas	As required by the GMA, the county and each city have identified critical environmental areas, including critical aquifer recharge areas. Protection of groundwater resources is addressed in critical areas ordinances (CAOs) that regulate development within recharge areas. The County regulates septic systems through its public health department.
Fish and Wildlife Habitat	The protection of fish and wildlife habitat conservation areas is addressed in comprehensive plan policies and implemented through local ordinances. The county and each city have identified critical environmental areas, which include fish and wildlife habitat conservation areas. CAOs, stormwater management programs and regulations, erosion control regulations, and tree protection ordinances are the mechanisms for mitigating adverse impacts to these areas.
Sensitive, Threatened, and Endangered (STE) Species	Mitigation of impacts to STE species is the same as for fish and wildlife habitat, above. All local jurisdictions have updated their CAOs, in part to provide greater protection for ESA-listed salmon and steelhead. The County has a NMFS-approved Salmon Recovery Program.
Migratory Species/Migration Routes	Mitigation for impacts to migratory species and habitat is the same as for fish and wildlife habitat, above.
Wetlands	The protection of wetlands is accomplished primarily by federal Clean Water Act, Section 404 regulations. State regulations that provide for the mitigation of impacts to wetlands include the Shoreline Management Act, Hydraulic Project Approval, State Environmental Policy Act, and the Floodplain Management Program. The county and the cities have adopted wetland protection ordinances incorporated into their CAOs. The county is also actively developing a wetland banking program as a mitigation tool.
Renewable and Non-Renewable Energy Sources	The primary energy conservation measure available to local jurisdictions is to adopt a compact urban form that supports alternative, energy efficient transportation. The Battle Ground, Camas, and Vancouver comprehensive plans directly address energy conservation.
Scenic Resources	Clark County has designated two scenic routes and implements the provisions of the Columbia River Gorge National Scenic Area Act in its code requirements. Battle Ground has adopted interim policies to protect and promote significant views. Camas' municipal code also allows for the protection of scenic resources. Other local codes do not directly address scenic resources.
Noise	Federal and state regulations that limit noise exposure in different classes of land use provide for some mitigation of noise impacts. Noise impacts are also considered in SEPA environmental review. Vancouver proposes to adopt a modification of the state noise ordinance.

Element	Mitigation Measures
Land Use, Population, and Housing	Mitigation for needed densities to accommodate growth in existing UGAs is available through better design and development standards, such as mixed use development and the use of low impact technology. No mitigation is available for loss of rural land to urban expansion.
Rural Lands	Clark County’s comprehensive plan has policies that protect rural lands and rural character. Development on rural lands is also regulated by the county’s zoning code, which establishes rural districts and permitted uses.
Resource Lands	Clark County’s comprehensive plan policies protect resource lands from incompatible uses and from conversion to urban land. The zoning code regulates the intensity and nature of development that can occur on and adjacent to resource lands. City comprehensive plans contain policies that direct development away from productive forest and farm land.
Historic and Cultural Resources	Clark County and the cities have policies and/or ordinances that require these jurisdictions to identify and protect historic and cultural resources.
Transportation	<p>Both Alternative 1 and the Preferred Alternative would require significant transportation improvements to reduce congestion and achieve a system-wide level-of-service. Cost of mitigation is the same. Projected revenue shortfall is higher for Alternative 1.</p> <p>Other mitigation could consist of:</p> <ul style="list-style-type: none"> - Increase local option transportation funding and increased funding through the state legislature or referenda. - Lowering the LOS standards on corridors where funding is not available or where multimodal transportation use is to be encouraged. - Defer or assume reimbursement for projects in areas to be annexed. - Deferring or eliminating projects that do not improve travel time on concurrency corridors. - Delay growth in certain areas until funding for improvements is available. - Amending the County’s comprehensive plan to allow rural major collectors to become multi-lane, non-state highways on specific routes that connect urban areas. - Implementing an updated regional traffic impact fee structure.
Emergency Services and Fire Protection	Battle Ground would require a new training facility. Increasing call volume, particularly in east county, would require additional resources for CCFD No. 5 to serve the Vancouver UGA, including a new station with fire and EMS equipment.
Police Protection	New facilities would be needed to mitigate the impacts of projected demands for services in most new UGAs. A new jail facility would be necessary within the next 6 years for the Clark County Sheriff. A new La Center facility could be required to serve development concentrated at the I-5 Junction; a new city hall would house expanded police department in the next 5-10 years. Ridgefield anticipates a need for a new public safety facility (combining fire and police protection) to serve proposed development in the Ridgefield Junction area. Funding this mitigation would be difficult. An additional mitigation measure would be developing a mechanism to delay growth in certain areas until funding is available.
Public Schools	Several school districts have adopted school impact fees on new development. Local comprehensive plan policies address the siting of new school facilities. Balancing land uses within school districts helps to ensure adequate tax base for schools. An additional mitigation measure would be developing a mechanism to delay growth in certain areas until funding is available.
Parks and Recreation	Clark County and its cities have established policies for the provision of parks and open space to accommodate new development and enhance the quality of life in urban areas. Mitigation in the form of additional parks would be needed to maintain levels of service in Battle Ground, Camas, Ridgefield, Vancouver, and Washougal. Vancouver-Clark Parks would have a parks deficit by 2025 of 606 acres. Funding this mitigation would be difficult. An additional mitigation measure would be developing a mechanism to delay growth in certain areas until funding is available.
Libraries	Fort Vancouver Regional Library District provides this service, although Camas has its own library. Mitigation measures to meet additional demand for library services consists of upgrading old or establishing new facilities where needed, purchase of materials, and increasing staff and other services. Local jurisdictions can provide mitigation for impacts from growth in form of assistance in locating facilities, assistance with entitlements, and coordination with programs and planning.
General Government	New and expanded facilities for several jurisdictions, as noted in the Summary of Impacts table, would need to be funded to maintain services for the new population.

Element	Mitigation Measures
Solid Waste	No mitigation needed.
Sanitary Sewer	Concurrency requirements extend to sanitary sewer provision. Each jurisdiction has established policies for providing sanitary sewer service concurrent with new development.
Public Water Systems	Concurrency requirements extend to water provision. Each jurisdiction has established policies for the provision of public water concurrent with new development.

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PROJECT DESCRIPTION

I. What is being proposed?

As discussed above in the Summary section, Clark County and the cities and towns of Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal, and Yacolt are proposing to revise their Comprehensive Growth Management Plans (the GMA plans) to comply with the requirements of the GMA. The revisions focus on changes to the Urban Growth Areas (UGAs) to accommodate projected growth between the adoption of the last plan and the next 20 years, 2004-2024.

In this FEIS, Clark County is considering the potential environmental impacts of a No Action Alternative and a Preferred Alternative. The No Action Alternative, or Alternative 1, would accommodate growth within existing UGAs through increased densities in some areas, and development of underdeveloped and vacant land. The Preferred Alternative would accommodate growth in current and expanded UGAs.

The FEIS analysis is intended to disclose the potential impacts on the environment from both the No Action and the Preferred Alternative. The EIS can be used to help decision makers adopt a final alternative that would form the basis of a new 2007 Plan.

A. What is the purpose of the proposal?

The County's objective for the new 2007 Plan is to accommodate the projected demand for jobs and housing by 2024 based on new growth assumptions, to implement land use patterns that reflect local principles and values (see Table 1 and pages 22-23 of the DEIS), and to reduce impacts on the environment, schools, and the cost of infrastructure by fine-tuning the location of expansion areas.

B. What is the schedule for reviewing the proposal?

To complete the planning for Clark County in conformance with the GMA (described above), the following schedule in Table 4 has been adopted by the County.

Table 4. *Schedule for Updating the Clark County Comprehensive Plan*

April 2005	Initiate BOCC workshops examining 2004 Plan
May – December 2005	BOCC decisions on fundamental assumptions and policy issues.
September -October 2005	Scoping Open Houses and Published Scoping Notice
March 2006	BOCC decisions on Alternatives to be evaluated
August 25, 2006	Distribute Draft Environmental Impact Statement
October 2, 2006	Deadline for comments on DEIS (38 days)
October 24, 2006	BOCC Decision on Preferred Alternative
May 4, 2007	Issuance of Final EIS
June 2007	Public hearings on draft Clark County Comprehensive Plan and FEIS
June 2007	Adoption/Implementation of the Clark County Comprehensive Plan

II. What comprehensive plan alternatives are being considered?

There are two alternatives discussed in this FEIS. Alternative 1 is the No Action Alternative required by SEPA to be evaluated in any EIS. The Preferred Alternative would expand the UGAs.

I. Alternative 1 (No Action) Alternative

5 Alternative 1, the No Action Alternative (Figure 2), maintains the UGA boundaries adopted in the 2004
Plan, and assumes the level and type of growth consistent with the new assumptions of 2.0 average
population growth, 2.59 pph, and a 5 percent redevelopment factor for residential land. Employment and
population growth would need to be accommodated by redevelopment of under-developed land, and by
10 development on vacant land within existing UGAs and rural areas. Like the Preferred Alternative which
uses the same assumptions, the planned population growth is 173,372 people (66,939 households) and
138,312 jobs.

The vacant and buildable land model predicts that current city UGAs could accommodate 122,258 people
(47,204 dwelling units) and 139,484 jobs. That means that 19,735 dwelling units could not be
15 accommodated with existing zoning but that the land supply could accommodate more than the planned
number of jobs. If the UGA boundaries are not changed, but population and jobs are still to be
accommodated (as required by the GMA), residential land uses in the urban areas would need to be
intensified in some areas.

Table 5 shows the capacities of each UGA and how population and jobs were allocated. The dwelling
units and jobs were assigned either as a result of input from city staff from each city where they would
20 foresee additional capacity for new housing and jobs (referred to as “city overrides”), or by checking the
county’s inventory of vacant and buildable land for opportunities to achieve greater densities. The new
dwelling units or jobs were assigned to 314 Traffic Analysis Zones (TAZs⁵) across the cities for purposes
of evaluating traffic impacts. (Table 20 in the Land Use analysis contains a list of all the TAZs and the
population and jobs allocations for both the No Action and Preferred Alternatives.)

25 The TAZs also provide an opportunity to see how much more growth (above what is already planned)
would need to be accommodated in specific geographical areas. Of the 314 TAZs, 257 were assigned
additional jobs or housing equal to less than 15 percent of the growth already planned for those areas by
2024. For example, TAZ #459 in Battle Ground covers 169 acres between Main Street and
30 (approximately) 10th Avenue, and between N Parkway and NE Grace Avenue. In 2004, there were 534
housing units. The current Battle Ground comprehensive plan for TAZ #459 would see a total of 596
dwelling units by 2024, and with the additional allocations under Alternative 1, 646 units (50 additional),
for an increase of 8 percent. Again, over much of the city UGAs, the overrides would increase jobs and
housing by less than 15 percent of what is already planned for 2024.

35 The remaining 57 TAZs were allocated additional jobs and/or housing that would augment planned
growth to 2024 by over 15 percent, with most showing a 15 percent to 60 percent increase over the
planned growth to 2024. A description of the allocations is provided below, by city UGA.

⁵ Transportation analysis zones (TAZs) are subdivisions of geographical areas that are delineated for land use and travel analysis purposes. About 650 TAZs cover the entire county in the Regional Transportation Council’s regional model.

Table 5. Alternative 1 Population and Job Allocations

UGA	2004 Population	Percent of Total UGA	Growth Capacity Total	2024 Population Capacity	Percent of Total UGA	Population Allocation	Job Allocation
Battle Ground	15,152	3.9%	20,324	35,476	7.7%	2,946	1,905
Camas	18,205	4.6%	10,927	29,132	6.3%	2,419	1,564
La Center	2,363	0.6%	1,520	3,883	0.8%	322	209
Ridgefield	2,651	0.7%	11,023	13,674	3.0%	1,135	734
Vancouver	277,242	70.8%	83,193	360,435	77.8%	29,928	19,352
Washougal	11,248	2.9%	7,423	18,671	4.0%	1,550	1,002
Woodland	107	0.0%	0	107	0.0%	9	6
Yacolt	1,262	0.3%	505	1,767	0.4%	147	95
Rural	63,444	16.2%	19,262	82,706	n/a	n/a	n/a
Total	391,674	100.0%	154,178	545,852	100.0%	38,457	24,867

Source: Clark County Community Planning

5 For Battle Ground, Camas, La Center, and Ridgefield, the TAZs in which there were vacant and buildable lands received additional households and jobs until the allocation numbers were reached. The residential density increase for these cities could be considered equivalent to townhouse or medium density residential development occurring on lands currently designated for low density residential uses, where lots are currently undeveloped or underdeveloped.

10 In Battle Ground, most of the housing allocation was in the existing unincorporated (county) areas of the UGA, particularly east of NE/SE Grace Avenue and west of SR 503 in the northwest corner of the UGA. Three TAZs in Battle Ground where housing allocations are highest in terms of growth beyond the current 2024 plans would have about 500 dwelling units beyond the current plans for about 2,400 dwelling units by 2024. The job allocations were mostly in the existing UGA south of NE 199th Street, and would increase planned jobs by about 46 percent.

15 In Camas, most of the housing allocation was to the TAZs within city limits and east of NW Parker Street, which would add about 600 households to east side of the city, beyond the approximately 4,300 households planned for 2024. Most of the employment allocation was to the area north of NW Lake Road, north of NW 38th Avenue (east of Parker) and to the southeast corner of the city, centered around SR 14.

20 In La Center, most of the more intense increase in housing allocation was to the existing UGA between downtown and the northern boundary of the UGA, with 80 units and 29 jobs added.

In Ridgefield, most of the more intense increase in housing allocation—about 60 dwelling units—was allocated to the total growth planned for two TAZs inside city limits, west of S 45th Avenue and east of 9th Avenue south of Pioneer Street. Additional allocations for jobs are along I-5 inside city limits, and also to employment areas along Hillhurst Road and in the new UGA east of NE 10th Avenue.

25 For the Vancouver UGA, all city-proposed overrides were included, such as city-initiated redevelopment plans for specific subareas and private developer proposals. These are shown in Table 20. The highest planned increases in housing and jobs would be in the implementation of the Vancouver Central City Vision subarea plan and redevelopment in the Columbia Business Center, Southwest Washington Medical Center and Barberton areas. City staff have indicated that their overrides would provide 12,369

additional dwelling units and 34,225 new jobs- Vancouver would get the majority of the additional population and employment leaving the other cities with relatively little growth to be realized.

5 In Washougal, household and job growth is focused in the downtown and the Riverwalk site (that is, within existing incorporated areas) where the City expects redevelopment at significantly higher densities than currently reflected in the zoning or existing development. Six areas (TAZs) would be affected, four south of Evergreen way to the Columbia River and two north of Evergreen Way between the western city limit and 32nd Street south of the Washougal river. Most of the intensification of housing would be south of Evergreen way, and represent from 29 percent to 99 percent more growth than would be predicted by the VBLM. The two TAZs north of Evergreen, and the four south of Evergreen, would see the number of jobs increased by 15 to 56 percent above what would be predicted by the VBLM.

Yacolt did not receive any allocations because there is insufficient sewer capacity for additional growth.

15 As a result of the allocations and overrides, the No Action Alternative would provide urban capacity for 69,093 dwelling units or 178,951 people. This exceeds planned growth by 2,154 dwelling units or 5,579 people but falls short of providing a 10 percent residential market factor. The No Action Alternative would provide land enough for 139,484 new jobs, which exceeds the target of new jobs by about 1,100. The new jobs-to-population ratio, based on capacity for growth, would be 1:1.45.

Alternative 1 would provide capacity for a total population growth (urban and rural) of 202,377 and jobs growth of 139,484. The level and amount of services that must be planned for are for that maximum population and jobs that could be accommodated, not the planned population (173,312) or jobs (138,312).

20 **2. Preferred Alternative, Preferred Urban Growth Area Map**

25 The Preferred Urban Growth Area Map (Preferred Alternative) (Figure 3) expands the UGAs. Beginning with the planning assumptions adopted by the BOCC, staff calculated the needed acreage of residential, commercial, and industrial land. Then the location of expansion areas was determined by staff, the BOCC, cities' requests, and public input. The urban growth areas would be expanded 12,063 acres. This means that the roughly 173,000 new residents in urban areas would be accommodated both in the current UGAs and in the expanded UGAs. Rural areas are planned to accommodate about 10 percent of planned growth, or 19,000 people.

30 Given the planning assumptions for growth rate and jobs/acre, the 12,063 acres represents five percent and six percent more than the minimum amount of land needed to accommodate the population and job growth projected to 2024, respectively, under the assumptions described in the DEIS. This includes an additional market factor for residential land, added to the residential land supply to ensure market flexibility. The Preferred Alternative would expand the UGAs of all cities except Yacolt and Woodland. The County's vacant and buildable land model estimates that the current and expanded UGAs could accommodate 67,658 dwelling units (175,234 people) and 132,893 jobs. The actual capacity for population growth is slightly more than what is needed to accommodate the planned growth. As in the No Action Alternative, the cities had additional input into where they planned to change some assumptions about future densities and zoning inside the UGAs. With that input, more dwelling units and jobs could be accommodated than the County's lands model would predict. With city inputs, there would be room for 182,160 (70,332 additional dwelling units). However, the capacity for only 132,893 jobs compared to the target growth of 138,312 would leave a shortage of 5,419 jobs. The new jobs-to-population ratio, based on capacity for growth, would be 1:1.51.

As a result of the allocations and overrides, the Preferred Alternative would provide urban capacity for 70,332 dwelling units or 182,160 people. This exceeds planned growth by 3,393 dwelling units or 8,788 people but falls of providing a 10 residential market factor. The Preferred Alternative would provide land enough for 132,893 new jobs, which is short of target of new jobs by about 5,400, and less than the capacity under the No Action Alternative. The new jobs-to-population ratio, based on capacity for growth, would be 1:1.51.

The Preferred Alternative would provide capacity for a total population growth (urban and rural) of 201,292. This is less than under the No Action Alternative because the No Action Alternative assumed greater amounts of redevelopment in existing urban areas and the Preferred Alternative projects less rural capacity as well. The level and amount of services that must be planned for are for that maximum population and jobs that could be accommodated, not the planned population (173,372) or jobs (138,312).

Impacts on the natural environment consist primarily in bringing urban levels of development to land that is currently outside UGAs. Building urban types of development in expanded UGAs would result in new impacts to the environment in those (currently rural) areas, but might result in little or no upzoning in the existing UGAs than under the No Action Alternative. Therefore, growth under the Preferred Alternative may have more flexibility in the market place and be less likely to create problems of incompatibility that upzoning in established neighborhoods might create.

The Battle Ground UGA would expand by 1,539 acres along the west and north limits of the existing UGA to include a variety of low to high density residential, mixed uses, campus employment and commercial uses. A smaller industrial use expansion on the south boundary that was part of Alternative 2 in the DEIS has been changed to Industrial and Urban reserves. The Preferred Alternative for Battle Ground is about 30 acres larger than that proposed in the DEIS under Alternative 2.

The Camas UGA would expand north of Goodwin Road and Lacamas Lake by 2,077 acres. The Preferred Alternative for Camas is nearly double the expansion proposed under Alternative 2 because it adds some areas that were proposed under Alternative 3. The land uses added would be low density residential (1,000 acres), mixed uses (343 acres), employment (331 acres) and open space (403 acres).

The La Center UGA would expand primarily to the west and southwest, although some low-density residential land is proposed contiguous to each side of the city limits. Industrial, commercial and some high density residential is proposed at the I-5/La Center Junction. The Junction would bracket a large area (approximately 400 acres) of already-developed rural residential land that has environmental constraints. Consequently, that low density residential area would have a Comprehensive Plan designation of Parks/Open Space and would retain its rural-residential density. Total La Center UGA expansion would be 1,687 acres.

The Ridgefield UGA would expand primarily south and east along the existing UGA or city boundary for low-density residential uses, as well as west of I-5 for medium density and employment center uses. A new area for industrial uses would be created east of N 65th Avenue and a new area of medium density residential would be created north of the city limits roughly along an alignment with NW 279th Avenue. The total expansion would be 1,765 acres.

The Vancouver UGA would expand at nine locations adjacent to the existing UGA. The UGA would expand along the north boundary of the existing UGA between NW 11th Avenue to NE 72nd Avenue for residential low-density and industrial uses. Two new large areas of an urban reserve overlay would be added north of the new UGAs. The UGA would be expanded northward around the junction with SR 503. Urban low density residential areas would be added west of the Fairgrounds; along NE 179th Avenue

east of NE 29th Avenue; east of NE 50th north of NE 119th; and in the Fifth Plain Creek Area. A large industrial area with adjacent industrial reserve to the west would be centered around SR 503 north of 119th Avenue. The total expansion would be 4,062 acres.

5 The Washougal UGA would expand to the northwest and northeast corners of the existing UGA and city limits for a mix of residential low-density, medium density, and high density uses. A large area of employment center/business park would be added east of SE Lawton and SE Jennings road. Total expansion would be 933 acres.

10 Yacolt would not expand its UGA due to the constraints of its sanitary sewer system. The town has identified urban reserve areas outside its UGA that would not change zoning or allow urbanization but would identify the City's intended locations for future urban expansion.

The Preferred Alternative is based on Alternatives 2 and 3 in the DEIS, from additional BOCC and staff input, from public requests generated by a public notice requesting consideration of specific properties for inclusion in the UGAs, and new boundary expansion requests from the cities.

B. Are the assumptions behind the No Action and Preferred alternatives different?

15 It is important to note that both alternatives use the same planning assumptions. The assumptions are listed on pages 1-2 of this FEIS, and are based on the principles and values listed in Table 1.

III. How has the public been involved in the growth management update?

20 The public involvement program for the Plan update began with news releases advising residents of the BOCC's series of work sessions to review the 2004 Plan. Local cities have been involved in contributing requests for changes to their UGAs and in the case of Ridgefield and La Center, pursuing separate SEPA review of their revised comprehensive plans.

Opportunities for public input and the program to inform Clark County residents have consisted of the following:

- BOCC work sessions

25 April 19, 2005 - Review Planning Assumptions
 April 26, 2005 - Vacant & Buildable Lands Model
 May 3, 2005 - Capital Facilities Planning
 May 10, 2005 - Review Planning Assumptions
 May 17, 2005 - Review Planning Assumptions
 30 May 25, 2005 - Focused Public Investment, Review Planning Assumptions
 May 31, 2005 - Review Planning Assumptions
 June 7, 2005 - Revenue Forecasting & Plan Monitoring
 June 14, 2005 - Review City Requests
 June 28, 2005 - Review Property Owner Requests, Review Planning Assumptions
 35 July 5, 2005 - Review Property Owner Requests
 July 6, 2005 - Review Property Owner Requests
 August 16, 2005 - Maximum Study Area Update
 September 6, 2005 - Maximum Study Area Update and Mapping

- Media coverage—news releases, stories, and public notification of BOCC work sessions

- In-depth information on Clark County’s Growth Management Plan web site
- Dissemination of information to a mailing list of interested citizens
- October 18, 2005 countywide public scoping meeting, attended by 20 people. The meeting included staff presentations, a question and answer session, and an open house format, with informational displays, maps, and handouts. Staff was present to respond to questions and elaborate on the available materials. No alternatives were presented at that time, but a “maximum impact area” illustrated the potential areas that could be included in the action alternatives. The public provided input on areas of the environment that should be evaluated in the DEIS. A copy of the scoping comments can be found on the County’s Growth Management website.
- Public open houses were held on February 9 and 23, 2006 to present the alternatives and to give the public a progress report on the update of the comprehensive plan. A copy of the comments is available on the Clark County Growth Management Plan update webpage.
- County staff manned a booth for the entire 10-day run of the Clark County Fair in August 2006.
- The DEIS was released on August 25, 2006. Open houses on the DEIS were held September 11, 12 and 13, 2006.
- Public hearing on the DEIS in September 2006.
- The BOCC decided on the Preferred Alternative in a work session on October 24, 2006. Joint public hearings with the BOCC and the Planning Commission were held on the Preferred Alternative map on November 23 and 24, 2006.
- Numerous work sessions on updates to comprehensive plan policies and text were held in starting in January 2007 with both the Planning Commission and the BOCC.
- The FEIS on the comprehensive plan update was released May 4, 2007.
- Open houses are planned for May 16, 22, and 23, 2007 to allow Clark County residents to comment on elements of the proposed comprehensive plan update.
- The BOCC and Planning Commission are planning joint public hearings on the comprehensive plan in June 2007.

IV. What must growth management plans contain?

A. Are there state legal requirements?

Counties and cities planning under the GMA must review their comprehensive plans and development regulations at least once every seven years (the most recent deadline for Clark County was December 1, 2004). Clark County is also required to review and evaluate the UGAs at least once every 10 years to provide a sufficient land supply for 20 years of growth in population and employment, as well as the infrastructure—such as roads, schools, and parks—to support this growth. The GMA does not prohibit

UGA expansions earlier than the ten- and seven-year cycles, although amendments are generally limited to no more than once yearly. For more information on state legal requirements, see Section IV of the Project Description in the DEIS.

B. What are the local requirements for Growth Management Plans?

- 5 Countywide Planning Policies were revised during the 2004 Plan update. Changes since the 2004 plan was adopted include:
- the addition of a “Schools Element” to the comprehensive plan, including new County-wide Planning Policies, and
 - after consultation with the cities, one proposed change to the County’s “no net loss of industrial
- 10 lands” policy.

WHAT ARE THE POTENTIAL IMPACTS OF THE GROWTH MANAGEMENT ALTERNATIVES?

I. What does this section evaluate and why?

5 Since the county will continue to grow, it is impossible to entirely avoid the adverse impacts associated with growth. Either making no changes to the existing comprehensive plans and UGAs of Clark County and the cities or making some changes (the Preferred Alternative) entails potential impacts. These impacts would occur across many aspects of the environment. The FEIS evaluates the potential environmental impacts of making no changes to existing comprehensive plans and UGAs (the No Action alternative) and making the changes proposed by the Preferred Alternative. As noted in previous sections, SEPA requires that actions proposed by a public agency that could have a significant environmental impact must evaluate those potential impacts and available mitigation for the impacts before a decision is made or the action is taken.

II. How are the evaluations made?

15 SEPA lists major elements of the environment that should be evaluated, depending on their applicability to a proposed action. Each of the major elements of the environment listed in SEPA has been analyzed in the DEIS and FEIS. The difference in impacts between the alternatives is based primarily on the location and size of UGAs proposed to accommodate the residential, commercial, and industrial growth.

A. What is an “impact”?

20 An impact is the consequence of the proposed action or program. In the context of SEPA, the significant adverse impacts or consequences of a proposed project must be discussed. Beneficial impacts or adverse insignificant impacts may be discussed, but are not required. Impacts can be temporary or permanent, direct or indirect, and cumulative.

B. How are impacts evaluated for their significance?

25 In the case of the natural environment, determining the relative impacts depended on knowing where the natural resources are and how much of them would be impacted by each proposed expansion area. Generally, where impacts on natural resources or the built environment can be quantified, the analysis relied on Geographic Information System (GIS) mapping to establish the location and size of the natural resources, such as soils, streams, wetlands, shorelines, or and resource lands and how the proposed changes might affect the resource by converting rural land to urban land. More detail about the methodology for determining impacts can be found in the DEIS.

30 It is important to note that the impacts analysis looks at the overall capacity of the proposed UGA expansions rather than just the housing and jobs targets. The BOCC established population and jobs targets as policy decisions. The cities and the County also made estimates of the additional growth that could be accommodated by redevelopment and infill, as shown in Table 20 for both alternatives. The Preferred Alternative adds more land for a residential market “cushion” against a potential short supply of land, while 35 the No Action alternative adds capacity through redevelopment of existing land, so the actual capacity of each alternative is different from the planned growth which is identical for both alternatives.

Here is an example. If a city decides it would accommodate 500 more households and decides it wants those households to live at a density of five units per acre, it would need 100 more acres of land for that growth. However, if it also decides that infrastructure takes 25 percent of developed land and that a 50 percent market factor makes the real estate market more fluid, then it would need to add 75 more acres to a proposed UGA expansion. Now the expansion is 175 acres and the city has to plan to provide services to the entire 175 acres. If full build-out were to occur, even with 25 percent in infrastructure, the impact is that 131 acres (1.75 x 0.75) have houses, and at five per acre, that is 655 households, not 500 and the impacts from that development are 175 acres of build-out, not 100. Therefore, assessing impacts must be on the total capacity of the land, not just the planned-for growth target. Unlike the 2003 DEIS, the assessment of impacts based on the total geographical expansion of UGAs more closely resembles the anticipated build-out.

Where impacts tend to increase with consumption of services by individuals, greater impacts may result from the No Action Alternative. Where the impacts tend to increase with the increase in consumption of land resources, greater impacts may tend to occur under the Preferred Alternative. It is important to note that the County made a policy decision to accept only city overrides related to adopted plans or those pending adoption. While the adoption of the Preferred Alternative could result in less market pressure to redevelop land within existing UGAs, this would not preclude the cities from implementing the plans put forward under the No Action alternative. Adoption of the Preferred Alternative should not imply that intensification of uses as suggested by the cities could not occur in the future.

C. What is “mitigation”?

Mitigation is defined as avoiding, minimizing, rectifying (repairing), reducing, eliminating or monitoring environmental impacts. Mitigation can consist of measures mandated by existing or proposed regulations at the local, state, and federal level. A lead agency may use its Substantive Authority under SEPA to require additional mitigation measures where appropriate to reduce impacts. An EIS should identify possible mitigation measures that would reduce or eliminate the adverse environmental impacts of a proposal. If the technical feasibility or economic practicality is uncertain, the mitigation measure may still be discussed but discussion of the uncertainties should be included. The EIS should also clearly identify the mitigation measures as either mandatory or as potential so reviewer may better assess the impacts of the proposal.

Mitigation measures must be reasonable and capable of being accomplished and should match the extent of the identified adverse impacts of the proposal.

III. How is the FEIS organized?

This FEIS for the growth management update consists of three volumes:

- Volume 1: Summary and Analysis of the Preferred Alternative
- Volume 2: Comments on the DEIS with Responses
- Volume 3: Revised DEIS

Volume 1 consists of a summary of the analysis of the Preferred Alternative and the body of the FEIS analysis of the No Action and Preferred Alternatives. The body of the FEIS (this section) summarizes existing conditions, discloses the anticipated impacts of the No Action and Preferred Alternatives, and summarizes available mitigation for the elements of the environment. Because the Technical Document of the DEIS (Volume 3) discloses the existing conditions and available mitigation in detail, only summaries are presented in this FEIS.

The elements of the environment discussed in the EIS are grouped under the following headings:

- Earth
- Air
- Water
- 5 • Plants and Animals
- Energy Conservation
- Scenic Resources
- Noise
- Land Use
- 10 • Economy
- Historic and cultural resources
- Transportation
- Public Facilities and Utilities

For each of these elements, the following questions are posed:

- 15 1. How can growth management plans potentially affect this element of the environment?
2. How do the potential impacts between the alternatives compare?
3. Do the growth management plans and development regulations provide mitigation for the potential impacts?

20 The Technical Document attached to the DEIS contains a list of changes to the GMA since 2003, detailed analysis of the characteristics of the environment (the setting), that potential impacts of alternatives first analyzed in the DEIS, and a discussion of the regulations that form the basic mitigation for the potential impacts. The Technical Document also contains unavoidable adverse impacts, irretrievable commitments of resources as a result of growth alternatives, and tables demonstrating how each cities' and the county's Proposed Plan comply with Countywide Planning Policies and the requirements of the GMA.

25

EVALUATION OF POTENTIAL IMPACTS ON THE ENVIRONMENT

I. Earth

A. How might growth management plans affect the soils, geology, and topography of Clark County?

Soil, geological, and topographical characteristics are important in the management of urban development because they may limit the ability of land to support the use it is zoned for, if those soils are weak, unstable, or hazardous due to tendencies to landslides or earthquakes. Poorly draining soils are unsuitable for septic systems, constraining rural development. Geological hazard areas are those that, because of their susceptibility to erosion, sliding, earthquakes, or other geological events, are not suited to siting residential, commercial, or industrial development. Potential geologic hazards in Clark County include landslides—often in steep-sloped areas around stream corridors—ground settling, flooding related to volcanic activity, and earthquakes. In addition, the GMA requires local jurisdictions to identify and protect agricultural and timber lands of long-term commercial significance. Most of the western half of Clark County has soils suitable for agriculture and nearly the entire County has either prime or good forest soils. Please refer to the corresponding section of the Technical Document of the DEIS for a discussion of existing conditions within Clark County as they relate to soils, geology, and topography (Revised DEIS, page 70 et. seq).

B. How do the potential impacts between the alternatives compare?

Tables 6 through 9 compare the impacts between the No Action and Preferred Alternative with respect to soils, geology and topography. Figures 12, 13, and 14 are updated soils maps found at the end of this document.

I. Soils

Alternative 1 (No Action)

Alternative 1 maintains the UGA boundaries adopted in the 2004 Plan. All of the population growth in the county would occur on vacant and underdeveloped lots within the existing UGAs. Existing UGAs contain 22,109 acres of land with severe limitations to foundations and another 33,156 acres of land with moderate limitations (Table 6). Much of the existing Vancouver urban area, with the exception of land along the Columbia River, has soils that place slight limitations on the construction of foundations.

All new urban development would occur within existing UGAs and would be served by existing municipal sewer systems or their extensions. However, because existing zoning would not provide sufficient land for projected growth, additional increased densities of housing and jobs would occur within existing UGAs. Most of the additional density would be in Vancouver, Battle Ground, and Camas. Medium and high density development would require additional engineering and costs to mitigate for soils unsuitable for foundations.

Less prime agricultural and forest land (51,856 and 38,604 acres respectively) would be urbanized than under the Preferred Alternative (58,910 and 46,374 acres, respectively) (Table 8). Therefore, because

Alternative 1 accommodates new growth within existing UGAs, it would preserve the more prime agricultural and forest lands as compared to the Preferred Alternative.

Preferred Alternative

5 Under the Preferred Alternative, the UGAs for all cities except Yacolt would expand, adding 12,063 acres of rural land to the approximately 81,000 acres of urban land in existing UGAs. Under the Preferred Alternative, 26,053 acres would have soils with severe limitations (3,944 acres more than Alternative 1) while 40,479 acres would have moderate limitations (7,323 acres more than Alternative 1). Of all UGAs, the new UGA for Camas would have the most land with severe limitations (964 acres) (Table 6). Battle Ground’s UGA expansion to the west includes mostly land that places moderate (1,224 acres) limitations on the construction of building foundations. Camas’s new UGA expansion to the northeast includes predominately land with severe and moderate soil limitations to foundations. The UGA for La Center expands partially to the east, which includes mostly moderate soil limitations but mostly to the southwest on land with more severe soil limitations .However, the amount of land with moderate limitations about equals land with severe limitations (850 to 842 acres, respectively). Ridgefield’s UGA north and south expansion includes land along the I-5 axis that ranges from slight (5 acres) to severe (634 acres) soil limitations. Under this Alternative, Washougal’s expanded UGA has about half its area with moderate (494 acres) and a little less than half with severe (369 acres) soil limitations to foundations.

20 In general, all UGA expansions under the Preferred Alternative are located in areas that limit the use of septic sewer systems (Table 7). In terms of absolute acreage, expanding the Camas and Battle Ground UGA would have the highest impacts, each adding about 1,500 acres of severe soil limitations to septic sewer systems.

25 Table 8 shows impacts of the alternative on preservation of resource soils. Under this alternative, 58,910 acres would have prime agricultural soils (7,054 more acres than Alternative 1) while 46,374 acres would have prime forest soils (7,770 acres more than Alternative 1). Impacts to prime agricultural and forest soils would occur primarily on land between Vancouver and Camas.

Table 6. Soils with Limitations to Foundations, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing urban areas	Total Acres by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Severe limitations	22,109	3,944 +22,109	316	964	842	634	819	369
Moderate limitations	33,156	7,323 +33,156	1,224	691	850	1,127	2,937	494
Slight limitations	25,323	851 +25,323	0	480	0	5	299	67

Source: USDA Soil Conservation Service – Modified by Washington State DNR

30

Table 7. Soils with Limitations to Septic Sewer Systems, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing urban areas	Total Acres by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Severe limitations	29,610	6,535 +29,610	1,425	1,536	859	634	1,264	817
Moderate limitations	27,762	4,812 +27,762	115	134	833	1,127	2,491	112
Slight limitations	23,186	769 +23,186	0	465	0	5	299	0

Source: USDA Soil Conservation Service – Modified by Washington State DNR

Table 8. Prime Agricultural and Forest Soils, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total Acres by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Prime Agricultural Soils	51,856	7,054 +51,856	693 202*	1,079 571*	807 507*	1,000 547*	3,104 1,080*	371 192*
Prime Forest Soils	38,604	7,770 +38,604	604	929	1,232	1,498	2,877	631

5 Source: USDA Soil Conservation Service – Modified by Washington State DNR. *acres zoned Agriculture

Table 9. Geological Hazard Areas, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total Land Added to UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Earthquake Hazard Areas:*								
Zone A (least hazard)	0	0	0	0	0	0	0	0
Zone B	6,139	928 +6,139	137	450	9	0	0	332
Zone C	55,614	8,613 +55,614	1,396	1,651	1,253	1,708	2,026	579
Zone D	18,703	2,333 +18,703	0	0	255	59	1,998	21
Zone E (greater hazard)	640	163 +640	0	0	163	0	0	0
Water	563	309 +563	0	272	37	0	0	0
Peat	6930	72 +6930	6	26	0	40	0	0
Steep Slope Areas (≥40%)	947	1,091 +947	13	322	85	92	472	107
Landslide Hazard Areas	3,631	766 +3,631	20	23	314	227	107	75
Erosion Hazard Area	3,900	963 +3,900	9	156	356	232	88	122

Source: Clark County Department of Assessment and GIS, 2006

*For purpose of summarizing site class data for all UGAs, site class data for B-C was collapsed into site B; C-D into C; and D-E into D. for the City of Vancouver data set as they have adopted separate classifications for the NEHRP categories in their geologic hazard ordinance that are different than Clark County's. Zone F of the NEHRP is the highest hazard rating, but no Zone F land is found within Clark County.

2. Geology and Topography

Alternative 1 (No Action)

10 There are 640 acres in the highest earthquake hazard zone (E) and over 18,700 acres in the second most hazardous earthquake zone (D), 947 acres of steep slopes, 3,631 acres of landslide hazard areas, and 3,900 acres of erosion hazard areas within the current UGAs (Table 9). Under Alternative 1, all growth to 2024 would be accommodated within existing UGAs. Because some of the projected growth could not be accommodated under the current zoning, there would be additional intensification of residential and employment densities in some areas of existing UGAs. This could add development pressure on constrained sites, particularly in low-density areas where it might be difficult to avoid building on hazardous land. However, on larger sites medium and high density districts could also provide more flexibility in working around site constraints and avoiding impacts to protected hazard areas.

15

Preferred Alternative

5 The Preferred Alternative would add 163 acres in Zone E and 2,333 acres in Zone D for a total addition of 2,496 acres of land within the most hazardous earthquake-prone zones. Most land within the new UGAs for the Preferred Alternative—8,613 acres out of nearly 12,063—is within the moderate earthquake hazard area of Zone C. About 7 percent would be within the second-least hazardous Zone B. There is no land found within the least-hazardous earthquake zone (A). The amount of land in earthquake hazard Zone D in the Vancouver UGA is markedly higher than in other UGAs.

10 The Preferred Alternative adds 1,097 acres of steep slopes to the 947 acres in existing UGAs and 766 acres of landslide prone areas to the 3,631 acres in the current UGAs, as shown in Table 9. The majority of steep or unstable slopes are identified in the Vancouver, Camas, and Washougal UGAs. Few steep slopes are located in the Battle Ground UGA. Areas of potential instability include land along parts of Salmon Creek and its tributaries, Gee Creek, the Columbia River (within an area currently used for surface mining), and Lacamas Lake.

15 The Preferred Alternative adds 963 acres of erosion hazard areas to the 3,900 acres in existing UGAs. There are severe erosion hazard areas in UGAs for all cities within Clark County under the Preferred Alternative. The majority of erosion hazard area is found in the UGAs of La Center (356 acres), Ridgefield (232 acres), and Camas (156 acres), while the least amount of erosion hazard areas would be added to the Battle Ground UGA (approximately 9 acres).

20 C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts?

25 Mitigation for impacts of each alternative on soils would involve protecting soils that support agriculture and forest uses and limiting or preventing development on unsuitable soils. Protection of lands that have soils suitable for agriculture and forest uses is primarily the County's responsibility through protection of resource lands. Drawing UGAs to avoid lands with high quality soils for agriculture and forest uses is the primary method of protecting those areas. City plans and ordinances do not generally deal with soils in terms of resource lands, since by definition these lands are outside city limits.

30 The Preferred Alternative would involve the conversion of some resource lands (about 4,700 acres; Table 22) to urban uses in order to accommodate projected population and employment growth to 2024. The incremental loss of farmland impacts the continued viability of farming, making it more difficult to sustain the role this sector plays within the life of Clark County. It also impacts the other values that are associated with farm land, including open space and scenic values.

35 Soils that are unstable or hazardous for building upon are classified as geologically hazardous critical areas by state law, and each jurisdiction restricts, or specially regulates the design of, development in those areas through its comprehensive plan and zoning districts, critical areas ordinances, and building codes. It is possible to build on soils constrained by slope or stability, though the main mitigation is to avoid soils and topography that present severe constraints. Reviewers are directed to the Technical Document of the DEIS for a discussion of the cities' and County's plans and ordinances to control impacts on soils.

II. Air

A. How can growth management plans affect the climate and air quality in Clark County?

5 Human-induced climate change is influenced by myriad decisions about growth and urban form made at local and regional levels. The efficiency with which resources, most notably fossil fuels, are used is directly related to development patterns. Policy decisions that promote the development of a compact urban form that can reduce motorized and non-motorized emissions of greenhouse gases and preserves vegetation that captures carbon emissions can reduce contributions to global climate change.

10 Air pollutants come from a wide variety of point sources like manufacturing plants and from area sources, such as dry cleaning businesses and residential wood stoves. Vehicles are mobile sources of pollution. Motor vehicles are Clark County's largest producer of air pollution. Non-mobile sources include the small engines of lawn mowers and leaf blowers, which are predicted to form an increasing share of pollution in the future.

15 The Portland-Vancouver airshed has mobile emissions "budgets" which must not be exceeded in order for the County to remain in compliance with federal regulations and to permit the growth of new industrial uses. The Southwest Washington Regional Transportation Council (RTC) uses its regional transportation model to monitor mobile emissions and ensure they are not exceeded. The Southwest Washington Clean Air Agency (SWCAA) is responsible for monitoring and developing programs to reduce pollution from area and point sources. Under existing air quality regulations, new industry locating
20 in the county is required to use the best available control technology to reduce its own emissions.

Reviewers are directed to the Technical Document of the DEIS for a more detailed analysis of existing conditions (Revised DEIS, page 82 et seq.).

B. How do the potential impacts between the alternatives compare?

I. Climate

25 **Alternative 1 (No Action)**

30 Alternative 1 would result in a more compact urban form than the Preferred Alternative. While this alternative would have the capacity for greater population growth, it would convert less undeveloped and vegetated rural areas to urban uses, resulting in less impervious surface replacing agricultural areas, and fewer large-lot urban developments that would require the use of mowers and leaf blowers. Because existing zoning would not provide sufficient land for projected growth, there would be an intensification of densities of jobs and housing in some UGAs to mitigate a shortfall of land for about 19,735 dwelling units and 36,615 jobs. Higher densities can support and encourage the use of alternative transportation, such as walking, cycling, and public transit, all of which reduce carbon emissions.

35 Alternative 1 would conserve more farm and forest resource land and rural land than the Preferred Alternative. No additional resource or rural land would be added to urban areas. Climate change impacts are complicated to estimate because people generate greenhouse gases through the use of electricity and fuels so the more people there are, the greater the potential for carbon emissions (the individual "carbon footprint"). There is insufficient information for this FEIS to determine whether the additional capacity for population growth would be offset by the preservation of rural lands that would continue to function
40 to some degree as carbon sinks.

Preferred Alternative

5 The Preferred Alternative would include an expansion of UGAs, converting approximately 12,000 acres of rural land to urban land, land that otherwise would be able to sequester carbon. Approximately 6,100 acres of that expansion would be in low-density single family development. Therefore, the use of small engine equipment is likely to be greater under this alternative and has the potential to contribute more carbon emissions. The dispersed nature of the land use pattern would also require 20,840 more vehicle miles of travel than Alternative 1 would. This would not be a significant amount, however, in terms of contribution to climate change. There is insufficient information for this FEIS to determine whether the lower capacity for population growth under the Preferred Alternative would create a lower impact or if the conversion of rural lands would result in greater impacts than Alternative 1.

2. Air Quality

Alternative 1 (No Action)

15 Alternative 1 (No Action) is estimated to have 20,840 fewer vehicle miles traveled than the Preferred Alternative. Congestion impacts are expected to be lower as well (see transportation impacts for detailed comparison). Therefore, there would be a correspondingly lower impact on air quality.

Preferred Alternative

20 The difference between the two alternatives in terms of air quality impacts from motor vehicles is likely to be relatively small because regulations continue to require lower vehicle emissions, which has a larger impact on air quality than the difference in the VMT. Where air quality may be impacted more greatly would be in the larger number of single-family lots and the additional capacity for growth beyond the planned dwelling units. Because the Preferred Alternative would have capacity for more low-density single-family dwelling units than Alternative 1, there is greater potential for impacts from small-machine emissions such as leaf blowers and lawn mowers.

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

25 Reviewers are directed to the Technical Document of the DEIS for a discussion of the cities' and County's plans and ordinances to control impacts on air quality and climate (Revised DEIS, page 84 et seq).

30 Most of the cities' plans recognize the link between air quality, traffic congestion, and vehicle emissions, primarily in the transportation elements. The plans contain policies to encourage the use of alternative modes of transportation, such as bicycling, walking, and transit, which can reduce the total amount of air emissions. Level of service standards and transportation concurrency contribute to the reduction of congestion which can improve air quality. Many of the plans also have policies citing the importance of preserving air quality as part of their economic development strategies, since new industrial development cannot occur if the regional air quality does not meet federal standards.

III. Water

A. How can growth management plans affect surface and ground waters in Clark County?

5 Development patterns can affect the quality and quantity of surface and ground waters. Replacing floodplains, wetlands, and vegetated areas with impervious surfaces increases the risks of contaminants finding their way into streams and groundwater. New impervious surface can change surface water flows and limit recharge of aquifers from which water is withdrawn. The most common causes of surface water quality impairment are high temperatures, dissolved oxygen, and presence of fecal coliform bacteria. All of these impacts are typically due to human activities or development, such as removing vegetation during development that otherwise shades streams or adding new impervious areas from roads, roofs, and parking lots that increases the potential for stormwater runoff to carry sediment and pollutants into streams.

15 Groundwater is the source of over 95 percent of the water used by businesses and residents in Clark County. All of Clark County's lowlands can be considered an aquifer recharge area, as groundwater lies beneath virtually all populated areas and is used as drinking water. Although most of the county's groundwater is of good quality, there are areas where it has been degraded or contaminated due to human activities. Groundwater contamination often occurs where water demand and consumption are greatest.

The reader is directed to the Technical Document for a more detailed analysis of existing conditions, applicable regulations and mitigation for impacts to water resources (Revised DEIS, page 86 et seq.).

20 B. How do the potential impacts between the alternatives compare?

Tables 10 through 13 compare the impacts between the No Action and Preferred Alternative with respect to surface waters. Tables 14 through 16 compare the impacts between the No Action and Preferred Alternative with respect to ground waters. A discussion of the impacts follows the tables.

1. Surface Water

25 **Alternative 1 (No Action)**

Under Alternative 1, new urban development to 2024 would be accommodated within existing UGAs. No additional miles of streams or shoreline or floodplain areas would be added to the 194 miles of streams, 14,531 acres of flood hazard areas, and 6,418 acres of shorelines in existing UGAs. This does not mean that there would not continue to be impacts on those surface waters. Within current UGAs there would be additional capacity to accommodate 21,889 dwelling units and 1,172 jobs as a result of intensification of land uses that is not accounted for under the current vacant and buildable land use model. As areas of existing low-density UGAs would develop at medium to higher densities, there would be slightly more impervious surfaces beyond the projected 17,337 acres of impervious surface inside current UGAs. Single family detached and multi-family housing tends to have more impervious surface per acre than low-density single-family development, potentially increasing adverse impacts to surface waters through additional runoff from polluted surfaces. It will also be more expensive to retrofit facilities to protect water quality in heavily developed areas.

Preferred Alternative

5 This alternative would add about 52 miles of streams to the 194 miles in existing UGAs (Table 10), a 27 percent increase in stream miles within UGAs. Most stream miles are located along unnamed streams or tributaries (38 miles) and along Lacamas Creek (3.7 miles). The Ridgefield and La Center UGAs would include nearly 63 percent of the new stream miles added. Ridgefield would add 17 miles and La Center would add 16 miles. This alternative would add 391 acres of shoreline environment to the 6,418 acres in existing UGAs (Table 11). The Preferred Alternative would add 692 acres of floodway fringe and 168 acres of floodway to the 14,531 acres of flood hazard areas in existing UGAs.

10 As development occurs, 6,297 acres of total new impervious surface would be added to the 17,337 projected for existing UGAs (Table 12) under the Preferred Alternative, an increase of about 36 percent. Table 12 shows total impervious surface while Table 13 shows impervious surface by watershed. It is important to note that six of the 9 streams affected by this alternative are listed as not meeting the state standards for stream water quality (303[d] limited), with large acreages of watersheds of Burnt bridge Creek, Columbia Slope, East Fork Lewis River, Gee Creek, Lacamas Creek, Salmon Creek and Vancouver Lake being affected by new impervious surface. To the extent that vegetation clearing, development, and runoff from impervious surfaces contribute to the degraded quality in these streams, urbanization could make improving water quality in those streams more difficult than under Alternative 1, which would leave those 12 miles of streams within rural areas.

20 Under the Preferred Alternative, the estimated new impervious surface is expected to double the amount of existing impervious surface amount within eight watersheds: Allen Creek, Burnt Bridge Creek, Columbia Slope, Flume Creek, Gee Creek, Lacamas Creek, Lakeshore, and Vancouver Lake watersheds. The impervious coverage in the Salmon Creek watershed, Washougal River watershed, and Whipple Creek watershed expected to increase by over 130 percent. The Little Washougal River watershed will not add any new impervious surface to the 21 acres that currently exists.

25 **Table 10. Comparison of Impacts on Streams, Alternative 1 and Preferred Alternative**

	Alternative 1	Preferred Alternative						
	(No Action)	Total Stream Miles by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Miles of streams added to urban areas:	Existing UGAs							
(NO NAME)	112.9	37.4 +112.9	2.1	3.8	12.6	13.5	4.0	1.4
Allen Creek	1.0	1.0	0	0	0	0	0	0
Burnt Bridge Creek*	16.0	16.0	0	0	0	0	0	0
Breeze Creek*	0.8	0.8	0	0	0	0	0	0
Campen Creek	1.6	0.9 +1.6	0	0	0	0	0	0.9
Cold Canyon	1.6	1.6	0	0	0	0	0	0
Columbia River*	21.9	21.9	0	0	0	0	0	0
Cougar Canyon	3.4	3.4	0	0	0	0	0	0
Curtin Creek*	3.4	3.4	0	0	0	0	0	0

	Alternative 1 (No Action)	Preferred Alternative						
East Fork Lewis River	0.2	1.3 +0.2	0	0	1.3	0	0	0
Fifth Plain Creek*	0.0	0.8	0	0	0	0	0.8	0
Gee Creek*	3.9	3.5 +3.9	0	0	0	2.9	0.6	0
Gibbons Creek	0.5	0.5	0	0	0	0	0	0
Lacamas Creek*	2.8	3.7 +2.8	0	3.7	0	0	0	0
McCormick Creek*	0	2.0	0	0	1.6	0.4	0	0
Mill Creek	1.5	1.0 +1.5	0.6	0	0	0	0.4	0
Morgan Creek	0.4	0.4	0	0	0	0	0	0
Packard Creek	0	0.2	0	0	0	0	0.2	0
Salmon Creek*	9.6	9.6	0	0	0	0	0	0
Washougal River*	4.8	4.8	0	0	0	0	0	0
Weaver Creek*	4.0	4.0	0	0	0	0	0	0
Whipple Creek*	3.3	0.7 +3.3	0	0	0	0	0.7	0
Yacolt Creek	0.6	0.6	0	0	0	0	0	0
Total	194.2	51.5 +194.2	2.7	7.5	15.5	16.8	6.7	2.3

Source: Clark County Department of Assessment and GIS, 2006 * 303(d) surface water limited quality

Table 11. Floodplains and Shoreline Environments, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
Acres of floodplain and shoreline areas added to UGAs:	Existing UGAs	Total UGAs	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Floodway fringe	9,686	692 +9,686	12	480	87	66	25	21
Floodway	4,845	168 +4,845	0	20	141	0	7	0
Shorelines	6,418	391 +6,418	0	237	70	45	39	0

Source: Clark County Department of Assessment and GIS, 2006

Table 12. Total Impervious Surface, Alternative 1 and Preferred Alternative (acres)

Projected new impervious surface:*	Alternative 1 (No Action)	Preferred Alternative
In proposed new UGAs	0	6,297
In existing UGAs	17,337	17,337
Total potential new impervious surface	17,337	23,634

Source: Clark County Department of Assessment and GIS, 2006

* Impervious surface estimates based on vacant lands analysis: representing the amount of potential impervious surface that would be created if the expanded UGAs were fully developed.

5

Table 13. Impervious Surface by Watershed, Alternative 1 and Preferred Alternative (acres)

Watershed	Alternative 1 (No Action)	Preferred Alternative
	Estimated Future Impervious Surface in Existing (unincorporated) UGAs	Estimated Future Impervious Surface in New (unincorporated) UGAs
Allen Creek	603	78 +603
Burnt Bridge Creek	2,456	0 +2,456
Columbia Slope	1,718	0 +1,718
East Fork Lewis River *	679	1,218 +679
Flume Creek	241	31 +241
Gee Creek *	989	957 +989
Gibbons Creek *	257	229 +257
Lacamas Creek *	2,613	1,838 +2,613
Lakeshore	238	0 +238
Little Washougal River	0	21 +0
Salmon Creek *	4,877	1,501 +4,877
Vancouver Lake	1,360	0 +1,360
Washougal River *	611	177 +611
Whipple Creek *	695	347 +695
TOTAL	17,337	6,297 + 17,337

* 303(d) surface water limited quality

2. Groundwater

Alternative 1 (No Action)

Under the current zoning, the total potential for new impervious surface is 17,337 acres (Tables 12, 13, and 14). All population growth over the next 20 years would be accommodated within existing UGAs, but as noted under the discussion of Surface Water, above, the intensification of densities for jobs and housing is likely to augment the projected impervious surfaces. Multi-family housing tends to have more impervious surface per acre than low-density development, potentially increasing adverse impacts to ground water not quantified in this FEIS.

Although the projected population and jobs growth is the same under the No Action and the Preferred Alternative, the increased draw from groundwater would be higher under the No Action Alternative because it contains more growth capacity and demand is related to total growth rather than development patterns.

Preferred Alternative

The demand for groundwater would be lower under the Preferred Alternative than the No Action because it contains less capacity for population growth and demand is related to total growth rather than development patterns.

However, the Preferred Alternative would add a total of 6,297 acres of impervious surface to the projected 17,337 acres, an increase of 36 percent. The increase in impervious surface increases the likelihood of lower recharges of groundwater sources.

Table 14. New Impervious Surface by Land Use, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total Land Added to UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Residential	7,481	3,502 +7,481	467	398	368	811	1,190	268
Industrial	5,062	1,412 +5,062	0	0	359	40	995	18
Commercial	4,794	1,383 +4,794	427	524	48	85	29	269
Total*	17,337	6,297 +17,337	894	922	775	936	2214	555

Source: Clark County Department of Assessment and GIS, November 2006 *Some totals may differ slightly due to rounding.

Table 15. Critical Aquifer Recharge Areas, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total Acres by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Category 1	4,010	417 +4,010	81	145	34	35	122	0
Category 2	53,704	11,622 +53,704	1,459	1,991	1,665	1,732	3,942	833
Total	57,714	12,039 +57,714	1,540	2,136	1,699	1,767	4,064	833

Source: Clark County Department of Assessment and GIS, 2006

5 **Table 16. Zones of Contribution, Alternative 1 and Preferred Alternative**

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total Acres by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
1 year	4,373	9.5 +4,373	0.5	0	5	3	1	0
5 year	6,657	305 +6,657	2	6	0	85	159	53
10 year	10,776	343 +10,776	5	23	1	43	271	0
Total	21,806	658 +21,806	8	29	6	131	431	53

Source: Clark County Department of Assessment and GIS, 2006

3. Critical Aquifer Recharge Areas

Alternative 1 (No Action)

- 10 Tables 15 and 16 help evaluate the impacts of development on the recharge of aquifers that support sources of drinking water. Existing UGAs contain 4,010 acres of Category 1 CARAs and 53,704 acres of Category 2 CARAs. Existing UGAs contain 4,373 acres of land within a 1-year zone of contribution to wellhead protection areas, the most critical areas for protecting wellheads from contamination. The No Action Alternative would not change the land area within those categories.

Preferred Alternative

5 The only occurrence of additional wellhead protection areas added to UGAs would take place in the La Center UGA, which includes about 7.5 acres. The expansion of UGAs into zones of contribution to municipal wells has the potential to make protecting groundwater more difficult, and including areas of wellhead protection, makes development subject to more stringent regulations to protect water quality in the wells.

10 Table 15 shows the critical aquifer recharge areas. The Preferred Alternative would add 417 acres of Category 1 CARAs to the 4,010 acres in existing UGAs. About 11,600 acres of Category 2 CARAs would be added to the 53,704 acres in existing UGAs. The highest priority recharge areas (Category 1) are primarily located in Vancouver and Camas, while La Center and Ridgefield UGAs have the fewest Category 1 acres (excluding Washougal, which has none). The most acreage of unconsolidated sedimentary aquifers, or Category 2, is in the Camas and Vancouver UGAs and the least amount is in the Battle Ground UGA.

15 Table 16 shows 658 acres of 1- to 10-year zones of contribution would be contained with the new UGAs, adding to the 21,806 acres in Alternative 1. Vancouver and Ridgefield UGAs would add the most land containing zones of contribution, while La Center and Battle Ground UGAs would add the least. The majority of acreage (about 66 percent) of the total area of zones of contribution is in the Vancouver UGA. Increases in impervious surface and the type of development activity (residential vs. industrial, for example) will determine in large measure the need for and type of groundwater protection measures.

20 C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

25 All jurisdictions in the county have policies and ordinances that address impacts to surface waters. These impacts have been a concern of the SEPA and GMA regulations since their adoption. Clark County and the cities have adopted critical areas ordinances to comply with the GMA mandate to protect environmentally critical areas, including wetlands, riparian habitat along streams and lakes, and floodplains. Vancouver, Clark County, Camas, La Center, Ridgefield and Washougal have also adopted Shoreline Master Programs to protect shorelines.

30 Stormwater and erosion control regulations that reduce impacts to surface waters from stormwater runoff are implemented in all jurisdictions as well. Listings of threatened fish species have required all jurisdictions with fish-bearing streams to re-evaluate water quality protection and habitat restoration for those streams. Clark County is the first in the state to have a federally approved Salmon Recovery Plan. Different mitigation measures, such as green infrastructure, can help to offset impacts from impervious surfaces in
35 more intensive development, such as that proposed under Alternative 1. Green infrastructure strategies can maintain critical ecosystem services and in some cases have less impact on water quality than low intensity development lacking a green infrastructure system.

Other mitigation measures are described in the Technical Document of the DEIS.

IV. Priority Fish and Wildlife Habitat

A. How can growth management plans affect plant, fish, and wildlife habitats?

Wildlife habitat areas are designated for protection through local, state, and federal regulations. Growth can reduce the habitat that is required to sustain plants, fish, and other wildlife. The County has identified and mapped priority habitat areas as part of the GMA planning process. Under the GMA, cities and counties are required to designate five types of critical areas: wetlands, frequently flooded areas, aquifer recharge areas, geologically hazardous areas, and fish and wildlife conservation areas (RCW 36.70A.170).

The Endangered Species Act (ESA) of 1973 provides the primary framework within which Clark County and its cities must address the conservation of federally listed threatened and endangered species. The Fish and Wildlife Habitat section of the Technical Document of the DEIS names the species protected by federal regulations and, in particular, streams with salmonid habitat (Revised DEIS, page 123 et seq.).

Wetlands provide important water quality functions and wildlife habitat. The most common impact to wetlands is from filling or draining to make land available for other uses that diminish their functional value and service they provide to the larger ecosystem.

The reader is directed to the Technical Document for a more detailed analysis of existing conditions, applicable regulations and mitigation for impacts to wetland resources (Revised DEIS, page 130 et seq.).

B. How do the potential impacts between the alternatives compare?

1. Fish and Wildlife Habitat

Alternative 1 (No Action)

Alternative 1 plans no expansion of UGAs. Growth to 2024 would occur within current UGAs. Existing UGAs have 7,384 acres of priority habitat, and about the same amount in conservation areas for riparian habitats (Table 17). The existing UGAs contain 2,256 acres of non-riparian habitat. No priority habitat within rural areas would be converted to urban areas. Alternative 1 would preserve the existing agricultural, forest, and rural land outside UGAs. These lands often provide important habitat for fish and wildlife, in addition to their other environmental functions and services.

However, because projected growth cannot be accommodated under the current growth assumptions, increased densities inside cities and their existing UGAs could result in more intense redevelopment. Most of the urban areas are unlikely to have much high quality habitat, but where there are significant stream or wildlife corridors, wildlife could be subjected to more impacts from intensified development. Impacts could include more impervious surface and more human interference from noise and light, than would be currently predicted for those areas.

Because this alternative would accommodate most of the projected growth over the next 20 years without expanding into rural areas, it would have less potential impact on priority habitats and species than under the Preferred Alternative.

Preferred Alternative

Under the Preferred Alternative, some additional fish and wildlife habitat would be brought into UGAs (Table 17). The UGAs of Camas (97 acres), La Center (152 acres), Ridgefield (59 acres) and Washougal

(21 acres) contain priority habitat with known sites for priority species. No priority habitat for species would be added to the Battle Ground, and Vancouver UGAs. This alternative would include new urban development patterns and intensities different from the existing rural conditions, which would have a greater impact to priority habitats than under the No Action Alternative.

5 In general, the UGAs under the Preferred Alternative have riparian habitat lands nearly triple the amount of non-riparian habitat lands. The Preferred Alternative would have more impacts on habitat for priority, sensitive/threatened/endangered, and migratory species than the No Action Alternative. A total of 1,803 acres of riparian habitat conservation areas would be added to the existing 7,314 acres in the UGAs for future urbanization, accounting for about 15 percent of the total future urban areas of 12,000 acres.

10 Non-riparian habitats are found primarily in the Camas and Vancouver UGAs, where they equal approximately 7 percent and 2 percent, respectively, of new UGA lands. All other UGAs have less than 1 percent of this type of habitat.

15 The La Center and Ridgefield UGAs would have a relatively high concentration of all types of priority habitat, equal to 31, and 34 percent of the total land area in their UGAs, respectively. It should be noted that about one-quarter of the La Center UGA would have fewer impacts than the acreage would indicate, because it would be designated Parks/Open Space along the East Fork Lewis River, where most of the priority habitat is found. The Battle Ground and Washougal UGAs would affect the least absolute amount of riparian habitat. Battle Ground, Vancouver, and Washougal have the lowest percentages of priority habitat out of total land area in their UGAs, at 8, 9, and 12 percent, respectively.

20 **Table 17. Priority Habitat and Priority Species, by Alternative 1 and Preferred Alternative**

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total Acres by UGA	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Size of UGA		12,063	1,539	2,077	1,687	1,765	4,062	933
Priority Habitat for Species	7,384	329 +7,384	0	97	152	59	0	21
Non-riparian Habitat Conservation Area	2,256	230 +2,256	2	143	5	9	70	1
Riparian Habitat Conservation Area	7,314	1,803 +7,314	125	381	368	528	307	94
Total	16,954	2,362 +16,954	127	621	525	596	377	116
Percent of UGA with Priority Habitat			8%	30%	31%	34%	9%	12%

Source: Washington Dept of Fish & Wildlife

2. Threatened and Endangered Species

Alternative 1 (No Action)

Alternative 1 would not expand UGAs. All growth and development to 2024 would be accommodated within existing UGAs. Because less land would be urbanized under this alternative, impacts to listed species would likely be reduced. Confining growth within existing urban areas would intensify development within these areas and make the conservation of any urban fish and wildlife habitat more challenging. Especially important habitat areas include the Vancouver Lake Lowlands, Columbia River shoreline, and Burnt Bridge Creek. Cumulative impacts from further development near habitat for listed species in these areas could be particularly important, since these urban areas are already characterized by significant habitat modification from development.

Because this alternative would accommodate the projected growth over the next 20 years without expanding into rural areas, it would have less potential impact on listed species and their habitats county-wide than the Preferred Alternative.

Preferred Alternative

The Preferred Alternative would convert rural land to urban uses and it would likely have more impacts on habitat for listed species. Two species in the county have been identified: bald eagles and purple martins. Bald eagles, a state and federal threatened species, were identified in the Salmon Creek/Lewis River area. Purple martins, a state candidate species, have been identified within an area that would include part of Camas' expanded UGA. Reticulate sculpins, a state monitor species, have been identified in Lacamas Creek.

Stream areas known to provide habitat for listed species would be included in expanded UGAs. Waterways that support threatened salmon would include: Gee Creek, Salmon Creek, Weaver Creek, and Whipple Creek, all of which support coho salmon and steelhead.

In addition to these terrestrial species, several species of threatened salmon and steelhead are found in waterways that either cross or are adjacent to new UGAs. These waterways include Salmon Creek (coho salmon and steelhead), Whipple Creek (coho salmon and steelhead), East Fork Lewis River (chinook, coho, and chum salmon and steelhead), Gee Creek (coho salmon and steelhead), and Weaver Creek (coho salmon and steelhead). It should be noted that Clark County has the first federally-approved salmon recovery plan in the state of Washington. Implementing this plan is a major step toward protection of listed fish species.

3. Migratory Species and Migration Routes

Direct impacts from the different alternatives to migratory habitat and species would typically be those associated with the conversion of this habitat to urban uses. Those areas within the county that provide habitat suitable to migratory bird species are located primarily along the Columbia River, Vancouver Lake Lowlands, Shillapoo Bottoms, and Ridgefield National Wildlife Refuge. Waterways within the county that provide important migratory routes for anadromous fish include the Lewis River system, Columbia River, Washougal River, Salmon Creek, and various smaller tributaries.

Alternative 1 (No Action)

Alternative 1 would not expand UGAs. All growth and development to 2024 would be accommodated within existing UGAs. Because less land would be urbanized under this alternative, impacts to habitat for

migratory species would likely be less than under the Preferred Alternative. More intensive development from upzoning to accommodate growth within existing UGAs could place greater stress on urban waterways that support anadromous fish. These waterways include Burnt Bridge Creek, Salmon Creek, Washougal River, Gibbons Creek, Gee Creek, and the East Fork Lewis River. As development is contained within existing urban areas, waterways that either occur within or immediately adjacent to urban areas could see greater impacts, particularly from accelerated runoff from impervious surfaces. The magnitude and severity of environmental impacts from urban infill are generally less than those that result from the conversion of rural land to urban land.

Confining growth to existing UGAs would also preserve rural and agricultural land that would otherwise be converted to urban uses. These areas generally provide some habitat function for terrestrial migratory species, and their conservation would avoid any impacts to migratory species that would result from their loss.

Preferred Alternative

Proposed UGAs would include waterfowl concentration areas. These areas are identified as providing suitable habitat to migratory bird species over time. The Preferred Alternative would not directly impact areas identified as providing the most significant habitat to migrating bird species—the Vancouver Lake Lowlands, Shillapoo Bottoms, Ridgefield National Wildlife Refuge. However, Camas’ UGA would extend all the way around Lacamas Lake, where under the No Action Alternative there would not be urban levels of development. This new UGA could have some impact on migratory species habitat.

Various streams that support anadromous fish are found within proposed UGAs as well. These include Salmon Creek or its tributaries, Whipple Creek, a portion of the Columbia River shoreline, East Fork Lewis River, and Gee Creek.

4. Wetlands

The most common impact to wetlands is from filling or draining to make land available for other uses that diminish their functional value and service they provide to the larger ecosystem. To evaluate impacts the acres of wetlands proposed under both alternatives are shown in Table 18. Information on wetlands in the county can be found in the Technical Document of the DEIS (Revised DEIS, page 130 et seq.).

Table 18. Identified Wetlands, Alternative 1 and Preferred Alternative (acres)

	Alternative 1 (No Action)	Preferred Alternative New + Existing	% of New UGA Covered by Wetlands
Battle Ground UGA	1,399	213+1,399	14%
Camas UGA	2,325	640+2,325	27%
La Center UGA	46	276+46	16%
Ridgefield UGA	569	111+569	6%
Vancouver UGA	10,812	606+10,812	15%
Washougal UGA	463	26+463	3%
Total	15,614	1,872+15,614	12%

Source: Clark County Wetlands Inventory Model - an aggregation of NWI, mapped, permitted and modeled wetlands.

Alternative 1 (No Action)

5 There are 15,614 acres of wetlands in existing UGAs; most within the Vancouver UGA. Because not all projected growth can be accommodated under the current growth assumptions, some urban residential and employment areas would have increased intensities of development. While this may increase pressures to fill existing wetlands and provide mitigation outside the urban areas, the local ordinances protect wetlands and the change in zoning may result in more flexibility in avoiding impacts to wetlands by being able to build more intensively. Wetland functions within the cities and UGAs would need to be replaced by engineered solutions that can be more costly in the long run.

10 More intensive development within existing urban areas could place greater stress on wetland functions by generating more stormwater runoff. However, intensive development that incorporates green infrastructure strategies can maintain critical ecosystem services and in some cases have less impact on water quality than low intensity development lacking a green infrastructure system.

Preferred Alternative

15 In Preferred Alternative 1,872 acres of wetlands would be added to the 15,614 acres in existing UGAs. The additional wetland acreage is located primarily around Camas (640 acres), Vancouver (606 acres), and La Center (276 acres), accounting for approximately 27 percent, 15 percent, and 16 percent, of land within the respective UGA expansions. A large portion of the wetlands in La Center are found in the area proposed for Parks/Open Space zoning. Wetland areas make a relatively smaller part of the UGAs in Ridgefield (6 percent) and Washougal (3 percent) under this alternative.

20 C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

25 Mitigation for increased development in habitat areas consists primarily of avoidance of critical areas or other compensatory mitigation required by federal, state, and local regulations. Requirements for protecting critical habitats—which includes fish and wildlife habitat conservation areas and wetlands—are found in the GMA, ESA, and the Shoreline Management Act (SMA). All Clark County jurisdictions have implemented requirements to protect critical areas. Federal, state, and local regulations for protecting habitat for threatened and endangered species and for the preservation of water quality would provide protection for habitat that supports other species. Consistency of regulations among jurisdictions, connectivity of ecosystems, and limits on growth in sensitive areas would continue to be important goals that provide additional mitigation.

35 Cities could establish an internally consistent regional program to identify and protect priority habitat areas. This program could include transfer of development rights (TDR) for those cities that do not have such programs, purchase of the land using funds earmarked for that purpose, and property taxation, which recognizes the restrictions on development. Incentive programs, education, and taxation policies (in addition to the County's current use assessment program) that encourage the conservation of these species and their habitats could be an additional form of mitigation. The county is also looking into the feasibility of a wetlands banking program. Such a program would require the offset protection of wetlands when impacts to wetlands in other locations cannot be fully mitigated.

V. Energy Conservation

A. How can growth management plans affect energy conservation in Clark County?

5 The demand for electricity, natural gas, and other natural resources would increase in Clark County as growth occurs. The cost of supplying these services can vary depending on the land use pattern of that growth but most of the increase in consumption would occur with growth in general. Since most energy providers are private companies, most of the discussion of energy revolves around energy consumption and conservation rather than production. The reader is directed to the Technical Document for a more detailed analysis of existing conditions, applicable regulations and mitigation for impacts on energy resources (Revised DEIS, page 157 et. seq.).

B. How do the potential impacts between the alternatives compare?

10 Most of the significant impacts on energy and natural resources would result from the population and employment growth, not the pattern with which that growth is accommodated. Although planned growth is the same for the No Action and Preferred Alternatives, there would be a greater capacity for growth under the No Action Alternative. If that alternative experienced full build-out, there would be a larger population (202,377) and more jobs (139,484) in Clark County than the planned county-wide growth
15 (192,635 population and 138,312 jobs). Therefore, the additional residents and employees under the No Action Alternative could use more energy in total. On the other hand, the more compact the urban form, the greater the efficiencies that can be gained in serving that form with energy resources. For example, more dense development requires fewer street lights than development that is spread out. In that case, the
20 No Action Alternative would enable more energy conservation than the Preferred Alternative because no new urban areas would need to be served.

The impact on fossil fuel usage for transportation would vary depending on the land use pattern adopted. For instance, a low-density land use pattern would have higher impacts compared to a more compact growth pattern. Impacts of the proposed transportation systems for each alternative are discussed in the
25 Transportation section (Section XII, page 68 et seq.).

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

30 Since none of the jurisdictions is an energy provider, promoting conservation is largely a voluntary task. The primary energy conserving measure available to local jurisdictions is to adopt a compact urban form that supports alternative, energy efficient transportation (walking, bicycling, and transit). Battle Ground, Camas, and Vancouver comprehensive plans contain policies promoting energy conservation and sustainability.

35 Beyond participating with providers to promote energy conservation, local jurisdictions could add similar policies to their comprehensive plans that deal in general with “sustainable” practices that support citizen and business efforts to reduce energy consumption and promote recycling. Policies could recognize the link between reducing energy consumption and protecting the environment on a regional, state, and national level. Implementation of tree preservation ordinances and examining building codes to allow more innovative “green” building design ideas would also be helpful.

VI. Scenic Resources

A. How can growth management plans affect scenic resources in Clark County?

Natural features are an integral part of what is often considered a scenic resource. As an area's population increases, there is often an associated deterioration, fragmentation, and loss of these natural features.

B. How do the potential impacts between the alternatives compare?

Alternative 1 (No Action)

The No Action Alternative would keep all urban growth and development to 2024 within existing UGAs on land already targeted for urban development, reducing the likelihood of impacts to scenic resources associated with rural and agricultural lands. Because some areas would need to be rezoned to accommodate denser growth, the No Action Alternative could encourage development to occur sooner in existing UGAs and would preserve scenic qualities of the rural areas.

Preferred Alternative

The Preferred Alternative proposes to convert 12,063 acres of rural lands to urban uses. Agricultural and rural areas are often considered to have scenic and visual values. Some of the areas with higher scenic values that would be added to UGAs include those around Ridgefield and La Center, and near Lacamas Lake, and Washougal's northern boundary. Proposed expansion areas between La Center and Ridgefield, and between Battle Ground and Vancouver (along SR 503), would reduce the undeveloped areas between those jurisdictions, creating a sense of a larger contiguous urban area.

No changes to UGAs would directly impact the Columbia River Gorge National Scenic Area (which is governed by federal rules implemented by the County), the Columbia River shoreline, the Vancouver Lake Lowlands, the Steigerwald Refuge, or the Ridgefield Wildlife Refuge, all areas with recognized scenic values.

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

Scenic resources have generally not been recognized as a critical or sensitive resource which should be inventoried and protected to the same extent as other natural resources. The first step in mitigation of the potential impacts of development on these resources would be to inventory the views from major public routes, public facilities, and viewpoints particularly those used by tourists to the area. Policies and programs could then be developed to protect these scenic resources from alteration as a result of development.

VII. Noise

A. How can growth management plans affect the creation of noise in Clark County?

Primary noise sources in Clark County are: vehicular traffic; railroads, rock quarrying, industrial and commercial operations, airplanes and airport activity; construction equipment and activities; rural activities associated with farming and timber harvesting; residential equipment such as heat pumps and air

conditioners; and human activity such as parties, sports and games, etc. The Clark County Amphitheater hosts music events that are subject to specific noise regulations. Vehicular noise is a combination of noises from the engine, exhaust, and tires.

B. How do the potential impacts between the alternatives compare?

- 5 Alternative 1 (No Action), would grow population in current urban areas, so noise impacts, although expected to be minimal, would remain in urban areas already experiencing urban noise levels. The Preferred Alternative would add 1.883 acres of industrial land and 1,503 acres of commercial/employment land to existing UGAs although some of these areas may already have rural industrial and rural commercial uses.

10 C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

- 15 When new developments are proposed, noise is a factor considered in SEPA review. However, experience has shown that enforcement of noise regulations can be a problem if they involve limitations on actions instead of buffering. Noise conflicts can be reduced in all of the alternatives simply by assuring that policies and programs are implemented that would buffer noise between uses.

For other potential mitigation measures, reviewers are directed to the Technical Document in the DEIS (Revised DEIS, page 143 et seq.).

VIII. Land Use

20 A. How can growth management plans affect urban land uses and growth in Clark County and its cities?

- 25 As discussed in detail in the DEIS, the GMA was adopted to ensure that development occurs in a planned manner, that there are adequate services available, and that critical resources are protected. The GMA requires comprehensive plans to establish land use designations and growth boundaries to guide development and ensure that the land supply can accommodate projected demands for housing and employment over a 20-year period. Reviewers should consult the DEIS Technical Document for details about planned and actual growth in demand for housing and employment, income, housing affordability, residential densities and patterns, and land absorption in the section titled Land Use (Revised DEIS, page 30 145 et seq.). All of these characteristics of the county's growth impact qualities of life and the ability of the county and its cities to provide adequate and affordable housing for its citizens. Providing for adequate urban growth opportunities needs to be balanced against protection of the environment, and of the conservation of commercially-viable rural resource lands.

- 35 Comprehensive plan predictions are based on a set of assumptions that may not be realized over the lifespan of the plans. For that reason, comprehensive plans and the growth that actually occurs are compared at least every seven years to enable corrections to be made. Growth assumptions for this comprehensive plan update include key factors such as a 2.0 percent annual growth rate, an average household size of 2.59 people, redeveloping underdeveloped land to accommodate about 5 percent of projected growth, and average development densities of 8 units per (net) acre in Vancouver, 6 units per (net) acre in Battle Ground, Camas, Ridgefield and Washougal and 4 units per (net) acre in La Center.
- 40 Adopting the assumptions represents a policy decision by the Board and impacts the projected need for

housing and jobs. Changing one or more of these assumptions affects the projected need for housing (and jobs).

B. How do the potential impacts between the alternatives compare?

Alternative 1 (No Action)

5 Alternative 1 would not alter the existing city UGA boundaries, requiring that the projected population be accommodated within the existing boundaries. To meet GMA requirements to accommodate growth under Alternative 1, residential and employment land would need to be built at higher densities, either by changing assumptions about redevelopment potential or by changing zoning or allowable densities within existing zoning regulations. To determine how the projected shortfall could be remedied, County staff
10 coordinated with local jurisdictions to identify locations where the additional population could be allocated within existing UGAs. Additional dwelling units and jobs were assigned to UGAs either based on input from city staff (referred to as “city overrides”) or by County staff allocating additional density to vacant and buildable land (referred as County allocations). Table 20 lists all of the allocations made to the TAZs for both the No Action and Preferred Alternatives.

15 Increases in residential density would vary by jurisdiction, but the County estimates that densities would increase from between 10 and 22 percent within the cities. For example, Vancouver would have to achieve full build out of all planned projects in addition to requiring vacant buildable lands to increase density by 20 percent of what is currently allowed. Most of the additional units needed were spread across entire city UGAs, with a relatively low percentage increase. Other areas received more concentrated growth in
20 selected areas as described below. All of the county allocations were added to areas with existing vacant and buildable land, while city overrides tended to be based on plans or actual redevelopment projects where the current or future zoning is expected to allow greater densities than the vacant and buildable lands model would predict.

25 It is assumed that, for local jurisdictions to accommodate the County population allocations, the range of densities could be expanded to allow some townhouse or medium density residential development in low density areas, and more units per acre in medium and high density areas. This development is assumed to occur on vacant or underdeveloped lots and, depending on the amount of buildable land in neighborhoods, could affect their current character. This would be most noticeable in areas where the existing development pattern is in urban areas with large residential lots. Density increases in these areas
30 could change the character of existing low density residential neighborhoods by providing more varied housing stock from what currently exists, and at higher densities than what has been constructed in the past. These changes would be most noticeable in Battle Ground, Camas, La Center, and Ridgefield.

In Battle Ground, most of the housing allocation would be in the existing unincorporated (county) areas of the UGA, particularly east of NE/SE Grace Avenue and west of SR 503 in the northwest corner of the
35 UGA. Three TAZs in Battle Ground where housing allocations are highest in terms of growth beyond the current 2024 plans would add about 500 dwelling units beyond the current plans for about 2,400 dwelling units by 2024. The TAZs would change from current low density, rural lot pattern to an urban development pattern. While this is already planned to occur, the addition of approximately 20 percent more housing units than the existing 2024 plan would require some development to be higher density than
40 now proposed. Increased density could be achieved in a variety of ways, such as increasing allowable densities across the entire area, or allowing the planned land use to occur in some portions of the TAZ and increasing density in other areas of the TAZ to accommodate the additional 500 housing units. In the latter case, limiting where increased density would occur would require higher density multifamily development in areas near planned single-family detached development. The County also allocated
45 additional jobs to UGAs. In Battle Ground, job allocations were mostly in the existing UGA south of NE 199th Street, and would increase planned jobs by about 46 percent.

In Camas, most of the housing allocation was east of NW Parker Street, which would add about 600 households to the east side of the city, beyond the approximately 4,300 households planned for 2024. The existing development pattern in the area is a mix of single-family residential development and large lot rural land uses. The allocations under Alternative 1 would provide a similar development pattern as described for Battle Ground—large lots would be subdivided and would likely be developed with a mix of residential densities from single-family homes similar to the surrounding area plus other housing options like row houses and multifamily units. The areas where the additional housing units are proposed would not likely alter areas that are already developed with urban sized lots, but vacant or underdeveloped parcels in or adjacent to those areas would need to provide denser housing options than what the current 2024 plan envisions. Most of the employment allocation was to the area north of NW Lake Road, north of NW 38th Avenue (east of Parker) and to the southeast corner of the city, centered around SR 14.

In La Center, most of the increase in housing would be near the existing UGA between downtown and the northern boundary of the UGA, with 80 units and 29 jobs added. The County's allocations were allotted to areas within the UGA that are generally still large lot rural development, but are planned to eventually transition into a higher density urban form regardless of the additional population allocation that would be accommodated under this alternative. The most noticeable change under this alternative would be that instead of developing almost exclusively low-density residential, La Center would have to provide land for medium density housing to accommodate rowhouse or multifamily housing.

In Ridgefield, most of the more intense increase in housing allocation—about 60 dwelling units—was allocated to the total growth planned for two TAZs inside city limits, west of S 45th Avenue and east of 9th Avenue south of Pioneer Street. Additional allocations for jobs are along I-5 inside city limits, and also to employment areas along Hillhurst Road and in the new UGA east of NE 10th Avenue. The additional County allocation would likely require a similar style of development as La Center where large undeveloped lots would be converted to a wider range of densities and housing types and intermixed with the more traditional single family style of development in the city. New development would likely be on smaller lots to accommodate more people with pockets of increased density in the form of rowhouses and multifamily units.

As listed in Table 20, the City of Vancouver city-initiated redevelopment plans under the No Action Alternative would provide most of the intensification of residential and job growth. The city-initiated redevelopment plans were for specific subareas and private developer proposals. The highest planned increases in housing and jobs would be in areas covered by the Vancouver Central City Vision, Columbia Business Center, Southwest Washington Medical Center, and the Barberton Economic Plan area and the Section 30 Plan. Where city staff have applications for subdivisions or other new developments that indicate higher densities than those assumed by the Clark County population projections, the City proposed additional densities. These overrides would occur regardless of the outcome of this FEIS. Other areas where County staff allocated housing were TAZs south of the new UGA of industrial land at SR 503, north of NE 99th Street west of NE 162nd Avenue, and west of I-205 at Padden Parkway. Those TAZs would increase densities by 15 percent.

In Washougal, household and job growth is focused in the downtown and the Riverwalk site (that is, within existing incorporated areas) where the City expects redevelopment at significantly higher densities than currently reflected in the zoning or existing development. Six areas (TAZs) would be affected, four south of Evergreen way to the Columbia River and two north of Evergreen Way between the western city limit and 32nd Street but south of the Washougal River. Most of the intensification of housing would be south of Evergreen Way, and represent from 29 percent to 99 percent more growth than currently planned for those areas. The two TAZs north of Evergreen, and the four south of Evergreen, would see the number of jobs increased by 15 to 56 percent above currently planned job growth. If zoning in these areas were to change and allow this level of redevelopment to occur, it would change the character of

Washougal's downtown from single-story buildings to some multistory developments and would provide an urban style of development not found anywhere else in the city.

5 How the additional population affects local jurisdictions and existing neighborhoods will depend on how
a city implements its changes in zoning densities. For example, Washougal proposes to accommodate
nearly all of the population allocation into its downtown area, so most of the impact would be to the
downtown area with relatively little impact to existing surrounding neighborhoods. If increased densities
were permitted across entire areas rather than targeted areas, such as a downtown, then existing
neighborhoods could see new development on vacant or underdeveloped parcels at higher densities than
10 the surrounding area. This new development could not only change the nature of an existing
neighborhood but potentially could affect the level of service provisions in a way not anticipated by
residents or agencies involved in planning for infrastructure. The introduction of more intense uses or
different uses adjacent to each other in established neighborhoods may negatively affect compatibility or
livability and require mitigation to offset. Upzoning and changes in the uses in areas that have not
15 developed under existing zoning, is likely to have less impact on compatibility because there are fewer
existing uses than in urban areas.

Table 19 compares how Alternative 1 (No Action) and the Preferred Alternative would accommodate the
projected urban population growth, as required by the GMA. The No Action Alternative would have a
deficit of land to accommodate the projected urban growth without the city overrides and additional
population allocations. With the overrides and allocations, Alternative 1 would have a slight surplus (3
20 percent) of urban land capacity for housing compared to the planned number of needed dwelling units ,
but would not provide enough land to accommodate a 10 percent residential land market factor for
dwelling units. With the residential land market factor, Alternative 1 would have a shortage of about 6
percent of residential land. Funding and capacity improvements for urban services such as education,
water, and sanitary sewer services would need to be adjusted to meet the additional demand of a larger
25 population within the existing boundary.

However, in terms of balancing use of land for growth against impacts of growth, Alternative 1 makes
more efficient use of land and other resources, since the road, sewer, and water networks would not need
to be expanded much beyond what is currently planned under the 2004 Plans. Higher densities could
result in more use of alternative transportation modes.

Table 19. Projected Urban Population and Dwelling Units, Alternative 1 and Preferred Alternative

		Alternative 1 (No Action)	Preferred Alternative
Planned Population Growth			
A	2004 population	391,675	391,675
B	Annual growth rate	2.00%	2.00%
C	2024 planned population (A x B, annually)	584,310	584,310
D	Planned population growth (A – C)	192,635	192,635
E	Planned urban population growth (90% of D)	173,372	173,372
F	Persons per household (pph)	2.59	2.59
G	Planned dwelling units (E ÷ F)	66,939	66,939
H	Planned dwelling unit target plus 10% market factor (G x 1.10)	73,633	73,633
Actual Capacity for Growth (based on Vacant and Buildable Lands Model)			
I	Potential new urban dwelling units based on VBLM	47,204	67,658
J	Overrides (see Table 20)	13,273	2,674
K	Allocations to cities	8,616	0
L	Total new urban dwelling units (I+J+K)	69,093	70,332
M	Percent of dwelling unit capacity target (without 10% market factor) (L/G)	103%	105%
N	Percent of dwelling unit capacity target (with market factor) (L/H)	94%	96%
	Population growth capacity (urban)	178,951	182,160
	Urban and Rural (see Table 21) Population Capacity	202,377	201,292

Source: Clark County Planning Department; Clark County Department of Assessment and GIS, 2007

Note: Household capacity is based several factors including anticipated urban growth and plan designation, average household size, and housing split. Household capacity is also calculated for school districts, which shows slightly different results due to different assumptions and household size estimates.

5

Table 20 shows a list of city overrides used in developing the numbers shown in Table 19. All city overrides were used for Alternative 1. The Board established that the overrides used in the Preferred Alternative had to be based on plans adopted or pending adoption by the local jurisdiction.

Table 20. City Overrides, Alternative 1 and Preferred Alternative

	Households	Retail	Other	Total jobs
TOTAL	13,273	6,516	32,128	38,644
Growth Target	66,939*			138,312
% of Target	18.21%			27.94%

*Without market factor

	HHs	Ret	Oth. Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change
CAMAS	70	0	0	406	X	X	Development in process
	434	0	0	417	X	X	Development in process; density transfer
	0	0	1050	420	X		Projected WaferTech expansion
	281	80	-363	426	X	X	Partial rezone in 2004; development approved
	60	0	253	437	X	X	Annexation; development in process
COUNTY	0	0	1020	378	X	X	Legacy Salmon Creek not fully built out
	0	0	1160	383	X	X	WSU Campus Master Plan
	0	0	-200	615	X		Large rural industrial site in Chelatchie Prairie
LA CENTER	-51	-39	-208	474	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	-77	-3	-162	475	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	-45	-6	-1	476	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	-27	-4	17	477	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	0	0	514	583	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	132	11	-5	585	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	30	0	-2	586	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
	24	-1	-54	600	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006
-72	0	13	601	X	X	Detailed sub-area analysis for Comp Plan DEIS, 2006	
WASHOUGAL	0	0	216	437		X	Reflects amount of planned light industrial development
	100	0	0	439	X	X	Reflects multi-family and planned residential development in the TAZ
	0	390	0	632	X	X	City has planned for a commercial node within the business park area
	45	100	643	634	X	X	City has planned a commercial/mixed use node within business park area

Table 20 (Continued)

Vancouver (TAZ's 1-41)							Vancouver (TAZ's 42-116)						
HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change	HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change
236	30	1500	1 ¹	X	1	Vancouver Central City Vision subarea plan ¹	22	0	0	42	X		
3	0	0	2	X		Vancouver Central City Vision subarea plan	12	0	0	43	X		
2	0	0	3	X		Vancouver Central City Vision subarea plan	10	0	0	44	X		
35	132	58	4	X		Vancouver Central City Vision subarea plan	14	0	0	45	X		
100	40	25	5	X		Vancouver Central City Vision subarea plan	58	35	57	46	X		Upper Main St. Redevelopment
0	50	750	6	X		Vancouver Central City Vision subarea plan	35	36	75	47	X		Upper Main St. Redevelopment
45	0	50	7	X		Vancouver Central City Vision subarea plan	35	58	57	48	X		Upper Main St. Redevelopment
67	12	300	8	X		Vancouver Central City Vision subarea plan	24	0	0	49	X		Upper Main St. Redevelopment
52	0	300	9	X		Vancouver Central City Vision subarea plan	1	15	100	50	X		Upper Main St. Redevelopment
35	0	350	10	X		Vancouver Central City Vision subarea plan	6	0	0	51	X		
57	20	222	11	X		Vancouver Central City Vision subarea plan	65	75	98	52	X		Upper Main St. Redevelopment
57	100	222	12	X		Vancouver Central City Vision subarea plan	9	0	0	53	X		
57	100	222	13	X		Vancouver Central City Vision subarea plan	50	0	488	54 ²	X	2	Wellons Industrial proposals
4	0	0	14	X		Vancouver Central City Vision subarea plan	20	0	0	55	X		
24	25	18	15	X		Vancouver Central City Vision subarea plan	17	0	0	56	X		
24	20	18	16	X		Vancouver Central City Vision subarea plan	250	85	125	57	X		Old WDOT campus redevelopment
321	147	157	17	X		Vancouver Central City Vision subarea plan	78	45	143	58	X		
3	0	800	18	X		Vancouver Central City Vision subarea plan	13	0	0	59	X		
125	23	30	19	X		Vancouver Central City Vision subarea plan	10	0	0	60	X		
2400	300	1250	20	X		Vancouver Central City Vision subarea plan	0	0	0	61			
600	14	200	21	X		Vancouver Central City Vision subarea plan	7	0	0	62	X		
100	40	750	22	X		Vancouver Central City Vision subarea plan	14	0	0	63	X		
100	12	300	23	X		Vancouver Central City Vision subarea plan	4	0	0	64	X		
100	14	100	24	X		Vancouver Central City Vision subarea plan							
6	0	0	25	X			17	0	0	102	X		
0	0	0	26	X			1200	500	1000	103	X		Col. Bus. Ctr planned infill/redevelopment
4	0	0	27	X			15	0	0	104	X		
14	0	0	28	X			14	0	0	105	X		
14	0	0	29	X			0	0	0	106			
4	0	0	30	X			0	0	350	107	X		Lwr Grand Blvd/Col House Subarea Plan
6	0	0	31	X			19	0	0	108	X		
14	32	18	32	X		Vancouver Central City Vision subarea plan	14	0	0	109	X		
31	17	9	33	X		Vancouver Central City Vision subarea plan	9	0	0	110	X		
24	14	18	34	X		Vancouver Central City Vision subarea plan	12	0	0	111	X		
22	34	9	35	X		Vancouver Central City Vision subarea plan	16	0	0	112	X		
10	0	0	36	X			18	0	0	113	X		
6	0	0	37	X			60	0	0	114	X		
3	0	0	38	X			150	75	500	115	X		Historic Reserve Master Plan
0	0	325	39	X		Port of Vancouver plans	31	0	0	116	X		
15	0	0	40	X									
17	0	0	41	X									

¹TAZ 1: BOCC accepted 1550 households, 588 retail and 3838 other jobs for the VCCV plan ²Taz 54: BOCC accepted 488 jobs

Vancouver (TAZ's 117-157)							Vancouver (TAZ's 158-195)						
HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change	HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change
14	0	0	117	X			14	0	0	158	X		
11	0	0	118	X			8	0	0	159	X		
6	0	0	119	X			15	0	0	160	X		
11	0	0	120	X			19	0	0	161	X		
8	125	0	121	X		Redevelopment of commercial (pre-apps)	10	0	0	162	X		
21	0	0	122	X			37	0	50	163	X		Fourth Plain subarea plan
18	0	0	123	X			68	77	93	164	X		Fourth Plain subarea plan
36	30	150	124	X		Rezone of residential in hospital district	45	45	38	165	X		Fourth Plain subarea plan
18	0	0	125	X			14	0	0	166	X		
20	0	0	126	X			17	57	75	167	X		Fourth Plain subarea plan
0	0	150	127	X		Historic Reserve Master Plan	13	0	0	168	X		
45	0	0	128	X		Historic Reserve Master Plan	19	0	200	169	X		Fourth Plain subarea plan
0	0	0	129	X			78	57	157	170	X		Fourth Plain subarea plan
0	0	0	130	X			232	0	150	171	X		Fourth Plain subarea plan
21	0	0	131	X			75	50	250	172	X		VHA plans
14	0	0	132	X			250	85	830	173	X		VHA plans
37	0	0	133	X			0	65	150	174	X		Fourth Plain subarea plan
23	0	0	134	X			150	75	75	175	X		Fourth Plain subarea plan
11	0	0	135	X			57	85	52	176	X		Fourth Plain subarea plan
12	0	0	136	X			0	0	150	177	X		Fourth Plain subarea plan
0	0	0	137	X			33	0	0	178	X		
10	0	0	138	X			1	0	0	179	X		Planned redevelopment of Elks Lodge, etc
50	75	350	139	X	X	SWWMC Master Plan	75	0	100	180	X		
18	0	0	140	X			15	0	0	181	X		
36	0	0	141	X			12	0	0	182	X		
0	80	2000	142	X	X	SWWMC Master Plan	24	0	0	183	X		
17	0	0	143	X			7	0	0	184	X		
11	0	0	144	X			21	0	0	185	X		
14	0	0	145	X			0	0	0	186			
22	0	0	146	X			0	0	0	187			
150	0	0	147	X		Infill subdivision activity	0	0	0	188			
1	0	0	148	X			0	0	0	189			
15	0	0	149	X			49	0	0	190	X		
10	0	0	150	X			7	0	0	191	X		
11	0	0	151	X			27	0	0	192	X		
18	0	0	152	X			2	0	100	193	X		BPA plans
0	75	525	153	X	X	VA Master Plan	132	50	50	194	X		Active subdivision & commercial appl'ns
0	63	278	154	X	X	Clark College plans	9	0	100	195	X		BPA plans
38	55	0	155	X									
6	0	0	156	X									
10	0	0	157	X									

Table 20 (Continued)

Vancouver (TAZ's 209-267)							Vancouver (TAZ's 268-307)						
HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change	HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change
0	100	100	209	X		Barberton FPIA	160	225	150	268	X	X	Evan Landina (airport site) redevelopment
0	100	300	210	X		Barberton FPIA	10	0	225	269	X	X	Evan Landina (airport site) redevelopment
							10	0	0	270	X		
0	0	100	219	X		Barberton FPIA	35	0	0	271	X		
0	0	200	220	X		Barberton FPIA	21	0	0	272	X		
0	0	300	221	X		Barberton FPIA	28	0	0	273	X		
							145	0	250	274	X		Col Tech Ctr revised devel. agreement
0	0	100	226	X		Barberton FPIA	0	0	0	275			
0	0	400	227	X		Barberton FPIA	3	0	250	276	X		Col Tech Ctr revised devel. agreement
							0	350	500	277	X		Col Tech Ctr revised devel. agreement
3	0	0	237	X			10	0	350	278	X		Sec. 30 Plan & Pac Rock devel. agreement
21	0	0	238	X			250	100	1400	279	X		Sec. 30 Plan & devel. agreements
16	0	0	239	X			7	0	45	280	X		Devel. applications on West side of 112th
54	0	0	240	X			14	0	0	281	X		
15	0	0	241	X			0	0	50	282	X		Comml Site Plan pre-app (old Nautilus)
12	0	0	242	X			0	0	0	283			
62	0	0	243	X			38	0	0	284	X		
27	0	0	244	X			16	0	0	285	X		
26	0	0	245	X			7	0	0	286	X		
40	0	0	246	X			32	0	0	287	X		
100	0	0	247	X		Annexation agreement	258	175	325	288	X		Four Seasons Master Plan
0	0	0	248				85	24	500	289	X		Additional jobs at SEH America
54	0	0	249	X			85	0	200	290	X		Four Seasons, future school site
24	0	0	250	X			9	0	100	291	X		Skills Center on 28th
0	0	0	251				19	0	0	292	X		
25	0	0	252	X			19	0	0	293	X		
23	0	0	253	X			11	0	0	294	X		
16	0	0	254	X			12	0	0	295	X		
32	0	100	255	X		Developer redevelopment	74	45	200	296	X		Burton/Cascade/Evan High/ESD admin ofcs
36	0	0	256	X			28	0	0	297	X		
16	0	0	257	X			25	0	0	298	X		
25	0	0	258	X			29	0	0	299	X		
15	0	0	259	X			0	0	0	300			
22	0	0	260	X			0	0	0	301			
17	0	0	261	X			0	0	0	302			
0	0	0	262				53	0	300	303	X		Pre-apps for parcels, SHE prop. expansion
35	175	550	263	X		Col Tech Ctr revised devel. agreement	25	0	0	304	X		
45	350	800	264	X		Col Tech Ctr revised devel. agreement	33	85	75	305	X		Evan Commercial Center (under
19	0	0	265	X			42	0	0	306	X		Active subdivision activity
18	0	300	266	X		Firstenburg Center	100	0	0	307	X		Active subdivision activity
15	0	0	267	X									

Vancouver (TAZ's 308-418)						
HHs	Ret	Oth Jobs	TAZ	Alt 1	Pref	Basis for Proposed Change
58	0	0	308	X		Active subdivision activity
123	0	0	309	X		Active subdivision activity
14	0	0	310	X		
15	0	0	311	X		
14	0	0	312	X		
25	0	0	313	X		
0	0	0	314			
0	0	0	315			
0	0	0	316			
0	0	0	317			
23	0	0	318	X		
0	0	0	319			
0	0	0	320			
8	350	200	321	X		Birtcher/Burnt Bridge Creek
1	125	250	322	X		Birtcher/Burnt Bridge Creek
0	0	200	344	X		Barberton FPIA
0	0	500	347	X		SR-503 FPIA
0	0	200	348	X		SR-503 FPIA
0	0	200	349	X		SR-503 FPIA
0	0	0	350			
0	0	500	351	X		SR-503 FPIA
0	50	150	363	X		Barberton FPIA
0	0	0	364			
0	100	100	365	X		Barberton FPIA
0	0	250	366	X		Barberton FPIA
200	250	350	395	X		Fishers Quarry/192nd developer proposals
17	135	100	418	X		Gramor, SWWMC proposal, and

Table 21 compares how Alternative 1 (No Action) and the Preferred Alternative would accommodate projected rural population growth outside of the existing and proposed UGAs. Based on land capacity, the No Action Alternative would have a surplus of land for growth in the rural areas, based on the 90/10 percent urban/rural split.

5 **Table 21. Projected Rural Population and Dwelling Units, Alternative 1 and Preferred Alternative**

	Alternative 1 (No Action)	Preferred Alternative
Planned Population Growth		
2004 population	391,675	391,675
Annual growth rate	2.00%	2.00%
2024 population	584,310	584,310
2005-2024 population growth	192,635	192,635
Rural population growth	19,264	19,264
Percent of population in rural areas	10%	10%
Persons per household	2.59	2.59
Planned dwelling units	7,438	7,438
Actual Capacity		
Potential new rural dwelling units based on VBLM	9,045	7,387
Percent of rural dwelling unit capacity target	122%	99%
Urban and Rural (see Table 19) Population Capacity	202,377	201,292

Source: Clark County Planning Department; Clark County Department of Assessment and GIS, 2007.

Preferred Alternative

10 The Preferred Alternative would expand the UGAs of all jurisdictions except Woodland and Yacolt as shown in Table 22 and Table 23. Countywide, 12,063 acres would change from rural to urban uses. The Preferred Alternative would add mostly urban low-density residential land (6,130 of 7,467 residential acres) to accommodate future population growth. This alternative includes a 10 percent market factor for residential land, which is intended to ensure that the residential land supply has an extra cushion that would prevent a shortage of land in the real estate market. Approximately 40 percent of low-density residential would be in the Vancouver UGA and 20 percent in the Ridgefield UGA. The remaining four jurisdictions would have from 445 to 595 acres of new low-density land each. Land proposed for conversion to urban uses consists of agricultural districts (about 4,600 acres), urban reserve (about 3,000 acres), and rural residential (about 4,000 acres). About 3,200 acres would be industrial, commercial, or employment center lands.

20 Table 19 indicates that the Preferred Alternative would have a slight deficit of land to accommodate the projected urban growth. With city overrides, the Preferred Alternative would have surplus urban land capacity of 5 percent, although with the 10% market factor, there is a projected 4 percent shortage of housing units. The potential population growth within cities would be lower under the Preferred Alternative than under the No Action Alternative because the Preferred Alternative assumes a lower number of city overrides and no additional population allocations. New education, water, and sanitary sewer services would be provided, compared to the No Action Alternative, which would need to increase capacity of its existing facilities or finding new sites within existing UGAs, potentially a more expensive undertaking than constructing new facilities as under the Preferred Alternative. This alternative would make less efficient use of the land base in the county. Table 21 compares how Alternative 1 (No Action) and the Preferred Alternative would accommodate projected rural population growth outside of the existing and proposed UGAs. Based on land capacity, the Preferred Alternative would have a slight deficit of land for growth in the rural areas, based on the 90/10 percent urban/rural split.

Table 22. Land Added to City UGAs by Rural Designation, Alternative 1 and Preferred Alternative

Existing County Comprehensive Plan Designation	County		Urban Land					
	Alternative 1 (No Action)	Preferred Alternative	Battle Ground		Camas		La Center	
			Alternative 1 (No Action)	Preferred Alternative	Alternative 1 (No Action)	Preferred Alternative	Alternative 1 (No Action)	Preferred Alternative
		Acres of existing Comprehensive Plan designations added to UGAs	County acreage dedicated to City		County acreage dedicated to City		County acreage dedicated to City	
Rural Residential	All land in Alternative 1 is currently designated for urban uses within each UGA. No additional county land would be added	0	No additional land would be added to UGA	818	No additional land would be added to UGA	961	No additional land would be added to UGA	626
Urban Reserve		3,028		291		0		75
Commercial		16		2		0		10
Office Park/Business Park		0		0		0		0
Industrial		8		8		0		0
Industrial Urban Reserve		136		0		0		136
Mining Lands		0		-		0		0
Agriculture		4,573		419		920		819
Forest land		155		0		155		0
Other		0		0		0		0
Parks/Open Space		144		0		42		22
Public Facility		1		0		0		0
Water		0		0		0		0
Total Acres	12,063	1,539	2,077	1,687				

Existing County Comprehensive Plan Designation	Urban Land					
	Ridgefield		Vancouver		Washougal	
	Alternative 1 (No Action)	Preferred Alternative	Alternative 1 (No Action)	Preferred Alternative	Alternative 1 (No Action)	Preferred Alternative
	County acreage dedicated to City		County acreage dedicated to City		County acreage dedicated to City	
Rural Residential	No additional land would be added to UGA	566	No additional land would be added to UGA	692	No additional land would be added to UGA	339
Urban Reserve		265		2,097		300
Commercial		0		4		0
Office Park/Business Park		0		0		0
Industrial		0		0		0
Industrial Urban Reserve		0		0		0
Mining Lands		0		0		0
Agriculture		911		1,233		272
Forest land		0		0		0
Other		0		0		0
Parks/Open Space		21		37		21
Public Facility		1		0		0
Water		0		0		0
Total Acres	1,765	4,062	933			

Table 23. Land Added to City UGAs by Urban Designation, Alternative 1 and Preferred Alternative

New Land Use Designation*	Urban Land												
	All UGAs				Battle Ground			Camas			La Center		
	Existing UGAs	Alternative 1 (No Action)	Preferred Alternative		Alternative 1 (No Action)	Preferred Alternative		Alternative 1 (No Action)	Preferred Alternative		Alternative 1 (No Action)	Preferred Alternative	
	Total acreage within UGAs	Total acreage within UGAs	Total acres within UGA	Acreage added to UGA	Acres within UGA	Acres within UGA	Acreage added to UGA	Acres within UGA	Acres within UGA	Acreage added to UGA	Acres within UGA	Acres within UGA	Acreage added to UGA
Urban Low Density Residential	37,543	37,543	43,674	6,131	2,154	2,737	582	906	1,863	957	595	1,129	534
Urban Medium Density Residential	8,997	8,997	10,097	1,100	928	1,212	284	3,433	3,476	43	0	164	164
Urban High Density Residential	1,719	1,719	1,839	120	101	101	0	396	396	0	0	0	0
Mixed Use Residential	81	81	197	116	81	197	116	0	0	0	0	0	0
Total new residential acres	48,340	48,340	55,726	7,467	3,264	4,246	982	4,734	5,735	1,000	595	1,292	698
Mixed Use	1,623	1,623	1,987	364	332	332	0	0	343	343	55	59	4
Mixed Use Employment	43	43	280	237	43	280	237	0	0	0	0	0	0
Commercial	6,066	6,066	6,462	396	604	773	170	326	337	11	82	161	79
Employment Center	10,452	10,452	11,322	870	641	791	150	295	615	320	0	0	0
Employment Campus	1,650	1,650	1,650	0	123	123	0	1,528	1,528	0	0	0	0
Industrial	3,462	3,462	5,345	1,883	0	0	0	974	974	0	0	501	501
Total employment acres	23,297	23,297	27,049	3,752	1,742	2,299	557	3,122	3,796	674	137	721	584
Public Facilities	3,742	3,742	3,742	0	17	17	0	0	0	0	76	76	0
Parks/Open Space	5,829	5,829	6,674	845	277	277	0	296	699	403	114	518	405
Total acres	81,207	81,207	93,270	12,063	5,300	6,839	1,539	8,152	10,229	2,077	920	2,608	1,687

New Land Use Designation	Urban Land								
	Ridgefield			Vancouver			Washougal		
	Alternative 1 (No Action)	Preferred Alternative		Alternative 1 (No Action)	Preferred Alternative		Alternative 1 (No Action)	Preferred Alternative	
	Acres within UGA	Acres within UGA	Acreage added to UGA	Acres within UGA	Acres within UGA	Acreage added to UGA	Acres within UGA	Acres within UGA	Acreage added to UGA
Urban Low Density Residential	1,767	2,987	1,220	29,731	32,122	2,391	2,392	2,836	445
Urban Medium Density Residential	207	548	342	4,256	4,524	268	173	173	0
Urban High Density Residential	0	0	0	1,222	1,222	0	308	428	120
Mixed Use Residential	0	0	0	0	0	0	0	0	0
Total new residential acres	1,973	3,535	1,562	35,209	37,869	2,660	2,873	3,437	564
Mixed Use	49	49	0	1,188	1,206	18	0	0	0
Mixed Use Employment	0	0	0	0	0	0	0	0	0
Commercial	208	234	26	4,610	4,645	35	237	312	75
Employment Center	1,654	1,782	128	7,722	7,722	0	141	413	272
Employment Campus	0	0	0	0	0	0	0	0	0
Industrial	0	48	48	2,099	3,412	1,313	389	410	21
Total employment acres	1,910	2,113	202	15,618	16,984	1,366	768	1,136	368
Public Facilities	187	187	0	3,316	3,316	0	146	146	0
Parks/Open Space	164	164	0	4,543	4,580	37	435	435	0
Total acres	4,235	5,999	1,765	58,687	62,749	4,062	4,221	5,154	933

Source: Clark County Planning Department; Clark County Department of Assessment and GIS, 2007

* Additional population allocated to each city under Alternative 1 may slightly change the amount of acreage reported for residential land uses, potentially requiring increased density to accommodate the 2024 population.

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

5 The County and all its cities have zoning codes and critical areas ordinances that are currently in place and will be used to mitigate the effects of development under either alternative. The biggest land use issue under Alternative 1 is the potential for incompatibilities between adjacent land uses in a more dense urban form. Buffering, beveling, landscaping and screening requirements will be central in addressing the compatibility issue. The biggest land use issue with the Preferred Alternative is that 4,700 acres of land
10 UGAs is proposed for job creation as industrial. Part of this revolves around taking advantage of a portion of the county's 33-mile shortline railroad.

IX. Rural and Resource Lands

A. How can growth management plans affect the rural and resource lands of Clark County?

15 Rural lands include rural residential, commercial and industrial land use designations. Resource lands are those designated for mineral extraction, agriculture, or forest uses. The county currently contains about 106,000 acres of rural lands and 198,000 acres of resource lands. The GMA requires jurisdictions to protect rural and resource lands from premature urban development. When land converts from rural or
20 resource designations to urban designations, there is usually no further opportunity to extract or use the resources in the future. When land is converted from a rural or resource designation to an urban designation, the rural landscape changes. The impact analysis looks at the amount of land that would be converted under the alternatives and how the rural landscape would change as a result.

B. How do the potential impacts between the alternatives compare?

25 Alternative 1 would not convert rural or resource lands to urban land, so the total acreage would remain at about 309,000 acres. Additional growth and development over the next 20 years would be accommodated within existing UGAs by rezoning as needed and developing vacant and under-developed land within existing UGAs. This alternative preserves resource land for its long-term commercial viability by providing an adequate mineral extraction, forest, and agricultural land base and by reducing conflicts between mineral extraction/agriculture and other surrounding land uses. Alternative 1 would help to
30 preserve the rural character of the county, small-scale resource uses, and other values—recreational, scenic, historic, and environmental—that are associated with rural and resource lands. Rural land that buffers the urban areas, providing a distinctive dividing line between urban areas would not change.

35 The Preferred Alternative would convert about 4,000 acres of rural land (Table 24) and 4,727 acres of resource land (Table 25) to urban land. This alternative would reduce total rural and resource land to about 102,000 acres (four percent) and about 193,300 acres (two percent), respectively.

40 Agricultural land would be the primary resource land converted to urban uses under the Preferred Alternative, primarily to Vancouver (1,233 acres), Camas (920 acres), Ridgefield (911 acres), and La Center (819 acres), with some resource land allocated to Battle Ground and Washougal. If the Preferred Alternative were chosen, the delineation between urban and rural areas could be less defined because as proposed, the majority of residential development, 88 percent of proposed new residential land under this alternative would be for low-density residential development. While some rural and resource lands would also be designated for employment, low density residential development pattern on the fringes of UGAs,

would create more of a suburban, rather than a higher density urban environment as Alternative 1 would, with the population accommodated within existing UGAs

Table 24. Rural Lands, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative
Rural Land in Clark County	106,395	102,368
Rural Land Allocated to UGAs		
Battle Ground	0	829
Camas	0	961
La Center	0	635
Ridgefield	0	566
Vancouver	0	696
Washougal	0	339
Total	0	4,027
Percent of Rural Land Converted to Urban Uses	0	4%

Source: Clark County Department of Assessment and GIS, 2007

5

Table 25. Resource Land Subtracted from UGAs, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative
Total Resource land (outside of UGAs)	198,076	198,076 – 4,727
Agriculture*	39,900	39,900 - 4,572
Forest**	158,176	158,176 - 155
Lands in a Mining Overlay district***	5,012	5,012 - 230
Battle Ground		
Agriculture*	0	419
Forest**	0	0
Mining lands	0	0
Camas		
Agriculture*	0	920
Forest**	0	155
Mining lands	0	0
La Center		
Agriculture*	0	819
Forest**	0	0
Mining lands	0	0
Ridgefield		
Agriculture*	0	911
Forest**	0	0
Mining lands	0	0
Vancouver		
Agriculture*	0	1,233
Forest**	0	0
Mining lands	0	0
Washougal		

	Alternative 1 (No Action)	Preferred Alternative
Agriculture*	0	272
Forest**	0	0
Mining lands	0	0
Total Resource Land in County Converted to Urban Uses	0	4,727
Agriculture*	0	4,572
Forest**	0	155
Mining lands	0	0
Percent of Resource land Converted to Urban Uses	0%	2%
Agriculture*	0%	11%
Forest**	0%	0.1%
Mining lands	0%	0%

Source: Clark County Department of Assessment and GIS, 2007. * Includes Agriculture and Agriculture-Wildlife designations. **Includes Forest Tier I and Forest Tier II designations. ***Surface Mining overlays can be on any non-urban land designation

5 **C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?**

10 Mitigation for conversion of rural lands consists primarily in ensuring that provisions to protect remaining rural lands are in place in the comprehensive plan and development regulations, since rural land brought into UGAs would (and is intended to) eventually urbanize and lose its rural character. Clark County’s comprehensive plan defines rural lands and rural centers with the intent to provide for land uses and densities that are compatible with designated resource lands and ultimately maintain the rural character of those areas. The County has also adopted “right to farm” and “right to harvest timber” ordinances to protect resource-based industries on rural lands from adjacent incompatible residential development.
15 Additional rural land mitigation could include:

- County designations of a larger portion of the undeveloped rural lands with soils identified by SCS as prime agricultural and forest lands as resource lands, regardless of lot size.
- Incentives (e.g., transfer or purchase of development rights) and strict development regulations to discourage construction of residences on subdivided resource lands.
- 20 • Adopt “No net loss” policies for rural designations.

Once resource land is included in a UGA, it is assumed that the resource itself is no longer protected from conversion to urban uses and loss of the resource would eventually occur. However, the County’s mineral resource overlay zone does provide protection in those cases.

X. Economy

25 **A. How can growth management plans affect the economy of Clark County?**

Clark County’s location within the larger Portland Metropolitan Statistical Area and its existing and new industries, have provided the basis for continued growth and prosperity. Clark County’s economy is broadly diversified and is strong in high technology manufacturing, financial and business services, and international trade. Various factors affect the economic health of the county and its cities. Growth
30 management plans should ensure a sufficient land supply to provide for future economic development, and should balance the ratio of jobs-to-population to encourage workers to live and work in Clark

5 County, and to ensure that sufficient revenues from taxes can support the public facilities needed to serve land development. The jobs-to-population ratio in Clark County is higher than in the Portland metro area. For firms to locate in Clark County, adequately serviced and readily available land is needed. The biggest potential concerns could be the funding of infrastructure and jurisdictional questions between the land use planning and regulatory functions of Clark County and the water/sewer service functions of the cities. The DEIS provides a detailed discussion of the economy (Revised DEIS, page 183 et seq).

B. How do the potential impacts between the alternatives compare?

10 Job growth is assumed to occur under both alternatives, although job growth under Alternative 1 would occur only within existing UGAs while job growth under the Preferred Alternative would occur within the existing UGAs and proposed expansion areas (see the 2006 DEIS for a discussion of development assumptions). Both alternatives assume one new job for every 1.39 new people. The No Action Alternative would result in an excess of 1,172 jobs compared to the target of 138,312 jobs, for a total projected job growth of 139,484.

15 The Preferred Alternative would not have the capacity to accommodate the projected number of jobs needed by 2024, with a gap of about 4 percent, or 5,419 jobs (Table 26).

20 Alternative 1 would offer fewer large tracts of vacant land for economic development; therefore, it would not support some of the County's economic development strategies, particularly those with emphasis on campus development and industry clusters. The Preferred Alternative would include large lots for industrial uses, with some acreage for other types of employment, although less than one-third of the total acreage of the Preferred Alternative would be designated for jobs. The Preferred Alternative would add land for jobs to all jurisdictions, but the majority would be dedicated to Vancouver and Camas. Expansion of the Camas UGA would be predominantly for mixed-uses and employment centers, whereas Battle Ground, La Center, and Ridgefield would all be allocated employment acreage predominantly for commercial, employment center/campus, and industrial lands.

Table 26. Projected Job Creation by Employment Sector, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative
<i>Planned Jobs</i>		
2005 population	391,675	391,675
Annual growth rate	2.00%	2.00%
2024 population	584,310	584,310
2005-2024 population growth	192,635	192,635
Urban population growth*	173,372	173,372
Average jobs to population ratio	1/1.39	1/1.39
Percent retail	22%	22%
Total retail jobs	30,429	30,429
Percent industrial	29%	29%
Total industrial jobs	40,110	40,110
Percent office/business park	40%	40%
Total office/business park jobs	55,325	55,325
Percent government	9%	9%
Total government jobs	12,448	12,448
Total Jobs	138,312	138,312
<i>Capacity for Jobs</i>		
Retail**	27,024	25,518
Other	105,860	100,755
Public	6,600	6,600
Total	139,484	132,893
Percent of capacity	101 %	96 %

Source: Clark County Community Planning, 2007

*Capacity based on Clark County Vacant Lands Model, allocations and overrides.

**Includes Mixed-Use, Mixed-Use Employment, and Commercial designations

5

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

The county’s stated goal is for job creation as part of this growth management plan update and the assumptions for job creation are the same for either alternative. The loss of jobs in the rural areas of the county, especially related to resource uses, will be more than offset by commercial and industrial job creation. There is greater potential for job creation in the Preferred Alternative because additional land (including larger parcels) will be available to accommodate it

10

XI. Historic and Cultural Resources

A. How can growth management plans affect historic and cultural resources in Clark County?

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Much of the county has been identified as having a high probability for archaeological resources, in part because of the area’s rich history and its importance as a settlement location. Many of the high probability areas are located along streams, rivers, and other water bodies. When applications for development are submitted, a pre-determination of the probability rating is required. The model helps staff determine whether an applicant is required to investigate potential resources further in order to protect them from development, or how to mitigate impacts. Most of the cities work with Clark County to protect historic and cultural resources, and many have agreements to use the County’s predictability model in their own

20

reviews. More intensive development pressures can make it difficult to prevent historic or cultural resources from being disturbed, though having more land available for development does not preclude those pressures from occurring. Land that remains undeveloped or in rural uses can end up protecting potential uses from future disturbances.

5 **B. How do the potential impacts between the alternatives compare?**

I. Impacts

10 Figure 32 in the DEIS shows how most of the land area in Clark County is within a moderate to high predictability area. However, impacts tend to be largely a matter of project-level decisions. Table 27 compares the acreages of moderate to high predictability for resources for both alternatives. Table 28 lists the historic structures within the new UGAs of the Preferred Alternative.

Alternative 1 (No Action)

15 Alternative 1 would not create any new impacts on cultural or historic resources that were not discussed in the DEIS. There are approximately 34,000 acres of land with a moderate, moderate-high, or high probability for archeological resources in the existing UGAs. Alternative 1 contains 289 historic sites in the UGAs, of which 29 are on the local Clark County register and 20 are on the National Register. The rest are inventoried but not registered.

20 Since creeks tend to have a high probability for archaeological resources, expanded UGAs that include shorelines and streams would tend to increase the risk of encountering cultural resources. This alternative would not add expand to include new lands with surface waters and would add no new miles of streams or shoreline.

25 By confining growth to existing UGAs, this alternative could increase the pressure to remove urban historic resources, usually structures such as homes, schools, and churches, to make way for higher density and higher intensity development. However, existing regulations provide protection for listed resources, if not inventoried ones.

Table 27. Areas of Archeological Predictability, Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative						
	Existing UGAs	Total New UGAs	Battle Ground UGA	Camas UGA	La Center UGA	Ridgefield UGA	Vancouver UGA	Washougal UGA
Size of UGA			1,539	2,077	1,687	1,765	4,062	933
Moderate	4809	1,319 +4,809	147	276	170	134	554	34
Mod-High	6482	1,904 +6,482	161	343	388	419	509	85
High	22,217	5,865 +22,217	733	1,206	1,096	1,004	1,635	192
% of UGA		-	68%	76%	96%	88%	66%	33%

Source: Clark County Planning Department; Clark County Department of Assessment and GIS, 2006

Table 28. *Historic Sites in Expanded UGAs*

UGA	Historic Inventory or Listing Type	Site Name	Total Sites
Camas	Included in Clark County Historic Resource Inventory only	Unknown	1
	National Register of Historic Places	Pittock (Lakeside) House	1
La Center	Included in Clark County Historic Resource Inventory only	Unknown	1
Ridgefield	Included in Clark County Historic Resource Inventory only	Unknown	2
Vancouver	Included in Clark County Historic Resource Inventory only	Unknown	3
Washougal	Included in Clark County Historic Resource Inventory only	Unknown	1

Preferred Alternative

5 Table 27 shows the acreage of land in the Preferred Alternative that would be classified as having a moderate to high probability of containing archeological sites. The Preferred Alternative would add about 9,088 acres to the total 22,217 acres of moderate to high probability, an increase of about 41 percent. The most noticeable aspect is the high proportion of the total Ridgefield and La Center UGAs that have a moderate to high predictability rating. However, the La Center high predictability area is largely due to the inclusion of the area along East Fork Lewis River. Since the area immediately adjacent to the river would not be developable under the proposed zoning, the high percentage somewhat overstates the potential impact.

15 There are nine registered or inventoried historic properties or structures within the proposed expansion areas, as shown in Table 28. The expanded UGAs in the Preferred Alternative contain eight inventoried, but not registered, sites, which would bring the total of inventoried, non-registered sites to 248 sites in UGAs. Since inventoried sites are generally not protected by local ordinances, the Preferred Alternative would increase the chances of impacting existing known historic resources. In addition, as noted above, the likelihood of proposed development encountering archaeological resources increases with the presence of streams and shorelines. This alternative would add 51.7 miles of streams and 391 acres of shoreline within expanded UGAs.

20 Figure 32 in the DEIS places most of Clark County, excepting areas long since urbanized, within high-probability areas. Consequently, most of the areas proposed for expansion alternative would require further investigation as to the incidence of cultural resources when those areas are proposed for development.

25 C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

30 For a discussion of the policies and regulations of Clark County and the local jurisdictions as they related to the protection and preservation of historical resources, please refer to the DEIS and Technical Document (Revised DEIS, page 198 et seq.). Although local, state and federal regulations protect identified cultural resources and registered historic sites from unlawful disturbance, most programs to protect historic resources exempt individual property owners or allow voluntary registration. Regulations cannot protect against deliberate violations that result in disturbance of historic or cultural resources, although they penalize the perpetrator.

XII. Transportation

A. How can growth management plans affect the transportation network in Clark County?

5 The GMA requires that local land use and transportation systems be balanced and that land use decisions consider transportation needs and impacts. The GMA also requires that local and regional plans be coordinated. Once the comprehensive plans are adopted, jurisdictions would only be able to approve developments that can demonstrate that adequate transportation facilities would be available at the time of development or be planned and funded to be complete within six years of development approval without reducing the level of service below that set in the plan.

10 **Planning**

Transportation planning is conducted by various agencies. Federal regulations require a designated Metropolitan Planning Organization (MPO). The Southwest Washington Regional Transportation Council (RTC) is the MPO in Clark County.

15 The GMA requires that local comprehensive plans include a transportation element. The GMA further created a formal mechanism for local governments and the state to coordinate transportation planning for regional transportation facilities and authorized the creation of Regional Transportation Planning Organizations (RTPOs). The RTC was designated as the RTPO for the three-county area of Clark, Skamania, and Klickitat Counties. RTPOs are intended to be integrated with the federally required MPO in the urbanized areas.

20 The Metropolitan Transportation Plan (MTP) for Clark County is the region's principal transportation planning document. The 2005 MTP identifies future regional transportation system needs to the year 2030. It outlines strategies and improvements necessary to maintain adequate mobility within and throughout Clark County. The MTP must be consistent with the area's comprehensive long-range land use plans, including the Clark County Community Framework Plan; urban development objectives; overall social, economic, and environmental system performance; and energy conservation goals and objectives.

25 **Transportation Demand**

Several factors influence the demand for transportation. These include the growth in population and employment, the patterns of development and land use, and demographic factors including household size, workforce participation, and vehicle ownership.

30 In the 1990's, household size in the county remained stable, averaging 2.69 persons per household. However, housing density is increasing. In 1980, single-family residences accounted for 81% of the housing stock and 19% were multi-family. By 2000, the ratio was 77% single-family to 23% multi-family. Another trend that affects travel demand is the increase in two-worker households, which leads to an increase in vehicle miles traveled per household.

35 Employment patterns have also been changing. There has been an increase in "high-tech" employment opportunities and an expansion of the retail sector in suburban areas of the Portland-Vancouver metropolitan region. This has led to a greater dispersal of employment throughout Clark County.

Travel demand has also grown as a result of the number of passenger cars registered in Clark County. However unlike the dramatic increase of 171% in passenger cars between 1960 and 1980, the increase

(82%) from 1980 to 2000 has tracked closely with the population increase (80%) over the same time period.

Freight traffic is also an important component of travel demand. A recent study commissioned by the Port of Portland suggests that freight truck transportation would increase significantly in the region during next 20 years.

Existing Roadway Facilities

The regional transportation system (Figure 15) has been designated by the Washington Regional Transportation Planning Program to include the four classifications of transportation facilities. The first category includes all state transportation facilities including I-5, I-205, State Routes (SR) 14, 500, 501, 502 and 503.

A second category of facility includes all local freeways, expressways, and principal arterials. Principal arterials, such as Mill Plain, Fourth Plain, NE 78th Street, NE 112th Avenue, SE/NE 164th/162nd Avenue, and segments of St. John's and Andresen are included.

The third type of regional transportation facility is the high capacity transit (HCT) system which includes any express-transit service operating on exclusive rights-of-way or high occupancy vehicle (HOV) lanes. Currently, the I-5, I-205, and SR-500 (I-5 to Orchards area) corridors are designated as HCT corridors. A study of future high capacity transit corridors and modes is underway. The Columbia River Crossing Study is also evaluating HCT options for river crossings in the I-5 corridor.

The final category of regional facility includes all other transportation facilities and services considered necessary to complete the regional transportation plan. These include transit services and facilities, roadways, rail facilities, airports, and marine transportation facilities, which are discussed below.

Existing Transit, Airport, Rail, Port & Non-Motorized Facilities and Services

Within Clark County, local transit is provided by C-TRAN, a publicly funded transit agency. C-TRAN operates approximately 160 vehicles on 18 local urban routes, 8 premium commuter routes and five innovative/dial-a-ride services. C-TRAN provided more than 5.6 million fixed route passenger rides in 2005. Vanpool and paratransit services served an additional 200,000 riders in 2005. C-TRAN also provides more than 1,600 parking spaces at seven park-and-ride facilities. Intercity scheduled bus service to cities throughout the northwest and nationwide is provided by Greyhound Bus Lines and by Northwest Trailways.

There are five general aviation airports operating in or serving Clark County: Portland International Airport (PDX), Pearson Airpark, Grove Field, Goheen Airport, Fly for Fun and Taylor's Green Mountain Airpark. General aviation airports are either publicly or privately owned airports that serve general aviation users. There are also several additional private unattended airfields located throughout Clark County.

Mainline freight rail service in Clark County is operated by Burlington Northern Santa Fe Railroad (BNSF). Union Pacific also operates some freight trains to Tacoma and Seattle on BNSF's lines.

Amtrak provides daily passenger service on the BNSF lines. Twelve daily Amtrak trains serve Vancouver. The *Empire Builder* travels between Seattle and Chicago via Portland, Oregon; the *Coast Starlight* travels between Seattle and Los Angeles via Portland, Oregon; and the *Cascades* travels between Vancouver, British Columbia, and Eugene, Oregon. An average of 5,274 passengers per month utilize the Clark County station. Clark County owns the Lewis & Clark Railroad, a 33-mile short line railroad. The

Columbia Basin Railroad Company is responsible for freight operations on the segment from Battle Ground south. A volunteer group, the Battle Ground, Yacolt, and Chelatchie Prairie Railroad Association (BYCX), operates a passenger excursion program on the segment from Battle Ground north.

5 Clark County has three Port Districts: the Port of Vancouver, the Port of Camas-Washougal, and the Port of Ridgefield. The Port of Vancouver features a variety of modern port facilities with inter-modal connections to railroad and highway systems serving the entire nation.

10 The development of non-motorized transportation modes (bicycling, walking) provides options for travel and recreation as well as maximizing the capacity of the road system. Clark County and other local jurisdictions have included bicycle and pedestrian elements in their comprehensive plans. Bicycling is allowed on all state routes in Clark County except on I-5 between the Interstate Bridge and slightly north of the Mill Plain Boulevard interchange.

Concurrency & Level of Service

15 As defined by the GMA, concurrency is the requirement that adequate transportation capacity be available to support development. Concurrency helps balance the timing and sequencing of development in relation to transportation improvements, such as new streets and traffic signals. Clark County and each city jurisdiction have a concurrency program. The two main parts of a concurrency program are an ordinance, which defines how concurrency is administered, and the comprehensive plan or code, which establishes transportation level-of-service (LOS) standards.

20 The GMA requires local jurisdictions to set LOS standards for transportation facilities that are regionally coordinated. These levels of service are typically designated A through F, from best to worst. LOS E describes conditions approaching and at capacity (critical density).

25 Level of service standards represent the minimum performance level desired for transportation facilities and services within the region. The standards are used to identify deficient facilities and services in the transportation plan, and are also used by local governments to judge whether transportation funding is adequate to support proposed land use developments.

30 Many types of transportation improvement projects are planned by Clark County and local jurisdictions, such as roadway improvements, traffic signals, road widening, intersection reconstruction, access ramps, bicycle lanes and sidewalks, school crossings, and storm drainage improvements. The total cost of these programmed and reasonably funded transportation programs and projects is approximately \$840 million for Clark County, \$406 million for the City of Vancouver, \$99 million for the City of Battle Ground, \$45 million for the City of Camas, \$16.5 million for the City of La Center, \$319 million for the City of Ridgefield, \$81 million for the City of Washougal, and \$5 million for the City of Yacolt.

B. How can growth management plans affect the transportation network in Clark County?

35 Transportation modeling was conducted by Regional Transportation Council staff using the regional EMME/2 travel demand model. Modeling was performed on the 2030 Metropolitan Transportation Plan Update (2030 MTP Update) network for both highways and transit. Refer to this document for details on the network assumptions. Alternative 1 and the Preferred Alternative were analyzed as “stand alone” alternatives for impacts and mitigation. Results were reviewed and adjustments made during post-
40 processing where volume balancing was necessary. Table 29 describes the performance measures that were used to analyze Alternatives 1 and the Preferred Alternative.

Table 29. Performance Measures , Alternative 1 and Preferred Alternative

	Alternative 1 (No Action)	Preferred Alternative
Total Person Trips*	2,684,788	2,704,046
Percent to Portland	7.40%	7.09%
All-Day Bridge Crossings	338,586	331,985
Vehicle Miles Traveled	1,096,954	1,117,794
Vehicle Hours Traveled	31,895	32,419
Vehicle Hours of Delay (VHD)	3,685	3,699
Lane Miles LOS E/F	176	202
Non-motorized mode share	6.52%	5.99%
Transit Share – all trips	1.30	1.13
Average roadway speed	34	34

Source: Regional Transportation Council

5 Table 30 summarizes the estimated level-of-service for major arterial corridors within Clark County in 2024. It is based on the volume-to-capacity ratio, which is not the actual measure used to determine transportation concurrency, but is a good indicator of future areas of concern. Where a major facility is not listed or where no letter is shown in the table, the roadway is expected to be operating at LOS D or better conditions in 2024. Figures 16 and 17 show the road segments where the projected traffic volume is likely to approach or exceed the road capacity for Alternatives 1 and the Preferred Alternative.

10

Table 30. Major Transportation Corridors: Estimated LOS, Alternative 1 and Preferred Alternative

Corridor Segment	Alternative 1 (No Action)	Preferred Alternative
I-5, Columbia River to 99 th Street	F	F
I-5, 99 th to I-205	D	D
I-205, Columbia River to SR-500	E/F	D/E
I-205, SR-500 to I-5	D	D
I-5, I-205 to 219 th	-	-
I-5, 219 th to Ridgefield	D/E	F
SR-500, I-5 to I-205	D	D
SR-503, SR-500 to 119 th Street	F	F
SR-503, 119 th Street to Battle Ground	D/E	E/F
SR-502, I-5 to Battle Ground	-	D
SR-501, I-5 to Ridgefield	-	-
SR-14, I-205 to 164 th Avenue	D/E	E/F
Fourth Plain, SR-503 to 162 nd Avenue	E/F	E/F
Ward Road, Fourth Plain to UGA	F	F
Ward/182 nd , UGA to 159 th Street	-	-
162 nd Avenue, SR-14 to Mill Plain	D	D/E
162 nd Avenue, Mill Plain to Ward	F	F
La Center Road, I-5 to La Center	E/F	F
Lakeshore/Fruit Valley, NE 61 st Street to 139 th Street	F	E/F
72 nd Avenue, 119 th to 219 th Street	F	F
199 th Street, NE 10 th to 72 nd Avenues	-	-
179 th Street, I-5 to 72 nd Ave.	-	D/E-
Burton Road, Andresen to 112 th Avenue	E/F	D
Andresen/Padden/88 th Street vicinity	F	F
137 th Ave., 28 th to Fourth Plain	-	-

Source: Clark County Community Planning, 2007

In addition, WSDOT has provided a more detailed comparison of level-of-service impacts of the alternatives on State facilities in Clark County (Table 31) which quantifies the number of miles of each roadway that would likely be at or approaching failure. The table compares deficiencies between the 2024 Alternative 1 and 2024 Preferred Alternative Plan.

5

Table 31. Washington State Transportation System PM Peak Deficiencies

Functional Class	Route	LOS ¹	Deficient Directional Miles			
			2024 Alternative 1 (No Action)	2024 Preferred Alternative	Change of Deficient Miles	Total Directional Miles in Clark County
Freeway, Express Way, Principal Arterial, and Ramps	005	E	9.00	10.79	1.79	
		F	3.04	2.97	-0.07	
	subtotal	12.04	13.76	1.72	41.56	
	014	E	0.19	0.30	0.11	
		F	0.74	0.44	-0.30	
	subtotal	0.93	0.74	-0.19	43.04	
	205	E	5.09	4.50	-0.59	
		F	2.25	1.40	-0.85	
	subtotal	7.34	5.90	-1.44	21.14	
	500	E	0.75	0.50	-0.25	
		F	0.00	0.25	0.25	
	subtotal	0.75	0.75	0.00	20.26	
	501	E	0.35	2.45	2.10	
		F	0.17	0.17	0.00	
	subtotal	0.52	2.62	2.10	29.02	
	502	E	0.00	2.88	2.88	
		F	0.00	0.00	0.00	
	subtotal	0.00	2.88	2.88	15.16	
503	E	3.32	5.49	2.17		
	F	3.76	4.78	1.02		
subtotal	7.08	10.27	3.19	18.28		
Total	E	18.70	26.91	8.71		
	F	9.96	10.01	-0.70		
		28.66	36.92	8.26	188.46	
Minor Arterial	503 ⁴	E	1.55	0.35	-1.20	
		F	1.23	1.23	0.00	
Total		2.78	1.58	-1.20	36.92	
Major Collector	500 ⁵	E	1.73	1.11	-0.62	
		F	0.00	1.73	1.73	
Total		1.73	2.84	1.11	24.10	
All State Facilities	Total	E	21.98	28.37	6.39	
		F	11.19	12.97	1.78	
		33.17	41.34	8.17	249.48	

1. The LOS is determined by V/C ratio. For LOS E, 0.88 < V/C <= 1; for LOS F, V/C > 1.

2. The volume used in the analysis is PM peak hour volume.

3. The volume and capacity data are from SWRTC Travel Demand Model.

10 4. On SR 503, the functional class is Principal Arterial from Fourth Plain to the north boundary of Battle Ground; at the north of Battle Ground, the functional class for SR 503 is Minor Arterial.

5. On SR 500, the functional class is Principal Arterial from I-5 to 162nd Ave; from 162nd Ave to SR 14, the functional class for SR 500 is Major Collector.

15

1. Impacts to Roads and Highways

Both alternatives show a significant number of congested lane miles of roadway. For purpose of this analysis, congestion is assumed to occur wherever the modeled volume-to-capacity ratio is 0.90 or higher during the p.m. peak hour. The congested facilities by alternative are shown in Figures 16 and 17.

5 Most of I-5 south of 99th Street is forecast to be at LOS F conditions under both alternatives, even with the widening to six lanes. The Leadership Committee of the Trade and Transportation Partnership Study has agreed not to widen I-5 beyond the existing six travel lanes. A Draft EIS is underway that will analyze a variety of options for the Columbia River Crossing and the Bridge Influence Area and make
10 recommendations on a preferred alternative. In addition to river crossing and transit components, the evaluation will consider freight, bicycle, pedestrian, and transportation system management/transportation demand management performance. At this time, there are no eight-lane I-5 alternatives for the section of I-5 from 134th Street to approximately Mill Plain Boulevard, although the section leading to the Columbia River crossing has a variety of lane configurations that in essence could serve as eight through-lanes of traffic across the Columbia River. While the modeling shows a need for
15 eight lanes on I-5 during the p.m. peak hour, this cross-section would be inconsistent with the bi-state consensus that emerged as a result of previous work in the I-5 Transportation and Trade Partnership Study.

Significant congestion is also likely to occur on I-5 between the 219th and Ridgefield interchanges unless alternative arterial and collector routes are planned and built. The high traffic volumes on this segment of
20 I-5 appear to be due to local trips and the lack of parallel arterial and collector roadways. The County has adopted an Arterial Plan Map amendment to add a future new roadway extension west from the I-5 /219th Interchange to Hillhurst Road and into Ridgefield that would provide an alternative for some local trips.

The adopted Metropolitan Transportation Plan and the draft WSDOT Highway System Plan include a series of long-term traffic operations improvement projects on I-205 between the Glen Jackson Bridge and the Padden Parkway. These include a new split-diamond interchange with 18th Street and Burton Road, and a collector-distributor system between 18th and 28th Streets. Modeling shows that these improvements would likely not solve all congestion problems during the p.m. peak hour of travel demand. Traffic volumes and congestion would be higher under Alternative 1 (E/F) than under the
30 Preferred Alternative (D/E) on I-205 north of SR-14.

The Columbia River bridges for I-205 and I-5 would operate at LOS F during the peak hour under both Alternatives 1 and the Preferred Alternative. All day bridge crossings for Alternative 1 are about 2% higher than for the Preferred Alternative, resulting in slightly higher peak hour congestion.

Under both alternatives, the SR-503 corridor between Fourth Plain and NE 119th St would be at LOS F. The segment from 119th to SR-502 in Battle Ground would be at LOS D/E in Alternative 1 and E/F in the Preferred Alternative. This corridor serves a significant portion of the proposed urban growth expansion of the Battle Ground and Vancouver UGAs as well as being a major travel route for rural commuters. The draft Washington Highway System Plan includes several solutions to address mobility and safety concerns in this corridor ranging from Intelligent Transportation System (ITS) investments and median curb to a six lane widening project. Widening to six lanes would result in impacts to adjacent
40 residents, businesses, and two schools along with potential wetlands impacts near Salmon Creek and Meadowglade.

SR-14 is at or approaching full capacity between I-205 and SE 164th Avenue in both the No Action and Preferred Alternatives. The draft Washington Highway System Plan includes several solutions to address mobility and safety concerns in this corridor ranging from ITS, ramp widening and extensions, auxiliary
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lanes and ramp metering at interchanges in addition to the planned widening from NW 6th Street across Lady Island to Union Street/SR-500, and an interchange project at Union Street/SR-500.

The level-of-service on some segments of SR 502 from I-5 to Battle Ground would decline to LOS D under the Preferred Alternative.

5 Levels of service on most county and city roadways would be similar under either alternative. Exceptions are noted under the discussion of the alternatives below. Corridors within the Vancouver UGA that would experience poor to failing levels of service during peak hours under both alternatives include:

- NE 162nd/SE 164th Avenue
- Ward Road
- 10 • NE 152nd from Ward Road to NE 99th Street
- NE 137th Ave from Padden Parkway to NE 99th Street
- Fourth Plain from SR-503 to NE 137th Avenue
- NE 121st Avenue from 49th St to Fourth Plain
- NE 49th Street from 121st Avenue to 137th Avenue
- 15 • NE 28th Street from 121st Avenue to 138th Avenue
- NE 18th Street from I-205 to NE 138th Avenue
- Mill Plain Boulevard from I-205 to NE 136th Avenue
- Salmon Creek Avenue
- Andresen Road/ Padden / 88th St /I-205 area
- 20 • Lakeshore Avenue
- Hazel Dell Avenue from NE 63rd Street. to NE 78th Street
- Sections of NE 99th Street near Gaiser Middle School
- Sections of Main Street/Highway 99 from McLoughlin to NE 78th Street
- NE 86th/87th Avenues from Fourth Plain of NE 18th Street
- 25 • SR-500 interchanges at St. Johns, NE 54th Ave. and Andresen Road
- Vancouver Plaza Drive and several neighborhood routes around the mall
- NE 72nd Avenue north of NE 119th Street
- NE 50th Avenue from Salmon Creek to NE 179th Street
- NE 13th Street/ Goodwin Road
- 30 • La Center Road, La Center Bridge and E 4th Street
- 82nd Avenue at Daybreak Bridge
- SR-503 north of Battle Ground to NE 269th Street

Alternative 1 (No Action)

35 Alternative 1 has a lower number of total person trips, vehicle miles traveled, vehicle hours of delay and lane miles of congestion and a somewhat higher share of transit and non-motorized trips (Table 29). The number of all day Columbia River Bridge crossings is slightly higher than for the Preferred Alternative. With the number of bridge crossings projected, and with the modeled network not assuming replacement

40 of the I-5 Bridge, the result would still be substantial traffic queues approaching each Columbia River Bridge, as well as a longer peak period for both morning and evening commutes.

I-5 and I-205 bridges would both be operating at LOS F conditions. Because of the impacts on the freeway mainlines, it is expected that in the a.m. peak travel time in Clark County, ramps leading to the I-5 and I-205 facilities would queue and would spill back onto the intersecting arterials, impacting traffic operations on those facilities.

- 5 With the forecast level of congestion, there could be increased cut-through traffic using neighborhood streets to avoid congestion on the major corridors, intersections, and interchanges.

Major corridors where traffic levels are noticeably higher and where levels of service would be lower compared to the Preferred Alternative include sections of:

- I-205 from Mill Plain to Burton Road
- 10 • Burton Road from Andresen Road to NE 86th Avenue
- the SE 164th Avenue corridor from Mill Plain to 18th Street
- NE 18th Street from 162nd to 172nd Avenue
- SE 192nd Avenue from SR-14 to SE 34th Street
- Highway 99 from Ross to NE 63rd Street
- 15 • Lakeshore from 78th to 99th Street
- 78th Street from St. Johns to NE 51st Avenue

Preferred Alternative

- 20 The Preferred Alternative is higher in the number of total person trips, congested lane miles, vehicle hours of delay, vehicle hours and miles traveled (Table 29). I-5 and I-205 and the mainline approaches would both be operating at or near LOS F conditions. The Preferred Alternative has 6,601 fewer daily bridge crossings, which is a 1.9% difference. Because of the impacts on the freeway mainlines, it is expected that in the a.m. peak in Clark County, ramps leading to the I-5 and I-205 facilities would queue and would spill back onto the intersecting arterials, impacting traffic operations on those facilities.
- 25 Congestion on the major corridors, intersections, and interchanges could increase the potential for traffic to use neighborhood streets to avoid congestion.

Major corridors where traffic levels are noticeably higher and where levels of service would be lower compared to Alternative 1 include:

- SR-503 from south of NE 119th St to NE 199th Street
- 30 • NE 164th Ave from SE 15th Street to Mill Plain
- Cramer Road from NE 179th to 189th Street
- NW 11th Ave/Spencer Rd
- NE 259th Street from east of NE 10th Avenue to 29th Ave
- portions of Hillhurst and Royle Roads
- 35 • NE 10th Avenue from NE 219th Street to Carty Road
- I-5 from NE 219th St to Ridgefield Junction
- LaCenter Road just east of the I-5 interchange
- NE 142nd Avenue from 159th Street to Battle Ground City Limits
- Several road segments within the Battle Ground City Limits
- 40 • Several short road segments within the proposed Washougal UGA
- NE 50th Avenue from Salmon Creek Avenue to NE 179th Street

2. Impacts to Public Transportation

Under both alternatives, C-TRAN buses would travel in mixed traffic on surface streets and freeways. No high capacity transit facilities were included in the transportation network. A study of potential high capacity transit corridors and options is just getting underway under the direction of the Regional Transportation Council. The Columbia River Crossing Study is also evaluating HCT options for river crossings in the I-5 corridor.

C-TRAN buses would experience high congestion levels on most local routes and cross-river commuter routes. C-TRAN service corridors would experience substantial delays and, therefore, increased costs to provide levels-of-service reflecting current conditions. These corridors include:

- I-5 between NE 219th Street and the Interstate Bridge and downtown Portland
- I-205 between Mill Plain and the I-205 Bridge
- Fruit Valley Road / Mill Plain between Felida and downtown Vancouver
- Burton Road and Mill Plain Boulevard routes
- Andresen Road routes
- Highway 99 between the Salmon Creek Transit Center and downtown Vancouver
- NE 162nd / 164th Avenue routes
- Connector routes to Battle Ground, La Center, Yacolt and Ridgefield
- Routes using SR-14 to serve Camas/Washougal

Alternative 1 (No Action)

Alternative 1 assumes no expansions to existing UGA boundaries. Future growth would occur inside existing UGAs. With greater housing and employment densities, demand for transit service would likely increase. C-TRAN may need to expand service hours, but the additional service would be focused primarily within the existing Vancouver UGA. The financial impacts on operations and maintenance budgets are not known at this time. Increased ridership could be gained as a result of higher densities, higher levels of service on high ridership corridors and through provision of additional park-and-ride facilities to capture commuter work trips on I-5, I-205, and other regional facilities. Development of park-and-ride facilities would require significant capital expenditures and increased operating expenditures to provide new service routes to the facilities. Significant delay on I-5 and I-205 may serve to encourage transit ridership, particularly if signal priority, freeway queue-jump lanes or preferential freeway lanes are implemented.

Preferred Alternative

The Preferred Alternative expansion is about 12,063 acres or roughly 18.8 square miles. Much of the land in these expansion areas would be allocated for additional moderate to low-density housing. Providing transit service to these areas would be more expensive because it costs more to serve spread-out, low density residential areas. C-TRAN would not be likely to expand service boundaries where land uses and densities are not transit-supportive. Increased ridership might be gained through a variety of strategies including provision of additional park-and-ride facilities to capture commuter work trips on I-5, I-205, and other regional facilities. Development of these park-and-ride facilities would require significant capital expenditures and increased operating expenditures. Significant delays on I-5 and I-205 may serve to encourage transit ridership, particularly if signal priority, freeway queue-jump lanes or preferential freeway lanes are implemented.

3. Impacts to the Pedestrian/Cycling Network

Impacts would be similar under either alternative. The non-motorized mode share is .53% higher for Alternative 1 than for the Preferred Alternative. Congestion on the major corridors could serve to encourage pedestrian and bicycle trips for shorter non-work trips and bicycle trips for work trips, if pedestrian and bicycle facilities were provided. Development of a safe and convenient bicycle and pedestrian network is also vital to an effective transit system.

The outlying employment centers in the Preferred Alternative may serve to discourage longer-distance bicycle commute trips without a focus on regional bicycle facilities connecting the Vancouver and Battle Ground UGAs to other FPIAs and urban areas.

Listed below are locations of identified bicycle system deficiencies within FPIAs. The listed deficiencies are either “caution” areas or “failed” areas. It is recommended that cyclists use caution while riding on “caution” corridors. Areas considered “failed” are not recommended as bike routes. Extreme caution should be used while riding through these areas:

- Ridgefield Junction: NE 10th Avenue
- Discovery Corridor: NE 179th Street
- St. John’s: NE 72nd Avenue
- 117th Avenue : NE 94th Avenue
- Vancouver Mall: NE Andresen Road and NE Thurston Way

Most FPIAs also include facilities considered to have low bike levels of service. These facilities are not recommended for bike riders of low and average riding skill. Bicycle and pedestrian facilities should be provided as these facilities are upgraded or expanded. Development of multi-use trails should also be considered where appropriate.

4. Impacts to the Freight System

The movement of freight is critical to the economic health of Clark County, Southwest Washington and the Portland Metropolitan Region. Significant improvements to the freight rail system would be necessary under any alternative in order to reduce the existing bottlenecks and increase the system capacity. There are several projects underway to address rail system capacity problems and improve service to the Port of Vancouver.

Truck freight mobility is dependent on road and highway levels of service. To some extent, truck shipments can shift to off-peak hours to reduce delays. The best available indicators of freight performance for comparing the alternatives are the total vehicle hours of delay and the roadway levels of service during the p.m. peak.

Using these metrics, freight mobility would be substantially impacted by either alternative. The number of vehicle hours of delay is essentially the same for Alternative 1 (3,685) and for the Preferred Alternative (3,699). Based on the p.m. peak hour data, the major freight corridors that would likely experience substantial delays under either alternative are:

- I-5 between Ridgefield and the Interstate Bridge
- I-205 between SR-500 and the I-205 Bridge
- SR-503 from SR-500 to Battle Ground
- SR-14 from I-205 to NE 164th Avenue

- Mill Plain east of I-205
- Fourth Plain east of SR-503
- NE 72nd Avenue from 119th to 219th Street
- NE 162nd Avenue from SR-500 to Ward Road
- 5 • Portions of Lakeshore/Fruit Valley Road between NE 99th Street and the Port of Vancouver
- Additional freight corridors that would be impacted under Alternative 1:
- Portions of NE 192nd Avenue
- Burton Road from Andresen Road to NE 86th Avenue
- the SE 164th Avenue corridor from Mill Plain to 18th Street
- 10 • SE 192nd Avenue from SR-14 to SE 34th Street
- Highway 99 from Ross to NE 63rd Street
- NE 78th Street from St. Johns to NE 51st Avenue
- Additional freight corridors that would be impacted under the Preferred Alternative:
- Portions of SR-502 from I-5 to Battle Ground
- 15 • NE 10th Avenue from NE 219th Street to Carty Road
- I-5 from NE 219th St to Ridgefield Junction
- La Center Road just east of the I-5 interchange

5. Impacts to the School Transportation System

20 Congestion on the major arterial roadways from either alternative would likely have adverse impacts on school bus operations. Peak morning congestion would increase travel time for school buses, which in turn reduces the length of routes that school buses can have and still run on time (high schools and middle schools).

25 Because elementary schools tend to convene at a later time, the increased peak period congestion would be unlikely to have a significant impact on school bus transportation. Conversely, all school types dismiss prior to the start of the p.m. peak, which limits the impact of congestion on school bus operations.

30 School buses often serve high schools first, then middle schools, and then elementary schools. Since schools tend to use the buses for multiple trips, the number of buses and routes needed somewhat depends on the traffic levels during the high school and middle school morning pickups. Consequently, any increased morning peak congestion on the major arterial routes would negatively impact school bus operations by requiring a greater number of buses. Since the a.m. peak hour level of service was not specifically analyzed, a comparison of relative impacts between the alternatives is not available. In general, the Preferred Alternative, based on the higher total vehicle hours of delay, is likely to create the greater impact.

6. Impacts to Emergency Services

Refer to discussion and tables in the sections regarding Impacts on Fire Protection and Impacts on Police Protection in Section XIII Public Facilities and Utilities.

7. Safety

40 There are several high accident corridors and locations currently identified within Clark County (identified by WSDOT, Clark County, and the City of Vancouver). These include:

- I-5 from NE 134th Street to NE 179th Street

- SR-500 from I-5 to SR-503
- SR-502 from I-5 to Battle Ground
- I-205 at NE Mill Plain/Chkalov
- NE 78th Street at Highway 99
- 5 • NE 182nd Avenue from NE 119th Street to NE 159th Street
- SR-14 from SE 192nd Avenue to Washougal
- NE 72nd Avenue from 119th Street to 219th Street
- NE 99th Street at 130th Avenue
- NE 78th Street at NE 5th Avenue
- 10 • Thurston Way at Parkway Drive
- Thurston Way/82nd Avenue at Vancouver Mall Drive
- NE 49th Street at 122nd Avenue
- Fourth Plain at F Street
- Columbia Street at W 13th Street
- 15 To the extent that each alternative adds significant traffic to these locations, it would exacerbate the high accident problem unless mitigation measures are undertaken.

8. Impacts on Focused Public Investment Areas (FPIAs)

Focused Public Investment Areas are distributed throughout the south and west portions of the county (see DEIS Figure 31). The intent of the FPIA approach is to be able to focus public infrastructure investments in a concentrated area for increased efficiency. For transportation, this could include a mix of roadway improvements, park-and-rides, bikeways and walkways, traffic calming, and safety improvements. Where congestion occurs within or adjacent to FPIAs, funds could be focused on fixing those transportation problems. Conversely, where traffic congestion occurs outside of the identified FPIAs, improvements needed to improve these facilities could reduce the amount of funding available to make investments within the FPIAs.

Substantial traffic congestion would occur on many of the major corridors countywide under either alternative. Relieving traffic congestion would require a sizeable investment in corridors connecting urban areas together as well as corridors within urban growth areas.

The No Action and Preferred Alternatives would have somewhat different impacts to the various FPIAs. Alternative 1 assumes aggressive growth in essentially all of the FPIAs within the Vancouver UGA and restrains growth in all other FPIAs to the amount permitted under the existing land supply. The Preferred Alternative would create a new large employment center at La Center Junction and would expand the supply of employment land at Ridgefield Junction and in the 117th St. FPIA. As previously noted, there are few major differences between these alternatives in terms of transportation corridor failures. The high levels of growth in Section 30 and the Columbia Tech Center in Alternative 1 appear to contribute significantly toward the increased congestion on Burton Road, 162nd Ave and 192nd Avenue. The dispersal of jobs and households and lower jobs-to-population ratio in the Preferred Alternative contribute to declining levels of service on several major corridors that serve FPIAs including SR-502 and SR-503 to Battle Ground, NE 50th Ave through the WSU Research Park FPIA and 72nd Ave and Andresen/Padden in the St. Johns FPIA.

C. How do the growth management plans and development regulations of the cities and Clark County reduce the potential impacts? Do other options for mitigation exist?

5 The transportation analysis highlights several major policy issues. Most of these issues are the same regardless of the alternative selected.

Cross-river bridge capacity is not sufficient to serve projected growth at the currently adopted level-of-service. The Columbia River Crossing EIS is addressing some aspects of this problem within the I-5 corridor. When a preferred Columbia River Crossing alternative is identified, it would be critical for the region to support it and aggressively pursue the resources necessary to complete the project.

10 During the course of the I-5 analysis, the issue of additional bridges across the Columbia River was repeatedly raised. There should be more study to identify whether there are any corridors where a bridge would be feasible. The initial study could be done in the context of the 50-Year Transportation Corridor Visioning process that is underway. If there are no realistic highway corridor connections, the other
15 option for increasing cross-river capacity would be high capacity transit (HCT). There is a study underway of HCT options that would identify the most promising policies, corridors and modes for increasing the level of transit service in Clark County. The effects of additional cross-river transit capacity should be a key consideration in the study.

20 A comparison of the alternatives also demonstrates the need for a better balance between jobs and housing in Clark County. If the population grows without a corresponding growth in local employment, the peak hour failure of the interstates and bridges is inevitable. Beyond the monitoring of land supply, jobs, and housing growth, consideration should be given to more effective economic development strategies and programs that support the expansion of existing businesses. Policies that prevent unbalanced housing growth could also be considered.

25 A second policy issue is how to address low levels of service on state highways. Although HB 1487 exempts Highways of Statewide Significance (HSS) from concurrency requirements, it requires the County, RTC, and WSDOT to jointly adopt a level-of-service for Highways of Regional Significance (HRS: state highways that are not HSS). HB 1487 also requires WSDOT to set a level-of-service for HSS routes. Both of the land use alternatives analyzed here contribute to traffic growth and congestion on Clark County's HSS and HRS routes.

30 Given the right-of-way, policy and financial constraints, the widening of I-5 to eight travel lanes outside of the Columbia River Crossing Bridge Influence Area is unlikely. Similar limitations apply to I-205 beyond the projects already programmed in the MTP. The acceptable level-of-service in these corridors may have to change or be redefined in terms of a multi-hour peak.

35 The draft Washington Transportation Plan has identified three tiers of proposed solutions to congestion and safety problems on SR-503 from Fourth Plain to Gabriel Road, on SR-500 from I-5 to Fourth Plain and on SR-14 from I-5 to the Washougal east city limits. In general, the lower cost solutions include ITS improvements and/or medians, while maximum cost options focus on widening and interchange improvements. The draft plan is not financially constrained. It identifies \$330 million in Tier 1 projects within Clark County, \$401 million in Tier 2 projects and \$501 million in Tier 3 projects.

40 The region has been successful in recent years in securing appropriations of approximately \$500 million for major improvement projects on state highway corridors. These include the I-5/NE 219th Street Interchange, the I-5/Ridgefield Junction Interchange, the I-5/Salmon Creek Interchange, a new

interchange at SR-500 and St. Johns, interchange improvements at I-205/Mill Plain, widening of SR-502 to Battle Ground and SR-14 in Camas. Funding for major projects on state highways is primarily controlled by the State Legislature and dependent on voter approved tax packages. It is difficult to program local funds, including traffic impact fees, for state highway projects until the state's share of the improvement costs is known.

An additional strategy for preserving and maximizing the capacity of state highway facilities is to ensure that there are parallel arterial and collector roadways that reduce and replace the demand for short distance travel on state highways. The transportation analysis makes it clear that there would be significant growth in north-south travel demand due to population growth in Battle Ground, Ridgefield, La Center and the unincorporated rural area.

Current county policy does not provide for four-lane rural arterials except as state highways. NE 72nd Avenue under both alternatives shows a need for four lanes between NE 119th Street and NE 219th Street/SR-502. Access to growth in the south part of Ridgefield may require the western extension of a rural arterial from the I-5/NE 219th Street Interchange. Other corridors, such as NE 137th Avenue and NE 172nd/182nd Avenues could provide relief to SR-503 congestion if designated for arterial level future capacity and could be necessary to accommodate long term growth as the area between the current Vancouver and Battle Ground UGAs is urbanized. Changes to the policy, code and Arterial Plan Map would be needed to designate and preserve future north-south arterial corridors.

Some of the future deficiencies are on arterial and collector roadways that have been built out to their current functional classification. Given the high levels of urban growth adjacent to the existing right-of-way, it may not be realistic to increase capacity by adding travel lanes in these constrained corridors. Widening projects beyond the functional classification of a roadway should be weighed against other options including:

- Adding capacity at intersections, or through signal coordination and access management;
- Adding transit capacity;
- Land use and design that increases non-motorized travel;
- Identifying new corridors through the 50-Year Transportation Corridor Visioning process or other studies;
- Circulation plans that reduce access and local trips on arterial corridors; and
- Reducing the level-of-service.

Table 32 shows a comparison of the locations where transportation capacity improvements would be needed to achieve a system-wide level-of-service on roadways approximating LOS D for each alternative. Table 33 shows proposed mitigation measures to address the congested corridors identified above.

Table 32. Capacity Project Needs by Alternative

Corridor Segment	Alternative 1 (No Action)	Preferred Action
Highways of Statewide and Regional Significance		
I-5, Columbia River to 99 th St.	X	X
I-205, Columbia River to SR-500	X	X
I-5, 219 th to Ridgefield (or alternate route)	X	X
SR-500, 162 nd to 182 nd Aves	X	X
SR-503, Fourth Plain to 119 th St	X	X
SR-503, 119 th St to 269 th St, N. of Battle Ground	X	X
SR-14, I-205 to 164 th Ave	X	X
Rural and Inter-urban Corridors		
Ward Rd, Fourth Plain to UGA	X	X
NE 182 nd Ave at 159 th St	X	X
NE 13 th St / Goodwin Rd	X	X
NE 72 nd Ave, 119 th to 219 th St	X	X
NE 259 th Street, NE 10 th Ave to 29 th Ave.		X
NW Timmen Rd / NW Spencer Rd / NW 11 th Ave		X
Daybreak Bridge / NE 259 th St	X	X
Multimodal		
Bike/pedestrian improvements particularly in FPIAs, around schools and in mixed use areas	X	X
High Capacity Transit	X	X
Extended transit service to outlying employment centers		X
Vancouver UGA		
Burton Road, Andresen to 86 th Ave	X	
NE 18 th St, I-205 to NE 138 th Ave	X	X
Andresen/Padden/NE 88 th Street area	X	X
Mill Plain Blvd, I-205 to NE 136 th Ave	X	X
NE 137 th Ave, Fourth Plain to 99 th St	X	X
Fourth Plain Blvd, SR503 to NE 137 th Ave	X	X
SE 164 th Avenues, SR-14 to Mill Plain		X
NE 162 nd Avenue, Mill Plain to Ward	X	X
Lakeshore Ave, RR Bridge to NE 119 th St	X	X
Salmon Creek Ave, NE 134 th St to NE 50 th Ave	X	X
NE 219 th St. Arterial extension to NW 31 st /Hillhurst		X
Hazel Dell Ave, NE 63 rd to 78 th St.	X	
NE 50 th Ave, Salmon Ck to NE 179 th St		X
NE 87 th Ave, Mill Plain to Fourth Plain	X	X
NE 99 th St, NE 25 th to 50 th Ave	X	X
Main St /Hwy 99, 39 th St to NE 78 th St	X	X
NE 152 nd Ave, Ward Rd to 99 th St	X	X
NE 142 nd Ave, NE 159 th St to 199 th St	X	X
SR-500 crossings at St. Johns, 54 th Ave & Andresen	X	X
Vancouver Plaza Dr & local routes near mall	X	X
Battle Ground UGA		
NE 112 nd Ave, NE 179 th to Main St	X	X
NE 112 th Ave, Main St to 244 th St		X
Main St, SR-503 to Grace Ave	X	X
Main St, NE 94 th Ave to SR-503		X
NE 199 th St, NE 112 th Ave to Parkway Ave	X	X
Ridgefield UGA		
NE 259 th St W of NE 10 th to 29 th Ave		X
S. Hillhurst & S. Royle Rd.		X
La Center UGA		
La Center Rd, I-5 to La Center,	X	X
E 4 th St, La Center Rd to Highland St	X	X

Source: Clark County Department of Assessment and GIS, 2005

Table 33. Proposed Transportation Mitigation Measures

Corridor Segment	Proposed Mitigation
Highways of Statewide and Regional Significance	
I-5, Columbia River to NE 99 th St.	Implement CRC EIS preferred alt. and/or modify LOS measure
I-205, Columbia River to SR-500	WA Highway System Plan tiered solutions
I-5, NE 219 th to Ridgefield	Add 219 th west extension to City or County CFP
SR-500, NE 162 nd to 182 nd Aves	Frontage improvements w/ development
SR-503, Fourth Plain to NE 119 th St	WA Highway System Plan tiered solutions
SR-503, NE 119 th St to 269 th St, N. of Battle Ground	WA Highway System Plan tiered solutions
SR -14, I-205 to 164 th Ave	WA Highway System Plan tiered solutions
Rural and Inter-urban Corridors	
Ward Rd, Fourth Plain to UGA	Complete corridor improvements to Pr4-cb
182 nd Ave at NE 159 th St	Include in CFP intersection projects
NE 72 nd Ave, NE 119 th to 219 th St	Designate and construct as rural arterial
NW Timmen Rd/ Spencer Rd/ NW 11 th Ave	Frontage improvements were identified in La Center FEIS
Daybreak Bridge / NE 259 th St	Not a concurrency corridor; accept peak hour congestion
Multimodal	
Bike/pedestrian improvements	Prioritize and include in CFP projects and on-going programs
High Capacity Transit	To be determined by HCT study recommendations
Reduce peak hour home-to-work trips	Extended transit service to employment centers; expand Commute Trip Reduction program
Vancouver UGA	
Burton Road, Andresen to 86 th Ave	Constrained corridor; ITS proposed in City CFP
NE 18 th St, I-205 to NE 138 th Ave	Construct 5 lane arterial; included in adopted City CFP
Andresen/Padden/NE 88 th Street area	Constrained corridor; over-capacity even with build out and new interchange; identify and evaluate new corridor options in 50-Year Trans. Visioning Process; I-205 NB off ramp to 72 nd Ave is in WA Highway System Plan
Mill Plain Blvd, I-205 to NE 136 th Ave	Parallel street circulation improvements; in adopted City CFP
NE 137 th Ave, Fourth Plain to NE 99 th St	Constrained corridor; not a concurrency corridor; accept peak hour congestion or add to Orchards TIF projects
Fourth Plain Blvd, SR-503 to NE 137 th Ave	Constrained corridor; ITS proposed in City CFP
162 nd Avenue, SR-14 to Mill Plain	Constrained corridor; ITS proposed in City CFP
NE 162 nd Avenue, Mill Plain to Ward	Constrained corridor; ITS proposed in City CFP
NW Lakeshore Ave, RR Bridge to NE 119 th St	Not a concurrency corridor north of 78 th St; accept some peak hour congestion; include in intersection improvements in County CFP
Salmon Creek Ave, NE 134 th St to NE 50 th Ave	Constrained corridor; make safety improvements as needed and evaluate new corridor options in 50-Year Transportation Visioning Process
NE 219 th St. extension to NW 31 st /Hillhurst	Add to County or Ridgefield CFP
Hazel Dell Ave, NE 63 rd to 78 th St.	Re-stripe to 3 lanes; require intersection improvements with development as needed
NE 50 th Ave, Salmon Ck to NE 179 th St	Add 119 th to 179 th segment to County CFP
NE 87 th Ave, Mill Plain to Fourth Plain	City Transportation Plan includes parallel route improvements to 92 nd and 97 th corridors
NE 99 th St, NE 25 th to 39 th Ave	These two short segments of apparent congestion are due to the transportation model loading all of the residential trips from the north and south sides of NE 99 th St onto 99 th St. Now that Basin 12A streets are more connected, a proportionate share of trips should be assigned to 88 th St.
Main St /Hwy 99, 39 th to NE 78 th St	Expand Hwy 99 project to 78 th St; Main St improvements and ITS project are in City CFP; consider HCT
NE 152 nd Ave, Ward Rd to NE 99 th St	Add to County CFP

Corridor Segment	Proposed Mitigation
NE 142 nd Ave, NE 159 th St. to 199 th St	Add rural section to County CFP; urban section should be frontage improvements or City CFP project
SR-500 crossings at St. Johns, 54 th Ave & Andresen	Arterial improvements and ITS projects that address all three corridors are in adopted City CFP
Vancouver Plaza Dr & local routes near mall	Arterial improvements and ITS projects that address mall area are in City CFP. Vancouver Plaza Dr. is not a concurrency corridor
Battle Ground UGA	
NE 112 nd Ave, NE 179 th to 244 th St	Identified in City TSP as a County project; add to City projects
Main St, SR-503 to Grace Ave	Constrained corridor; City TSP projects add capacity to several parallel routes
NE 199 th St, NE 112 th Ave to Parkway Ave	Intersection improvements included in City TSP
Ridgefield UGA	
NE 259 th St. W of NE 10 th to 29 th Ave.	Frontage improvements with development
S. Hillhurst & S. Royle Rd.	Frontage improvements with development
La Center UGA	
La Center Rd, I-5 to La Center,	City DEIS includes planning level estimates for widening and for a second bridge alternative
E 4 th St, La Center Rd to Highland St	Continuous left turn lane identified in City DEIS; City preferred alternative would divert through traffic to another corridor and river crossing
Camas	
NE 13 th St / Goodwin Rd	City should add project to their CFP

Source: Clark County, 2007

5 All of the cities experiencing growth adopted new or updated transportation plans which identify the deficiencies, levels-of-service, proposed improvements, costs and revenues in 2004 or since. Washougal is in the process of adopting a new transportation CFP. Ridgefield and La Center have also issued EIS documents that address the impacts and mitigation for their proposed UGA expansions. These documents provide a much more detailed analysis than can be readily summarized in this FEIS. All adopted plans meet the GMA requirements.

Table 34 identifies County transportation projects that would be necessary to mitigate the impacts of additional population and employment projected under either of the alternatives.

10 **Table 34. Proposed County Mitigation Projects**

Proposed Mitigation Projects for Both Alternatives				
Location	From	To	Project Type	Cost Estimate
NE 50 th Ave	NE 119 th St	NE 179 th St	Widen road	\$33,930,000
NE 72 nd Ave	NE 133 rd St	NE 219 th St	Widen/Bridge	\$55,159,000
NE 152 nd Ave	Ward Rd	NE 99 th St	Widen road	\$11,310,000
Ward Rd	NE 162 nd Ave	NE 182 nd Ave	Widen road	\$18,850,000
NE 182 nd Ave	NE 159 th St	NE 174 th St	Intersection imp.	\$3,016,000
Various locations			Intersection imp.	\$52,000,000
NE 137 th /142 nd Ave	NE 119 th St	NE 173 rd Cir	Widen road	\$33,930,000
Total				\$208,195,000

Source: Clark County, 2007

15 The Clark County Transportation Capital Facilities Plan and the Transportation Improvement Program (2006-2011) describes the programmed projects proposed to serve the existing unincorporated area. The total cost for capital projects and programs is estimated at \$1.05 billion (2006-2024). Of that total, over the next 6 years, expenditures for projects and programs would total \$173.1 million. An additional \$138

million would be required to complete the projects programmed but not completed in the first 6 years. Additional projects planned in the MTP could cost about \$200 million.

Table 35. County Transportation CFP Summary

County CFP Summary	Cost Estimates
Projects & Programs 2007-2012	\$173,111,000
Projects & Programs 2013-2024	\$666,756,200
Projects & Programs 2007-2024	\$839,867,200
Mitigation for No Action or Preferred	\$208,195,000
Total Capital Costs	\$1,048,062,200

Source: Clark County, 2007

5

County staff has generated projections of revenue under current law that would be available for transportation capital projects and programs for the 2007-2024 period under the No Action and Preferred Alternatives. Tables 36 and 37 summarize the revenues and costs for these alternatives:

Table 36. County Transportation Cost / Revenue Summary, Alternative 1 (No Action)

Calculation of Revenue Available for Transportation Capital Projects	
General Revenue Sources	Estimated Revenue
Property Tax	\$827,905,730
Fuel Tax	\$178,553,855
All Other Sources	\$137,739,408
Total General Revenue	\$1,144,198,993
Capital Revenue Sources	
Traffic Impact Fees	\$42,598,080
Grants	\$138,247,892
Public Works Trust Fund Loans	\$19,845,500
Other	\$2,942,000
Total Capital Revenue	\$203,633,472
Total Revenue	\$1,347,832,465
Non-Capital Costs	
Non-Capital Engineering, Management	\$253,885,519
Road Maintenance/Preservation	\$336,832,994
Facilities	\$1,538,316
Deputies	\$69,657
Total Non-Capital Costs	\$592,326,486
Revenue Available for Capital	\$755,505,979
Capital Costs	
Transportation Projects & Programs 2006-2024	\$839,867,200
Mitigation Projects for Alternative 1	\$208,195,000
Total Capital Costs	\$1,048,062,200
THE BALANCE	\$(292,556,221)

Source: Clark County, 2007

10

Table 37. County Transportation Cost / Revenue Summary, Preferred Alternative

Calculation of Revenue Available for Transportation Capital Projects	
General Revenue Sources	Estimated Revenue
Property Tax	\$860,960,549
Fuel Tax	\$178,553,855
All Other Sources	\$137,739,408
Total General Revenue	\$1,177,253,812
Total Revenue	\$1,380,887,284
Capital Revenue Sources	
Traffic Impact Fees	\$42,598,080
Grants	\$138,247,892
Public Works Trust Fund Loans	\$19,845,500
Other	\$2,942,000
Total Capital Revenue	\$203,633,472
Non-Capital Costs	
Non-Capital Engineering, Management	\$253,885,519
Road Maintenance/Preservation	\$336,832,994
Facilities	\$1,538,316
Deputies	\$69,657
Total Non-Capital Costs	\$592,326,486
Revenue Available for Capital	\$788,560,798
Capital Costs	
Transportation Projects & Programs 2006-2024	\$839,867,200
Mitigation Projects for Preferred Alternative	\$208,195,000
Total Capital Costs	\$1,048,062,200
THE BALANCE	\$(259,501,402)

Source: Clark County, 2007

XIII. Public Facilities and Utilities

The county allocated population to the cities in part for purposes of assessing public facilities needs, as shown in Table 5. In most cases, additional facilities will be needed in the 20-year planning period, but it is not possible to specifically say where they will be needed. Needed facilities based on the planning assumptions are discussed in this section, as are any projected distinctions the two alternatives present.

A. Fire Protection

Three municipal fire departments, eleven rural fire districts, Department of Natural Resources (DNR) and the US Forest Service provide fire protection and emergency medical services (EMS) to Clark County. In addition, there are three ambulance services in the county: American Medical Response (AMR), City of Camas, and North County EMS District No. 1. For more information on existing conditions, refer to the corresponding section of the DEIS (Revised DEIS, page 220 et seq.).

Increased demand for EMS and fire protection is related to population growth, number of emergency calls and response times in Clark County. The growth pattern determines cost of providing acceptable levels of service, and which service providers must bear that cost. More compact development patterns are easier to serve, and particularly easier to provide with adequate water flows for fire suppression. Since none of the alternatives includes very high density or high-rise development, the special fire protection problems associated with these development patterns is not an issue. Regardless of density, all fire and EMS providers are challenged by the tax revenue limits posed by Initiative 747. Table 38 below shows the current population served and the additional population that would be served by affected fire districts under the Preferred Alternative.

Table 38. Estimated Urban Population Served, Alternative 1 and Preferred Alternative

Fire Districts	Alternative 1 (No Action)	Preferred Alternative
FD No.2	953	880
FD No.3	13,800	12,834
FD No.5	35,253	38,675
FD No.6	25,379	24,555
FD No.10	4,058	3,493
FD No.11	10,478	21,395
FD No.12	17,465	32,408
FD No.13	1,796	1,790
Battle Ground	8,310	6,194
Camas	13,010	10,532
Vancouver	52,408	48,842
Washougal	6,880	5,297
Yacolt	491	491
East County FD	6,005	15,329
TOTAL	196,286	222,685

Source: Clark County Department of Assessment and GIS, 2007

The Preferred Alternative would have more dispersed growth compared to Alternative 1. However, since there are significant areas of the current UGAs that have not yet developed, the addition of new areas may result in some leapfrog-type development, and result in more dispersed land use patterns in the interim. The dispersal of uses may require additional facilities, equipment and staff to provide service.

5 Fire Districts No. 3 serving Vancouver's and Battle Ground's UGAs, Fire District No. 11 serving Battle Ground's UGA, and Fire District No. 12 serving Ridgefield's and La Center's UGA s would experience the greatest change to the areas they serve. Fire District No. 3 would be serving approximately 1,050 additional acres of urban land uses, primarily residential (41 acres), commercial (16 acres) and industrial (992 acres). There is a higher population for Fire District No. 5, 11, and 12 and East County Fire District in the Preferred Alternative. Expansion of Vancouver's UGA east of 96th Avenue and north of 119th Avenue may result in more than 6-minute emergency response times for development in those areas currently and may require new or relocated fire stations.

10 Fire District No. 11 would be serving approximately 2,550 additional acres of urban land uses, primarily residential (about 1,570 acres), commercial (roughly 673 acres) and industrial (about 252 acres). Lower density residential and mixed-use assigned to the southwest corner of the city's expanded UGA may also result in some of those areas having more than 5-minute emergency response times currently (see discussion under Transportation, above). Fire stations may need to be relocated or constructed to ensure coverage as those areas develop.

15 Fire District No. 12 will potentially serve nearly 4,600 additional acres of urban land uses. The residential land is about 2,366 acres possibly providing homes for about 32,400 people, which is an increase of 86% or 17,465 people in Alternative 1. The remaining land uses are primarily commercial (238 acres) and industrial (550 acres). Residential and industrial land allocated to the south of La Center's UGA and North of Ridgefield's UGA might cause longer than 5-minute emergency response times. Fire stations might be needed to ensure coverage as those areas develop.

Plans and Ordinances

25 Clark County has not included fire protection as one of the services considered under concurrency management. Individual cities have established general policies in their comprehensive plans requiring public facilities and services to be adequate to serve new development at the time it is available for occupancy and use, but fire is not included in concurrency management procedures. Individual cities and fire districts have set additional service standards that they attempt to meet.

30 **Battle Ground:** The City of Battle Ground contracts fire service from Fire District No. 11, which provides fire protection and prevention services to its citizens. The Fire Capital Facilities Plan adopted by the City in February 2006 identifies a need for a training facility and replacement of an Ambulance and Class A Fire Engine to serve growth proposed under the Preferred Alternative. The City of Battle Ground's long-term plan for station 11-3, located downtown, includes a significant remodel and addition to the facility within 3 to 5 years.

40 Adjacent to Battle Ground UGA, is Fire District No. 3 which serves an approximate 83 square mile area including the communities of Hockinson, Brush Prairie, Venersborg, Heisson/Battle Ground Lake, and Rawson Rd/Hockinson Highlands. The districts March 2006 adopted Capital Facility Plan includes constructing a training facility, an addition to station 3-2 (Venersborg), an expansion to station 3-3 (BG Lake/Heisson), and one new fire engine. It also identifies a need to build an additional fire station through a joint venture with Fire District No. 11, Vancouver Fire District and Fire District No. 5 to accommodate growth in the Preferred Alternative.

45 **La Center:** Fire District No. 12 serves La Center. The city does not have direct authority over fire response policies. However, they work together with the district to set policies. CCFD No. 12 has a new station in the Ridgefield Junction area to serve both the Ridgefield and La Center Junction areas to accommodate growth in the Preferred Alternative. The plan also identifies the need for an additional pumper (paid for by Cowlitz Casino) if a Casino is built in La Center's UGA.

Ridgefield: Fire District No. 12 also serves Ridgefield. The city does not have direct authority over fire response policies. However, they work together with the district to set policies. CCFD No. 12 has a new station in the Ridgefield Junction area to serve both the Ridgefield and La Center Junction areas to accommodate growth in the Preferred Alternative.

5 B. Police Protection

The Cities of Camas, Washougal, Battle Ground, La Center, Ridgefield, and Vancouver provide local law enforcement services through local police departments. The Clark County Sheriff's Department provides services in those areas outside the city boundaries and in Yacolt. Cooperation between the cities and the county is good. Each jurisdiction provides backup for others in emergency situations. The Washington State Patrol has police jurisdiction on all state routes within the county. The State Patrol is largely responsible for state facilities, but also provides backup for the Clark County Sheriff's Department and local jurisdictions. For more details on services, refer to the DEIS (Revised DEIS, page 225 et seq.).

Each of the police protection agencies would provide service to the homes and businesses which locate in their service areas. As land in each UGA is annexed to the city or town, the responsibility for law enforcement would transfer from the sheriff to city police. Table 39 shows the number of sworn officers that would be needed under the No Action and Preferred Alternatives. Either alternative would require additional staff and facilities than is projected under the 2004 Comprehensive Plan based on the increase in projected population.

Table 39. Needed Sworn Law Enforcement Officers, Alternative 1 and Preferred Alternative

Jurisdiction	Standard	Authorized Sworn Officers	Alternative 1 (No Action) ¹	Preferred Alternative ¹	Cost ²
Battle Ground	1.5/1000 population	25	56	62	\$65K per officer
Camas ³	1.64/1000	12	52	58	\$75K per officer
La Center ⁴	2/1000	12	12	22	\$75K per officer
Ridgefield ⁵	1.6/1000	4.3	24	42	\$75K per officer
Vancouver ⁶	1.3/1000	2016	516	486	\$75K per officer
Washougal ⁷	1.52/1000	19	31	36	\$80K per officer
Clark County ⁸	Land-use based	141	277 (241)	344 (257)	\$75K per officer

¹ Alternatives (except La Center and the Clark County Sheriff's office) determined by county planning staff based on the jurisdiction's 2004 population plus the existing and expanding projected UGA population. The numbers reflect the total number of officers needed (including current staffing) for the 20-year planning period.

² Where estimated Personnel Costs are not provided by the City, cost is provided by County planning staff at 75K per year/per officer.

³ Based on 2004 standard and estimated amount of growth by county staff.

⁴ Based on Federal standard of 1.6/1000 and estimated 20 year total amount of population.

⁵ Based on current city limits and population and estimated 20 year total amount of population.

⁶ Based on current authorized staffing which is at a lower percentage than the target 1.3/1000 officer standard.

⁷ Washougal staff provided officers/1000 and cost per officer. Additional information provided by County planning staff.

⁸ Planning staff added projected sworn positions forecasted by the Sheriff's office to address new calls for service in the county outside city boundaries to the currently authorized 141 positions. The Sheriff's office indicates this evaluation is based on land-use designations and the number of acres of each land-use designation that are expected to be developed during the planning period, not on number of officers/1000 population. The numbers in parentheses indicate the number of positions needed to specifically address the calls for service outside of small city UGAs.

Alternative 1 (No Action)

Alternative 1 would not expand urban areas, which means that most of the growth would be in the Vancouver UGA. Since population growth would be similar for each alternative, there would be similar staffing needs. However, staffing needs are influenced by response times, and more attention is being given to the number of calls to commercial property. One major impact could be in response times as a result of traffic associated with additional density, although this can be offset by changes in deployment strategies. A new or expanded county jail facility at an estimated cost of \$90-\$100 million will be needed in the 20-year plan period.

Preferred Alternative

The Preferred Alternative would have a greater impact to the Sheriff's Department because of the increased growth proposed for all UGAs, particularly in commercial property, although this will be mitigated somewhat by city annexations. Serving the proposed UGA expansions continues to be the responsibility of the sheriff until lands are annexed to the city or a new city is formed that includes portions of the existing and proposed urban area. Staffing requirements are estimated in Table 39, above. Additional facilities as well as staff and equipment would be needed within the next six years, including a new or expanded county jail facility at an estimated cost of \$90-\$100 million, as well as the potential for a second jail expansion within the 20-year Comprehensive Plan period. Increased response times in some areas could also be an issue.

Plans and Ordinances

The GMA does not require the inclusion of law enforcement services in concurrency, and no Clark County jurisdictions have elected to include them, though minimum officers per thousand population standards have been adopted.

The individual jurisdictions have established policies in their comprehensive plans requiring public facilities and services such as police protection to be adequate to serve new development at the time that it is available for occupancy and use. The cities and towns have identified the following mitigation measures to mitigate impacts to police services on future growth. Additional mitigation measures which could be adopted are also identified below.

Clark County: Police protection is not included in the county's concurrency management program. As the GMA is implemented and where urban areas are developed without being annexed to cities, the sheriff will have to add staff. County jail and regional facilities responsibilities would not change, because they are related to countywide population. Due to the increased projections for jobs and population growth, the Sheriff has indicated that a new jail facility will be necessary within the next 6 years at an estimated cost of between \$90-100 million and the possibility of a second jail expansion within the twenty year planning period. Annexation of land to the cities will result in responsibilities shifting from the sheriff to the cities in those areas so that the sheriff may be expected to focus more on countywide responsibilities. If annexation to cities, specifically Vancouver, does not occur prior to development, the Sheriff will require a substantial number of additional officers, support staff and related facilities to service those urbanizing areas. The impact of such growth is shown in the above table.

Battle Ground: The City of Battle Ground will be able to accommodate the projected growth with existing facilities, but additional staff and equipment may be needed.

Camas: The new public safety facility on Parker Road provides service to the northwestern portion of the City. Plans to upgrade the downtown Public Safety Building are also underway.

La Center: The City of La Center estimates that under the Preferred Alternative, a new facility could be required to serve development concentrated at the I-5 Junction. Financing this facility will be a challenge.

5 **Ridgefield:** Ridgefield anticipates a need for a new public safety facility (combining fire and police protection) in the vicinity of NW 31st and NW 269th in order to serve proposed development in the Ridgefield Junction area. Financing this facility would be a challenge.

Vancouver: The City of Vancouver would need to increase police staffing and equipment as the population grows and urban growth areas are annexed. New facilities would also be needed.

Washougal: The city is not proposing to accommodate significant additional growth at this time. Existing facilities are expected to be adequate, but additional staffing and equipment may be needed.

10 **Additional Mitigation Measures**

Mitigation measures that could be implemented by cities and the county in order to improve safety for residents and make most efficient use of staff, facilities and equipment are detailed in the DEIS.

C. Public Schools

15 There are nine school districts within Clark County: Battle Ground, Camas, Evergreen, Green Mountain, Hockinson, La Center, Ridgefield, Vancouver, and Washougal. Refer to the DEIS for more information on existing conditions (Revised DEIS, page 229 et seq.).

20 Of all public services, public schools in the county would feel the most direct and immediate impact of any public facility/utility next to roads as a result of growth. DEIS Figure 37 shows the expansion areas in relation to school district boundaries. Table 40 shows how many new schools would be needed and the associated costs by alternative. The facility and cost estimates for both alternatives are based on projected increased enrollment when residential lands under both alternatives are developed, minus each District's anticipated capacity in six-years when the facility improvements in the District's six-year Capital Facility Plans are constructed. Therefore, the table does not indicate the capital facility needs and costs that are currently planned for each District's six-year planning period. Please also note that School Districts are
25 required to update their Capital Facility Plans (CFPs) every two years, therefore the CFPs that were received for this document may reflect different planning periods.

Table 40. Needed School Facilities, Alternative 1 and Preferred Alternative

School District	Current Facilities ¹		Alternative 1 ³ (No Action)		Preferred Alternative ³	
			Additional Facilities	Cost (millions)	Additional Facilities	Cost (millions)
Battle Ground	Elementary	6	4	\$211.7	3	\$172.4
	Middle	6	4		3	
	High	2	Expand		Expand	
	Portables	128	8		5	
Camas	Elementary	5	2	\$90.8	3	\$130.5
	Middle	2	1		2	
	High	1	Expand		Expand	
	Portables	14	9		11	
Evergreen ⁴	Elementary	20	6	\$214.4	7	\$232.9
	Middle	6	1		1	
	High	4	1		1	
	Portables	202	52		49	
Green Mountain ⁵	Elementary	1	1	\$10.5	1	\$10.5
	Middle	0	0		0	
	High	0	0		0	
	Portables	2	1		1	
Hockinson	Elementary			\$0.0 ⁶		\$10.5
	Middle	2	0		0	
	High	1	0		0	
	Portables	1	0		Expand	
		13	0		8	
La Center	Elementary			\$75.0		\$75.0
	Middle	1	1		1	
	High	1	1 ⁷		1 ⁷	
	Portables	1	Expand		Expand	
		10	0		0	
Ridgefield	Elementary	2	2	\$56.6	4	\$169.2
	Middle	1	Expand		1	
	High	1	Expand		1	
	Portables	21	7		4	
Vancouver ⁸	Elementary	21	0	\$0	0	\$0
	Middle	6	0		0	
	High	6	0		0	
	Portables	6	0		0	
Washougal	Elementary	3	3	\$139.5	3	\$146.6 ⁹
	Middle	2	1		1	
	High	1	1		1	
	Portables	16	5		5	
Total Schools/ Portable Classrooms			29 schools 82 portables	\$798.5 million	34 schools 78 portables	\$947.6 million

¹ Battle Ground, Camas, Green Mountain, Ridgefield, and Washougal School Districts Alternative 1 and the Preferred Alternative facility needs are based on each district's current Capital Facilities Plan, Clark County's GIS household forecast both Alternatives and the assumptions that each districts student generation rate remains constant and the number of forecast household units for high density and low density are built on the residential lands in each district. Proposed improvements/capacity is based on projected increased enrollment minus the capacity that each district anticipates will exist in six-years. In other words, these figures are based on the assumption that the current six-year improvements have been constructed. Construction costs are based on an estimate of \$227/square foot for elementary schools, \$232/square foot for middle schools, and \$248/square foot for high schools. Assumed square footage for elementary is 110/student, 130/student for middle schools, and 150/student for high schools. Land cost is estimated at \$200,000 per acre. Assumed square footage for elementary is 10 acres, middle is 30 acres, and high is 50 acres. Cost to house the remaining students in portables is \$100,000 per portable, which includes two-classrooms for a total of fifty students.

²Current number of elementary, middle and high schools. The facilities that are listed do not include schools that are used for alternative programs or leased facilities.

³For facilities: proposed number of elementary, middle and high schools, and portable classrooms. Expand=expansion of existing facility. Costs include land acquisition.

5 ⁴Alternative 1 and the Preferred Alternative based on Evergreen School District 2006-2012 CFP Section VIII Long Range Facility Plan. Proposed improvements/capacity is based on projected increased enrollment minus 2012 capacity. These figures are based on the assumption that 2012 Improvements have been constructed. Construction costs are based on architect's estimate of \$250 per sq. ft. in 2006 dollars. Assumed square footage for elementary is 65,000 SF, middle is 130,000 SF, and high is 212,000 SF. Land cost is estimated at \$240,000 per acre in 2006 dollars for bare land. Cost to house the remaining students in portables is \$50,000 per portable setup cost at 2006 dollars.

10 ⁵Students attend La Center High School.

⁶20-year Capital Facility Needs for Alternative 1 will be met with improvements planned in the Hockinson School District 2007-2013 Capital Facilities Plan.

15 ⁷The old Middle School facility will be used to house additional students from the original elementary school (grades 3-5) listed in the current facilities inventory.

⁸Alternative 1 and the Preferred Alternative based on the March 2007 enrollment forecast update by Vancouver School District. Twenty-year forecast is defined as enrollment forecast for 2025. This is NOT the peak enrollment forecast for each education level. The district enrollment is forecast to peak between 2014 and 2017 and then decline somewhat to 2025. The 2025 enrollment includes a loss of 779 elementary and 507 middle school students, and a gain of 635 high school students from 2006 enrollment. The 510 high school students over available capacity can be accommodated in the equivalent of 17 portable classrooms.

20 ⁹The cost for the Preferred Alternative is greater than the cost for Alternative 1 because the elementary and middle school facilities are projected to be larger for the Preferred Alternative.

25

Alternative 1 (No Action)

Alternative 1 would not expand urban areas, which means that most of growth would occur in the Vancouver UGA. Projected growth would be accommodated through increases in density in both urban and rural areas. The Vancouver School District is projecting a decline in enrollment midway through the planning period and believes it can handle any increase with existing facilities. Expansion of existing facilities or new facilities in other school districts would be needed (Table 40 above), but this alternative would need fewer new facilities and would make the most efficient use of existing facilities, and therefore has lower costs.

30

Preferred Alternative

35 The Preferred Alternative would require a larger number of new school facilities given the expansion of UGAs. Most of the proposed residential expansion is along the northern part of the Vancouver UGA that would put the most burden on the Battle Ground, Evergreen, Ridgefield, and Washougal School Districts, although most of the expansion areas proposed for industrial lands fall in the Battle Ground and Ridgefield Districts. The responsibility for serving growth would fall to all school districts.

Plans and Ordinances

40 Clark County's school districts have revised their long-range plans to reflect the 2004 GMA plans of the county and cities, and will revise their plans to respond to the plan that is ultimately adopted. Schools are not a part of the concurrency management system of the county or any of the cities. However, local jurisdictions have adopted school impact fees on new development for all school districts, as allowed by state law.

45

The school districts have also asked local jurisdictions to balance land uses within school districts so that they have the tax base to support the schools. That is, each school district would like to have a balance of residential, commercial, and industrial land uses.

50 **Clark County:** Schools are major employment centers, require urban levels of water and sewer service and fire protection, and generate high volumes of traffic. They are also a focus of community life and

should be located in activity centers. Schools are not included in the county's concurrency management system. Goal 6.5 of the county's comprehensive plan is to coordinate with school districts to ensure that sites are constructed to meet the educational needs of county residents. Policy 6.5.1 focuses on mitigating land use impacts of school sites by requiring location with UGAs where possible, ensuring that facilities hook up to water and sewer services and that transportation facilities are adequate. Policies 6.5.2-6.5.4 encourages coordination between the county and school districts for efficient provision of school services and use of facilities. School impact fees are provided for as a funding source in Policy 6.6.5. Capital Facilities Plans for the school districts are adopted by reference in Policy 6.5.6.

Battle Ground: The Battle Ground School District's 2006-2012 Capital Facilities Plan indicates the need for five new K-8 schools (two are under construction) and one new high school. However, the improvements listed in this section, and Table 40 above, indicate improvements needed in addition to the planned improvements through 2012. To accommodate Alternative 1, four additional K-8 schools would need to be constructed and the existing high schools would require expansions. Eight portables also would be needed. Please note that in the Battle Ground School District, elementary schools (K-5) and middle schools (6-8) are built on one site, as one campus. For the Preferred Alternative, three K-8 schools, expansions at the existing high schools and five portables would be required.

Camas: The Camas School District's 2007-2013 Capital Facilities Plan indicates the need for replacement elementary schools, one new elementary school, an expansion of an existing elementary school, and expansion of the existing high school. However, the improvements listed in this section, and Table 40 above, specify improvements needed in addition to the planned improvements through 2013. To accommodate Alternative 1, two new elementary schools and one new middle school would require construction. In addition, the existing high schools must be expanded and nine portables would be needed. To accommodate the Preferred Alternative, three new elementary schools and two new middle schools would need to be constructed. An expansion at the existing high schools and eleven portables would also be required.

Evergreen: The Evergreen School District's 2006-2012 Capital Facilities Plan indicates the need for three new elementary schools, one new middle school and one new high school. For Alternative 1, the district projects a 6,390 student enrollment increase, with the majority of the increased enrollment at the elementary school level. In addition to constructing the six-year improvements in the 2006-2012 Capital Facilities Plan, the District would need to construct six elementary schools, one middle school and one high school. For the Preferred Alternative, the district projects a 7,040-student enrollment increase. The facility needs would require construction of seven new elementary schools, one new middle school, and one new high school. In addition, forty-nine portables would be needed.

Green Mountain: The Green Mountain School District's 2007-2013 Capital Facilities Plan indicates the need for expansions to the existing schools. However, the improvements listed in this section, and in Table 40, specify improvements needed in addition to the planned improvements through 2013. For both Alternative 1 and the Preferred Alternative, Green Mountain School District anticipates the need to construct a new school for 300 students and would add one portable. The school facilities and portables would be configured as elementary and middle schools in the manner that best serves the enrolled students.

Hockinson: The Hockinson School District is planning for a new elementary school per the District's 2007-2013 Capital Facilities Plan. They will not require any additional facilities under the Alternative 1 forecast. For the Preferred Alternative, the high school will require expansion and eight portables will be needed.

La Center: The La Center School District's 2007-2013 Capital Facilities Plan indicates the need for one new elementary school and an expansion of the existing high school. However, the improvements listed in this section and Table 40 are improvements needed in addition to the planned improvements through 2013. For both Alternative 1 and the Preferred Alternative, La Center School District anticipates the need for one new elementary school, one new middle school (the old middle school facility will be used to house additional students from the original elementary school, grades 3-5). The existing high school will need to be expanded.

Ridgefield: The Ridgefield School District's 2006-2024 Capital Facilities Plan indicates the six-year need for one new high school, an expansion and renovation of the present high school, and the renovation and expansion of the existing elementary schools. However, the improvements listed in this section and Table 40 are improvements needed in addition to the planned improvements through 2012. For Alternative 1, the Ridgefield School District anticipates the need for two new elementary schools and expansions at the middle and high schools. In addition, seven portables will be needed. For the Preferred Alternative, four new elementary schools, one new middle school, and one new high school would need to be constructed. As far as portables, four are anticipated.

Vancouver: The majority of the Vancouver School District's boundary is in a fairly urban, built-out environment. Enrollment growth in the future is dependent on infill, redevelopment, densification, and neighborhood turnover. According to the March 2007 Updated Enrollment Forecast by the Vancouver School District, no new facilities are necessary for the overall projected enrollment for 2025, the District's 20-year planning scenario. This is not to say that there won't be growth between now and then. There will continue to be growth in the northern and eastern schools at the edges of the urban growth boundary. In addition, the Vancouver School District's enrollment is projected to increase to a peak between 2014 and 2017, and then decline somewhat to 2025, due to an aging population and the district's more urban nature.

Washougal: The Washougal School District's 2007-2013 Capital Facilities Plan indicates the need for one new elementary school and one new middle school, which the District anticipates constructing as a K-8 campus on property the District recently purchased. However, the improvements listed in this section and Table 40 above, are improvements needed in addition to the planned improvements through 2013. To accommodate Alternative 1, three new elementary schools, one new middle school and one new high school will be required. In addition, five portables will be needed. To accommodate the Preferred Alternative growth scenario, three new larger elementary schools, one larger middle school and one high school would need to be constructed. In addition, five portable will be required.

Yacolt: No new development is proposed for Yacolt school district under any of the growth alternatives.

Additional Mitigation Measures

The following policies could be adopted by local jurisdictions and school districts to reduce or eliminate any adverse impacts to school services caused by amendment of the Growth Management Plan.

1. Cooperate with the school districts to ensure that school impact fees are adequate for the increased demand generated by growth.
2. Include schools as one of the public facilities under the concurrency management system mandated by the GMA.
3. Identify school site requirements as part of the designation of land for community facilities when planning for urban activity centers.

4. Assist the school districts to identify alternative sources and means of funding school facilities and educational programs. Such sources might include certificates of participation for funding new facilities and establishment of endowments or trust funds for special programs (e.g., arts and/or sciences)
5. Eliminate the requirement for a conditional use permit for new school facilities that are proposed within cities or UGAs.
6. Some form of phased development could be mandated in new expansion areas until school services meet adopted standards.

D. Parks and Recreation

Information on existing parks, funding, and other issues can be found in the corresponding section of the DEIS (Revised DEIS, page 235 et seq).

Park standards would not change between the alternatives, but the distribution of parks and the cost of acquiring them would affect different jurisdictions with each alternative. Because park standards are based on population, new parks would be required under both of the alternatives. Currently, parks within cities and UGAs cost approximately \$225,000/acre to acquire, while the per-acre cost in rural areas is \$15,000 to \$40,000.

As urban areas are annexed to the cities, the county’s role would shift from being a provider of urban parks to providing regional and rural parks and recreation. This eventuality has already been considered in the creation of the Vancouver-Clark Parks and Recreation Department and adoption of the updated comprehensive plan by the county and the City of Vancouver. Table 41 shows the projected park needs by capacity for the No Action and Preferred Alternatives. Other providers, particularly state and/or federal agencies, add more than 12,000 acres to the system, primarily in the form of natural open space such as the Ridgefield National Wildlife Refuge.

Table 41. Estimated Parkland Needs, Alternative 1 and Preferred Alternative

Jurisdiction	Current Combined Standard	Current Situation	Alternative 1 (No Action) (additional acres) ¹	Preferred Alternative (additional acres)
Battle Ground	5.0 acres/1,000	12.1 acres/1000	6.0	27.5
Camas ²	n/a	n/a	n/a	n/a
La Center	7.0 acres/1,000	9.7 acres/1,000	6.3	30.9
Ridgefield	7.0 acres/1,000	2.8 acres/1,000	47.4	127.9
Vancouver	6.0 acres/1,000	5.2 acres/1,000	505.3	753.4
Washougal	6.41 acres/1,000	5.69 acres/1,000	54.3	74.9
Yacolt	5.0 acres/1,000	13.8 acres/1,000	0	0
Clark County (Regional Parks)	10.0 acres/1,000	8.68 acres/1,000	3,622	3,622

Source: Clark County Department of Assessment and GIS, 2005

¹Based on UGA capacity

²The City of Camas uses a distance radius, not acreage per 1,000 population, to determine need.

Alternative 1 (No Action)

Alternative 1 would not expand urban areas, which means that most of the growth would be in the Vancouver UGA, although all jurisdictions are expected to add population and will need a corresponding number of parks. Growth would be accommodated through the development of existing undeveloped and underdeveloped properties in current urban and rural areas, and through redevelopment or more

intensive use of existing structures. Planning and construction of new park and recreation facilities would primarily occur in urban areas to accommodate the increased population. It is likely that urban parks would be more heavily used to the point of over-use with increased urban densities. However, if jurisdictions continue to acquire land in densifying areas, residents would be more likely to have multiple parks nearby.

Preferred Alternative

The Preferred Alternative would have substantial impact on the northern part of the proposed Vancouver UGA expansion where planned low-density single family land use would create a relatively dispersed residential population that would not be served by any newly allocated park land. There are no new park facilities planned for the new expansion areas surrounding Vancouver. The provision for new parks and recreation facilities would fall on Vancouver – Clark Parks and Recreation for the proposed expansion. All of the cities would also require new park and recreation facilities to accommodate the expected growth from annexed lands and to meet the standards adopted by each individual jurisdiction.

Plans and Ordinances

In their individual comprehensive plans, Clark County and the cities have established policies for provision of parks and open space to accommodate new development and enhance the quality of life in urban areas. The following discussion summarizes the ways that each jurisdiction intends to meet adopted standards.

Vancouver-Clark Parks: Vancouver-Clark Parks and Recreation adopted their current capital facilities plan in 2002. A Comprehensive Parks, Recreation and Open Space plan is currently being considered for adoption. The current plan was adopted by the City of Vancouver in December 2006. The current assessment of demand and need is divided into three basic categories which include neighborhood parks, community parks, and urban open space. There continues to be a need for both acquisition and development of neighborhood and community parks, and the acquisition of urban open space. The minimum combined standard level of service is 6 acres per 1,000 population within the City of Vancouver and its UGA, and 10 acres per 1,000 population for Clark County regional parks.

Battle Ground: The City of Battle Ground adopted a Parks Plan concurrently with the Comprehensive Plan in December 2004. The City of Battle Ground owns approximately 184 acres of parks and open space on 35 parcels within the city limits. Battle Ground established service standards based on the National Park and Recreation Association recommendations. These include 5 acres of parks and open space for every 1,000 people.

The Battle Ground Future Urban Growth Area is divided into 21 Neighborhood Service Areas (Nyssa's). The City's analysis identifies the need for 54-90 acres of additional park land to serve anticipated growth. The acquisition and development of a youth sports fields complex, including baseball, softball, soccer, and a "challenger" field are the City's highest priorities.

Camas: The recently adopted Camas Parks and Recreation Plan identifies a need for 483 acres of total park land in the next twenty years. Acquisition and development of parks would be funded through a variety of sources including impact fees, REET, state and local grants, and the general fund.

La Center: La Center recently completed a 12.05 acre community park that includes a variety of recreational facilities. The city indicates that it has adequate park facilities to serve expected growth. Chapter 6 of the La Center Urban Area Comprehensive Plan (2004) concerns Parks and Recreation and Open Spaces and adopts the National Park standards (Policy 1). Policies call for coordination with Clark County and other agencies for preservation of recreation values of the East Fork Lewis River,

implementation of the Parks and Recreation Master Plan, development of bicycle and pedestrian circulation system, and preservation and enhancement of the East Fork of the Lewis River wetlands and riparian lands. The city has implemented a Park Impact Fees Program since 1997. The current La Center Urban Area Capital Facilities Plan (2004) anticipated that by 2023 the city would require 13.5 acres of additional developed community park lands, 4.1 acres of developed neighborhood park lands, and 1.4 acres of developed pedestrian trails to serve an anticipated population of 3,500 persons. The 1991 Parks and Recreation Master Plan will be updated in 2007.

Ridgefield: Ridgefield expects tremendous residential growth through 2010 and the necessary park acreage to serve anticipated residential growth is substantial. The city is currently developing a citywide master parks plan to guide the location, acquisition and design of park facilities for the future. Policies P-1 through P-8 of the City of Ridgefield Comprehensive Plan (2005) require coordination between the city and the county in developing parks and trails systems. Policy P-5 obligates the city to provide adequate acreage of parkland to meet existing and future park and open space needs. The forthcoming Parks and Recreation Master Plan would develop appropriate levels of service and standards. Impact fees for parks may be considered.

Washougal: According to the Draft Washougal Comprehensive Park and Recreation Plan an additional 2.7 acres of neighborhood park land is currently needed in Washougal. Washougal anticipates an update of the Park Impact Fee to accurately reflect the cost of developing park and recreation facilities.

Yacolt: Yacolt is not proposing any additional residential development since it does not have a sewer system to support it. Therefore, no additional parks facilities would be needed.

E. Libraries

Fort Vancouver Regional Library District is the provider for Clark, Skamania and Klickitat Counties and the city of Woodland in Cowlitz County. Refer to the DEIS section for information on existing conditions (Revised DEIS, page 241).

Library service demand is directly related to population. As the population of the county increases, demand for library service will increase.

Alternative 1 (No Action)

Alternative 1 would accommodate all expected growth within existing UGAs, largely by in-fill development on passed over lots. While this would encourage efficient use of existing facilities, it could increase competition for available land, making it more expensive to develop new library facilities which are needed because of the growing population.

Preferred Alternative

New library facilities would be needed to keep pace with the projected 20-year population. An expansion of UGAs would allow more options for siting of needed facilities.

Plans and Ordinances

None of the cities and towns or Clark County includes library services in the concurrency management system. Funding for FVRLD comes from property taxes, fees and donations.

Additional Mitigation

The following mitigation measures could be adopted by the county and cities and towns in order to assist FVRLD to meet the increased demand from expected growth.

- 5 1. Include library facilities in the planning for community facilities in planning for downtown development and urban activity centers.
2. Permit libraries to locate their facilities in conjunction with local school facilities, not only within designated UGAs, but also in urban reserve areas.
3. Provide land for libraries in or adjacent to urban parks (neighborhood or community parks).
- 10 4. Assist FVRLD to identify alternative sources and means of funding new facilities and outreach programs. Such sources might include certificates of participation for funding of new facilities and establishment of endowments or trust funds for special programs.

F. General Government

15 General government buildings house the staff that operate each city and town, and include offices, public works yards, and maintenance facilities. As cities and towns grow, more staff is required to provide services to residents and maintain city/town facilities. As a result, more general government space is needed.

General government buildings are not included in the concurrency management system. Government staff growth is more related to program mandates than to population growth.

20 After the 1994 comprehensive plan was adopted, Clark County completed a facility plan for all its operations and the result is the new office building to house county staff currently located in rental facilities around the Courthouse. No additional office space would be needed over at least the next 10 years.

The City of Battle Ground expects to need additional space to serve the much greater population and employment base under all alternatives.

25 The City of Camas expects to remodel its city hall over the next five years in order to provide for growth and changing state mandates.

The City of La Center expects to construct a new city hall to include an expanded police department in the next 5 to 10 years.

30 The City of Vancouver located some staff (transportation planning and design) in the new county office building, but, based on historic trends, may need additional facilities over the next 10 years.

The City of Washougal may have to expand its city hall to provide facilities for staff expansion as it grows over the next 20 years.

No mitigation measures are proposed.

G. Solid Waste

For a discussion of providers and landfill capacity, refer to the corresponding section in the DEIS (Revised DEIS, pages 243-44).

5 Both CTR and West Van, waste transfer companies, have been designed to receive and transfer up to
438,000 tons per year of solid waste (250,000 tons of solid waste were received during 2001). Under
interim emergency conditions, either facility is designed to handle the entire projected year 2011 flow of
municipal solid waste within Clark County. This full backup capability is expected to last throughout the
10 20-year planning period covered in the comprehensive plan. The current system has been designed with
flexibility to respond to changes in population and economic growth and in the behavior of residential
and non-residential waste generators. It is essential for the waste transfer system to maintain an
acceptable "level of service" during the 20-year planning period covered by the comprehensive plan.

15 Finley Buttes Landfill is located in Morrow County, Oregon, approximately 180 miles east of Clark
County and approximately 12 miles south of Boardman, Oregon. The projected life of the current
permitted landfill exceeds the 20-year period covered by this plan. A backup disposal facilities plan was
submitted to the county by Columbia Resource Center in 1992. The plan describes the designated
alternative disposal sites if Finley Buttes Landfill ceases operations, either temporarily or permanently.
CRC has backup disposal agreements with both Columbia Ridge Landfill in Gilliam County, Oregon,
operated by Waste Management, Inc., and Roosevelt Regional Landfill in Klickitat County, Washington,
20 operated by Allied Waste. In addition, a landfill in Wasco County, Oregon is owned and operated by
Waste Connections Inc. Both truck and rail transport is available to these backup sites.

Mitigation measures are not required, since the existing system has the capacity to accommodate all
expected growth. However, in the interests of the long-term health of the system, each jurisdiction could
adopt waste reduction measures and encourage additional recycling. The county's recycling rate is
25 estimated at 35% with a recovery rate of 45%.

H. Public Water Systems

Water service within Clark County is provided by a variety of local jurisdictions and a publicly owned
water provider. The cities of Vancouver, Battle Ground, Camas, Ridgefield, and Washougal are providers.
30 Clark Public Utilities (CPU) is the primary water provider for rural areas outside of UGAs and also
operates the water systems for La Center and Yacolt. The DEIS discusses water rights and other details
of the public water supply (Revised DEIS, page 245 et seq.).

35 Water is one of the services that is included in concurrency management in Clark County. That is, all new
urban development must have public water available at the time that it is occupied. Increase in demand for
water is a function of population and employment growth, and the pattern of development. Table 42
shows the added demand for the No Action and Preferred Alternatives. The City of Vancouver's 2006
Water System Comprehensive Plan identifies the average demand of 235 gallons/day per dwelling unit
and 58.5 gallons/day per employee.

Table 42. Public Water Demand, Alternative 1 and Preferred Alternative

Residential	Alternative 1 (No Action)		Preferred Alternative	
	Dwelling Units	Gallons / Day	Dwelling Units	Gallons / Day
Battle Ground	4,848	1,139,280	5,759	1,353,361
Camas	6,509	1,529,615	8,070	1,896,466
CPU includes La Center & Yacolt	27,313	6,418,555	32,472	7,630,944
Ridgefield	4,756	1,117,660	8,663	2,035,805
Vancouver	30,879	7,256,565	18,029	4,236,815
Washougal	3,832	900,520	4,726	1,110,610
Total Residential	78,137	18,362,195	77,719	18,264,001

Employment	Alternative 1 (No Action)		Preferred Alternative	
	Employees	Gallons / Day	Employees	Gallons / Day
Battle Ground	7,395	432,608	11,026	645,021
Camas	15,862	927,927	19,014	1,112,319
CPU includes La Center & Yacolt	31,145	1,821,983	40,734	2,382,939
Ridgefield	9,202	538,317	9,334	546,039
Vancouver	71,688	4,193,748	46,673	2,730,371
Washougal	4,192	245,232	6,112	357,552
Total Employment	139,484	8,159,814	132,893	7,774,241
Total Water Demand		26,522,009		26,038,242

Source: Clark County Department of Assessment and GIS. Based on rural vacant and buildable lands formulas that were used in the 2006 Transportation Analysis Zone Analysis.

5

Alternative 1 (No Action)

Alternative 1 would not expand the UGAs, which means that most growth would occur in the Vancouver UGA. This alternative would rely primarily on the existing systems. Some water mains might have to be replaced over the twenty-year life of this alternative and some areas would need larger water lines to support more intensive development. New wells would probably also need to be expanded to accommodate all expected growth. The water purveyors are water utilities and as such are financed from new water connection system development charges and use fees. The combined 20-year cost forecast for system needs would be \$202,290,814.

Preferred Alternative

The Preferred Alternative would have the greatest impact on the northern part of the Vancouver proposed UGA expansion, although the cities of Camas, Washougal, Ridgefield, La Center and Battle Ground are proposing proportionately large expansions. The provision of water would initially fall on CPU until the land is annexed to the city or a new city is formed and includes portions of the existing and proposed urban area. Water service is currently provided in this area and CPU anticipates no difficulty in providing water as development occurs. Any required water distribution system, expansion to serve growth will be provided by developers as they extend to reach their urban developments. The water purveyors are water utilities and as such are financed from new water connection system development charges and user fees. The combined 20-year cost forecast for system needs would be \$307,215,500.

Water service must be included in concurrency management programs under the GMA, and policies for providing water service concurrent with new development within UGAs are established in all of the comprehensive plans, as discussed under Mitigation Measures in the DEIS (Revised DEIS, pages 251-53). Additional mitigation measures that would reduce the impacts of growth on water services are also highlighted there.

I. Sanitary Sewer

Several jurisdictions and public agencies provide sanitary sewer services in Clark County. These include the cities of Battle Ground, Camas, Ridgefield, Vancouver, Washougal, CPU, and Clark Regional Wastewater District (CRWWD). Clark County owns the Salmon Creek Wastewater Treatment Plant (SCWWTP) that treats flows from CRWWD and Battle Ground. For a fuller discussion of providers, facilities, and collection and treatment capacity, refer to the corresponding section in the DEIS (Revised DEIS, page 254 et seq.).

Sanitary sewer service is one of the urban services that the county includes in its concurrency management system. Under all alternatives, public sewer service would be limited to urban areas, as required by GMA. Rural areas would continue to rely on septic systems.

Impacts on sewer service are directly related to population and employment growth. According to the Wastewater Facilities Plan/General Sewer Plan for Salmon Creek Wastewater Management System, July 2004, observed sewage generation flows at a rate of approximately 243 gallons per day (GPD) per dwelling unit. For the purposes of the FEIS, we are also using Clark Regional Wastewater Districts methodology to estimate commercial and industrial sewer demand; 25 GPD per employee. Table 43 shows the added demand for Alternatives 1 and the Preferred Alternative.

Table 43. Public Sewer Demand, Alternative 1 and Preferred Alternative

Residential	Alternative 1 (No Action)		Preferred Alternative	
	Dwelling Units	Gallons / Day	Dwelling Units	Gallons / Day
Battle Ground	7,172	1,742,902	8,599	2,089,442
Camas	5,353	1,300,900	6,839	1,661,897
CRWWD	15,628	3,797,607	13,241	3,217,549
La Center	557	135,341	1,892	459,844
Ridgefield	4,575	1,111,786	9,019	2,191,528
Vancouver	31,754	7,716,214	35,789	6,266,632
Washougal	3,330	809,107	4,592	1,115,900
Total Residential	68,370	12,990,259	69,970	17,002,793

Employment	Alternative 1 (No Action)		Preferred Alternative	
	Employees	Gallons / Day	Employees	Gallons / Day
Battle Ground	7,221	180,525	12,275	306,875
Camas	13,630	340,750	15,740	393,500
CRWWD	25,685	642,125	22,217	555,425
La Center	906	22,650	3,598	89,950
Ridgefield	11,552	288,800	12,378	309,450
Vancouver	69,152	1,728,800	54,829	1,370,725
Washougal	4,117	102,925	7,082	177,050
Total Employment	132,263	3,306,575	128,119	3,202,975
Total Sewer Demand		16,296,834		20,205,768

Source: Clark County Department of Assessment and GIS. Based on rural vacant and buildable lands formulas that were used in the 2006 Transportation Analysis Zone Analysis.

- 5 Table 44 shows the projected costs of sanitary sewer systems for the Preferred Alternative. It should be noted that individual providers used higher annual residential growth rates than the 2.0% used by the County. This means that the expected growth can be accommodated under either alternative. Costs are from individual providers' capital facilities plans.

10 **Table 44. Projected Costs of Sanitary Sewer Systems, Preferred Alternative**

	Six-year estimated costs	20- year estimated costs
CRWWD	\$54,927,318	\$90,166,054
SWWTP	\$45,600,000	\$106,760,000
Battle Ground	\$10,787,480	\$19,021,400
Camas	\$19,382,480	\$24,232,480
La Center	\$29,773,000	\$56,134,000
Ridgefield	\$42,040,000	\$72,420,000
Vancouver	\$35,073,000	\$91,200,000
Washougal	\$29,749,000	\$39,267,000
Yacolt	\$128,000	\$5,145,000
TOTAL	\$ 267,460,278	\$504,345,934

Alternative 1 (No Action)

15 Alternative 1 would not expand the UGAs, which means that most of the growth would be in the Vancouver UGA. It would not require planning and construction of sewer collection facilities beyond the area already covered in sewer provider plans. Some sewer mains might have to be replaced over the twenty-year life of this alternative to support higher intensity use and new lines would be needed in Battle Ground and around Washington State University Vancouver. The City of Vancouver operates three treatment facilities, one of which is for industrial wastewater. As of 2005, these facilities operated at the following capacities: Westside facility, 43.6%; Marine Park, 57.6%; and Industrial, 37.5%. Treatment plant capacity is expected to be expanded to accommodate projected growth with planned improvements for Vancouver, and expansions may be needed for other cities as well. . Under Alternative 1, additional growth outside UGAs would continue with septic systems. Projected 20-year costs in the 2004 capital facilities plan for sanitary sewer was \$392,477,194.

20

Preferred Alternative

The Preferred Alternative would expand the UGAs. The primary location of demand is west central Clark County which includes Hazel Dell, Battle Ground, Ridgefield and La Center. A majority of this demand falls on the SCWWTP. Additional growth would require constructing new pump stations along the I-5 corridor. This area would also have high costs to serve with sewer. Because Whipple Creek's terrain restricts the ability to serve large areas by gravity service, there is a need for multiple pump stations.

Clark Regional Wastewater District (CRWWD) and the City of Vancouver have expressed interest in serving the new northeast section of the Vancouver UGA. Only CRWWD has included the new expansion area in their 20-year CFP forecasts. The district has also shown they can continue to serve the additional growth proposed in Meadow Glade.

In February 2007, the Board of CRWWD commissioners indicated that Meadow Glade service area can accommodate the proposed growth under the Preferred Alternative, which is approximately 1,400 1-acre lots. Battle Ground Lagoon will absorb this added sewer capacity, and send it to the SCWWTP for treatment.

Expansion of Ridgefield's urban growth boundary would require constructing approximately 41,500 additional linear feet of force mains, 136,050 linear feet of trunk lines, and 13 new pump stations. They have identified 4 phases to complete this work at a cost of \$58.1 million that would likely be financed by system development charges and developer funded improvements. The Ridgefield plant is operating at near full capacity and would need expanding to accommodate growth. La Center's plant is operating at 55% capacity and can accommodate future growth.

Once Yacolt has made substantial progress toward planning a public sewer system and updating other aspects of its capital facilities plan, it may request that its Urban Growth Boundary be expanded to include all or some of these areas, which would then allow it to participate in development planning and eventually annex these areas. Yacolt's 20-year sewer costs include building a small-diameter sewer system. Construction will begin in 2012 and end in 2022.

A secondary location of demand is Camas and Washougal. As previously mentioned, Camas' treatment plant is operating at 53% (2005), and it can accommodate identified growth. Washougal is currently updating its Sanitary Sewer Capital Facility Plan to serve future growth.

Sanitary sewer service must be included in concurrency management programs under the GMA, and policies for providing sanitary sewer service concurrent with new development within UGAs are established in all of the comprehensive plans, as discussed under Mitigation Measures in the DEIS. Clark County, CPU, and CRWWD are currently exploring options for regional management. Depending on the outcome of these efforts, the county may have long-term regional wastewater treatment services. Additional mitigation measures that would reduce the impacts of growth on sanitary sewer services are also highlighted there.

J. Electrical system

Electricity is provided to all Clark County jurisdictions by CPU, a consumer-owned public utility that both generates and buys electricity. For additional information on existing conditions, refer to the corresponding section of the DEIS (Revised DEIS, pages 264).

Electrical service is entirely a “pay as you go” service. Electrical system upgrades are paid for by new development directly (in the form of system connection fees) and by utility rates paid by CPU customers. Rates are adjusted to reflect changing costs of purchasing or generating power. CPU has adjusted rates four times in the past 18 years, three times since 1999 as prices to produce and buy electricity have risen significantly. CPU has instituted an aggressive energy conservation policy and provides incentives to customers to encourage their participation in conservation efforts.

For this reason, CPU expects to be able to expand the electrical system to serve development, no matter which alternative is selected. Likewise, availability of electricity is not expected to be a limiting factor for new development. (However, industries with special power needs—either total amount or reliability—may prefer to locate near existing substations or in areas where the power grid is more fully developed.)

Suggested mitigation for energy conservation is discussed under the Energy and Natural Resources section.

XIV. Are there adverse impacts that cannot be avoided?

The Technical Document discusses unavoidable adverse impacts, irreversible and irretrievable commitments of resources, and the trade-offs between short-term and long-term environmental costs and benefits to productivity in Section X and XI (Revised DEIS, page 265 et seq.).

XV. How do the proposed revised comprehensive plans conform with the Growth Management Act?

How the comprehensive plans of Clark County and its cities conform to the requirements of the GMA is evaluated at length in the Technical Document. It also looks at the conformance of these plans with the requirements of the County-wide Planning Policies, which serve as the framework for the policies in the county’s and cities’ comprehensive plans. Consistency with the procedural criteria established by the Department of Community Planning is also evaluated. Tables 94 through 109 in the DEIS evaluate conformance for each jurisdiction.

Concurrency, fiscal impacts, and annexation and incorporation are issues associated with the different alternatives under consideration. The concurrency requirement is mentioned at several points in the GMA. The GMA defines concurrency for transportation as “...improvements or strategies that are in place at the time of development, or that a financial commitment is in place to complete the improvement of strategies within six years.” Only transportation, water, and sewer facilities are mandated by the GMA for concurrency review. Programs and issues of concurrency are discussed in detail in the Technical Document.

The GMA requires CWPPs to include an analysis of fiscal impact (RCW 36.70A.210(3)(h)), although the statutory requirement is brief and general. Subsequent conclusions by the Central Puget Sound Growth Management Hearings Board appeared to establish minimum requirements for fiscal analysis that included an assessment by local jurisdictions of anticipated costs versus revenues based on designated UGAs. Differences in the fiscal impacts between the alternatives are not significant. They are discussed in the Technical Document.

The intention of the GMA is that urban development occurs within cities or UGAs, which are areas that are designated to eventually become cities, either through annexation or incorporation. The transition of these areas from unincorporated to incorporated areas requires the cooperation of staff and policy makers from the County, cities, towns, and special districts. In order to achieve this level of cooperation, the Clark

County Community Framework Plan (CFP) requires each jurisdiction within the county to plan for annexation and incorporation within UGAs. Regardless of which alternative is selected, policies established by the CFP and countywide planning policies would continue to define the overall annexation and incorporation process that jurisdictions must follow.

ACRONYMS

- ADA** – Americans with Disabilities Act
- AMR** – American Medical Response
- BNSF** – Burlington Northern & Santa Fe Railroad
- BOCC** – Board of County Commissioners
- BPA** – Bonneville Power Administration
- CAA** – Federal Clean Air Act
- CARA** – Critical Aquifer Recharge Area
- CCC** – Clark County Code
- CCFD** – Clark County Fire District
- CCHR** – Clark County Heritage Register
- CFP** –Community Framework Plan
- CMAQ** – Air Quality Improvement Program
- CMC** – Camas Municipal Code
- CMS** – Congestion Management System
- CPU** – Clark Public Utilities
- CREDC** – Columbia River Economic Development Council
- CRESA** – Clark Regional Emergency Services Agency
- CTR** – Central Transfer and Recovery Center
- CWA** – Federal Clean Water Act
- CWPPs** – County-wide Planning Policies
- CWSP** – Clark County Coordinated Water System Plan
- DCD** – Department of Community Development
- DEIS** – Draft Environmental Impact Statement
- DEQ** – (Washington State) Department of Environmental Quality
- DGER** – Division of Geology and Earth Resources
- DNR** – (Washington State) Department of Natural Resources

DOE – (Washington State) Department of Ecology

DS – Determination of Significance

EDSP – Economic Development Strategic Plan for Clark County prepared by CREDC

EIS – Environmental Impact Statement

EMS – emergency medical services

ESA – Endangered Species Act

ESD – (Washington State) Employment Security Department

FEIS – Final Environmental Impact Statement

FEMA – Federal Emergency Management Agency

FIRM – Federal Insurance Rate Map

FPIA – Focused Public Investment Area(s)

FVRLS – Fort Vancouver Regional Library System

FWS – Fish and Wildlife Service

GMA – Growth Management Act

HCDP – Housing and Community Development Plan

HCT – high capacity transit

HHW – household hazardous waste

HOV – high occupancy vehicle

HUD – U.S. Department of Housing and Urban Development

ISTEA – Intermodal Surface Transportation and Efficiency Act

ITS – Intelligent Transportation System

kVa – 1000 volt-amperes; the rating assigned to an electricity distribution transformer

LCMC – La Center Municipal Code

LCSCI – Lower Columbia Steelhead Conservation Initiative

LOS – level of service

LOS E/F – level of service rating of E/F (close to failing or failing level of service)

LRT – Light Rail Transit

MGD – million gallons per day

MHI – median household income

MPO – Metropolitan Planning Organization; regional planning organization required by federal regulations (for Clark County it is RTC).

MRCI – municipal, residential, commercial, and industrial

MTP – Metropolitan Transportation Plan

NAAQS – National Ambient Air Quality Standards

NHS – National Highway System

NMFS – National Marine Fisheries Service (now NOAA Fisheries)

NOAA – National Oceanic and Atmospheric Agency

NRCS – Natural Resource Conservation Service

NRHP – National Register of Historic Places

NSS – Highways of Statewide Significance

OCD – Office of Community Development, State of Washington

OFM – Office of Financial Management, State of Washington

PDX – Portland International Airport

PHS – Priority Habitat and Species Program

PIF – Park Impact Fees

PMSA – Primary Metropolitan Statistical Area

RCW – Revised Code of Washington

REET – Real Estate Excise Tax

RMC – Ridgefield Municipal Code

RTC – Southwest Washington Regional Transportation Council

RTPOs – Regional Transportation Planning Organization; created by GMA (RTC is the RTPO for Clark, Skamania and Klickitat counties.)

SCWTP – Salmon Creek Wastewater Treatment Plant

SEPA – State Environmental Policy Act

SIP – State Implementation Plan (for reducing air pollution).

SMA – Shoreline Management Act

SR – State Route, Washington

STE – Sensitive, Threatened and Endangered species

STEP system– septic tank effluent pump system

SWCAA – Southwest Washington Clean Air Agency

TDR – Transfer of Development Rights

TEA-21 – Transportation and Efficiency Act

TIF – Transportation Impact Fees

TSM/TDM – Transportation System Management / Transportation Demand Management

UBC – Uniform Building Code

UGA – urban growth areas

UP – Union Pacific Railroad

USDA – U.S. Department of Agriculture

VHT – Vehicle hours traveled

VMC – Vancouver Municipal Code

VMT – vehicles miles traveled

WAC – Washington Administrative Code

WDFW – Washington State Department of Fish and Wildlife

WMC – Washougal Municipal Code

WSDOT – Washington State Department of Transportation

WSRB – Washington State Surveying and Rating Bureau

WUCC – Water Utility Coordinating Committee

DEFINITIONS

Achievable density – the density of residential development (usually expressed as number of dwelling units per acre) that can actually be built, taking into consideration the required street dedications, setbacks, parking, and environmental constraints such as slopes, wetlands, etc.

Acre, gross – An acre of land measured including all land uses (i.e., streets, sidewalks, utility easements as well as buildable lots).

Acre, net – An acre of land calculated excluding all unusable spaces (i.e., streets, sidewalks, utility easements, drainage channels, etc.)

Affordable housing – Housing is considered affordable to a household if it costs no more than 30% of gross monthly income for rent or mortgage payments, or up to 3.0 times annual income for purchasing a home. This is the standard used by the federal and state government and the majority of lending institutions.

Arterial – a major street carrying the traffic of local and collector streets to and from freeways and other major streets. Arterials generally have traffic signals at intersections and may have limits on driveway spacing and street intersection spacing.

Average Daily Traffic – the weighted 24 hour total of all vehicle trips to and from a site Monday through Friday.

Built-out – Having no remaining vacant land; fully developed to the maximum permitted by adopted plans and zoning.

Capital Facilities Program – A program administered by a city or county government and reviewed by its Planning Commission, which schedules permanent improvements, usually for six years in the future to fit the projected fiscal capability of the jurisdiction. The program is generally reviewed annually, for conformance to and consistency with the adopted Comprehensive Plan.

Cluster Development – Development in which a number of dwelling units are placed in closer proximity than usual, or are attached, with the purpose of retaining an open space area.

Collector – A street for traffic moving between major or arterial streets and local streets. Collectors generally provide direct access to properties, although they may have limitations on driveway spacing.

Comprehensive Plan – a document consisting of maps, charts, and text which contains the adopting city or county's policies regarding long-term development. A comprehensive plan is a legal document required of each local government by the State of Washington. The required content of the comprehensive plan is described in RCW 36.70 and 36.70A, 36.70B, and 36.70C.

Concurrency – occurring at the same time. The Growth Management Act requires that adequate public services and facilities such as water, sewer, storm drainage, and transportation infrastructure is available at the time that new development is occupied and that the level of service for that infrastructure must meet standards set by the city or county.

Critical Areas – includes wetlands, sensitive fish and wildlife habitat areas, critical recharge areas for groundwater aquifers, flood hazard areas, and geologically hazardous areas (such as landslide areas, earthquake fault zones, and steep slopes), as defined by GMA.

Density – For residential development, density means the number of housing units per acre. For population, density means the number of people per acre or square mile.

Density, gross – Density calculations based on the overall acreage of an area, including streets, roads, easements, rights-of-way, parks, open space, and sometimes, other land uses.

Density, net – density calculations based on the actual area of land used, exclusive of streets, roads, rights-of-way, easements, parks and open space.

Determination of Significance – under SEPA, the written decision by the responsible official of the lead agency that a proposal is likely to have a significant adverse environmental impact and therefore an EIS is required.

Developable land – land that is suitable as a location for structures because it is free of hazards (flood, fire, geological, etc.), has access to services (water, sewer, storm drainage, and transportation), and will not disrupt or adversely affect natural resource areas.

Element – a component or Ch of the comprehensive plan. State law requires each city comprehensive plan to include five elements, which are land use, public facilities, utilities, transportation, and housing. Counties must also prepare a rural element. In addition, elements addressing recreation, conservation, and solar energy may be included at local option.

Extremely-low-income household – households earning 30 percent or less than the countywide median household income.

Flood Hazard Area – a lowland or relatively flat area adjoining inland or coastal waters that is subject to a one percent or greater chance of flooding in any given year. Also known as the 100 year flood area.

Floodplain – typically is the surface elevation of a water body during a 100-year storm event, includes the floodway and floodway fringe.

Floodway – an area within the floodplain where encroachments (e.g., by a structure) would cause the floodplain elevation to rise.

Floodway fringe – an area between the floodway and the outside limit of the flood plain where structures can usually be built.

Floor Area Ratio – the gross floor area permitted on a site divided by the total net area of the site, expressed in decimals to one or two places. For example, on a site with 10,000 net square feet of land area, a Floor Area Ratio of 1 to 1 (1.0:1.0) will allow a maximum of 10,000 square feet of building area to be built. On the same site, a FAR of 1.5 to 1.0 would allow 15,000 square feet of building to be constructed.

Growth management – the use by a community of a wide range of techniques in combination to determine the amount, type, and rate of development desired by the community and to channel that growth to into designated areas.

Growth Management Act – Washington State House Bill (HB) 2929 which was adopted in 1990 and amended several times since then.

High Occupancy Vehicle – a vehicle carrying more than two people.

Household – all persons living in a dwelling unit, whether or not they are related. Both a single person living in an apartment and a family in a house are considered a “household”.

Household Income – The total of all the incomes of all the people living in a household. Households are usually described as very low income, low income, moderate income, and upper income.

Impact fee – a fee levied on the developer of a project by a city, county, or special district as compensation for the expected effects of that development. The Growth Management Act authorizes imposition of impact fees on new development and sets the conditions under which they may be imposed.

Implementation measure – an action, procedure, program or technique that carries out comprehensive plan policy.

Infrastructure – the physical systems and services which support development and people, such as streets and highways, transit services, water and sewer systems, storm drainage systems, airports, and the like.

Land absorption – when vacant land is developed or underdeveloped land is redeveloped.

Landscaping – planting (including trees, shrubs, and ground covers) suitably designed and installed and maintained to enhance a site or roadway permanently.

Level-of-Service (LOS) – a method of measuring and defining the type and quality of particular public service such as transportation, fire protection, police protection, library service, schools/education, etc. Transportation levels of service are designated “A” through “F”, from best to worst. LOS A describes free flowing conditions; LOS E describes conditions approaching and at capacity; LOS F describes system failure or gridlock.

Low-income household – households earning between 51% and 80% of the countywide median income

Market factor – an amount used in calculating the needed supply of vacant and buildable land; the market factor represents an additional “cushion” of available land. It is intended to ensure that the land supply does not become so restricted that it causes an artificial rise in land prices.

Median income – the mid-point of all of the reported household incomes; half the households have higher incomes and half have lower incomes than the mid-point.

Middle-income household - households earning between 95 and 120 percent of the countywide median income.

Moderate-income household – households earning between 81 and 95 percent of the countywide median income.

Non-project action – an action that is different or broader than a single, site specific project. Includes adoption of plans, policies, programs, or regulations that contain standards controlling the use of the environment, or that will regulate a series of connected actions (WAC 197–11–704).

Open space – any parcel or area of land or water that is essentially unimproved and devoted to an open space use such as preservation of natural resources, outdoor recreation not requiring development of play fields or structures, or public health and safety (flood control).

Planning Commission – a group of people appointed by the City Council or County Commission to administer planning and land use regulations for the jurisdiction. State regulations governing the powers and activities of the Planning Commission are contained in RCW.

Poverty level – a set of money income thresholds that vary by family size and composition that the Census Bureau uses to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being “below the poverty level”.

Resource lands – as defined by GMA, lands that may be used for commercial forest, agriculture, or mineral extraction industries. Cities and counties must identify these lands and develop policies to protect them as a part of growth management planning.

SEPA – the State Environmental Policy Act which requires that each city or county consider the environmental impacts of a proposed development before approval and incorporate measures to mitigate any expected negative impacts as conditions of approval.

Transfer of Development Rights (TDR) – a program that permits a property owner or developer to relocate development potential from areas where proposed land use or environmental impacts are considered undesirable to another site which can accommodate increased development beyond that for which it was zoned.

Upper income household – households earning over 120 percent of the countywide median income.

Urban Growth Areas – areas where urban growth will be encouraged. Counties and cities planning under GMA must cooperatively establish the urban growth areas and cities must be located inside urban growth areas. Once established, cities cannot annex land outside the urban growth area. Growth outside of urban growth areas must be rural in character.

Vehicle Miles Traveled – the average number of miles traveled by a vehicle in a given area. This is both a measure of trip length and of dependency on private vehicles.

Very low income –households earning less than 50 percent of the countywide median income

Vision, Visioning – a collective and collaborative statement by citizens, elected and appointed officials and interested parties of their preference for what their community can and should be.

Water-quality limited stream – surface waters that have been identified as not meeting water quality standards and not supporting identified beneficial uses, as defined in Washington regulations (WAC 173-201A).

Zoning – a map and ordinance text which divides a city or county into land use “zones” and specifies the land uses and size restrictions for buildings within that zone.