
Chapter 5: Short-Term Use and Long-Term Productivity; Irreversible and Irretrievable Commitment of Resources; Cumulative Impacts

SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

No Build

The No Build will not cause short-term housing, business, or public facility displacements. However, it will continue to degrade the livability of the downtown areas of Dundee and Newberg, as well as result in degrading air quality and increased travel times due to increased congestion.

Modified 3J and Other Build Alternatives

Major benefits will accrue from travel time saved for the thousands of people who use the Modified 3J or any of the other Build Alternative corridors on a daily basis. From an economic viewpoint, increased accessibility will enable McMinnville to develop stronger economic and employment ties, not only with the Portland metropolitan area, but also with Newberg and Dundee. If more regional job opportunities are created in McMinnville, it could cut down on commuting into Portland. 1000 Friends of Oregon advocates that better access to McMinnville will create more housing opportunities for commuters, and the length of time required to commute from McMinnville to the Portland metropolitan area will become that much shorter. The result will be an increase in the number of commuters. However, the Gen1 model did not confirm the 1000 Friends of Oregon theory. The Gen1 model, as discussed in Chapter 4, estimated that overall changes in households and jobs that could be attributed to the Bypass would be small. However, McMinnville would be expected to become more attractive for employers under Modified 3J and the other the Build Alternatives. This would improve the jobs/housing balance in McMinnville and reduce the pressure on the surrounding transportation network during peak period hours.

Modified 3J will improve access between the Oregon coast and the Portland metropolitan area. This is important in terms of the movement of goods and also as support for the tourist-based economy of the Oregon coast.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

No Build

Under the No Build, continued congestion will require long-term, inefficient use of fossil fuels. While the Bypass routes will require more travel distance, congestion by far represents the greatest source of inefficient use of fossil fuels.

Modified 3J and Other Build Alternatives

Construction of Modified 3J or any other Build Alternative will require considerable energy and materials.

Modified 3J will require approximately 200 acres of EFU land. The other Build Alternatives will require a range of approximately 178 acres to 227 acres of EFU land. Other resource impacts will be relatively minor and will be mitigated by enhancements elsewhere (see Mitigation, Chapter 6).

CUMULATIVE IMPACTS

Cumulative impacts are defined as "...the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other action." For purposes of this LFEIS, cumulative impacts are the effects of project alternatives in combination with other past, present, and reasonably foreseeable future projects, including transportation projects, land development,

changes in technology, policy changes, and other identifiable activities or trends. Cumulative impacts can be both direct and indirect. The purpose of cumulative impact analysis is to identify and describe impacts of the project that may be insubstantial in and of themselves but substantial in combination with the effects of other projects and trends.

Past and present human activities that contributed greatly to cumulative impacts include:

- The clearing of native vegetation for farming and timber production.
- The development of the nearby cities of Newberg, Dundee, Dayton, McMinnville, and others.
- The development and incremental expansion of the Portland metropolitan area.
- Historic development of transportation routes in the project area (road and rail).
- Economic development activities of regional importance that continue to contribute to trips on Oregon 99W, such as timber harvesting, agriculture, and coast-oriented tourism.
- Development of the Newberg and Dundee riverfront areas, and the need for access to each.
- The adopted downtown Dundee vision and Main Street Refinement Plan that provide for a compact, pedestrian-friendly downtown environment along existing Oregon 99W.

Chapter 1 lists numerous transportation, infrastructure, and land use projects that are ongoing or are reasonably expected to be in the foreseeable future. Figure 1-2 shows where they are located relative to this project. The following projects from that list are of particular importance to the cumulative impacts discussion:

- I-5 – Oregon 99W Connector (far southwest Portland)
- Edwards Rd. Extension to Dayton Ave. (Dundee)
- 10th Street and Oregon 99W traffic signals (Dundee)
- Newberg Riverfront Master Plan
- Providence Newberg Hospital (Medical Center) relocation and expansion in east Newberg
- Springbrook Oaks Specific Plan (east Newberg)
- Golf course east of Newberg, within UGB

Transportation

System-wide Vehicle Miles Traveled

Several factors have contributed to an increase in system-wide travel over the past 50 years. Increased commuting to and from the Portland metropolitan area resulted from factors such as population and income growth, increasing participation of women in the labor force, automobile-oriented development, and demand for affordable and rural housing. Population and employment have also substantially increased in Yamhill County. Tourism has expanded on Oregon's coast, including development of popular gambling casinos. This has greatly contributed to travel on Oregon 99W between the Portland metropolitan area and the coast. Also, the use of Oregon 99W as an important freight link continues to expand as the economy becomes more complex. While these factors have increased the number of trips, the Oregon 99W corridor has undergone little change except for some widening and access control.

Very small increases in the number of passenger and freight miles traveled are predicted under Modified 3J. Modeling shows that the Bypass will likely induce more travel in the Oregon 99W/Oregon 18 corridor but not on Oregon's transportation system as a whole. The Bypass will provide greater accessibility to the Portland area and make the McMinnville area more attractive to potential employers. Increased travel will be a consequence of stimulating job growth in the McMinnville area and reducing the cost of travel between the McMinnville and Portland areas. According to results from ODOT's Gen1 Model, "Commuter effects [would] vary. Commuting to the Portland area from Sheridan in Yamhill County will

slightly increase as a result of improved accessibility provided by a Bypass. However, commuting from Newberg to the Portland area will decrease slightly and more Newberg residents will commute to jobs in McMinnville.”²⁸

Provision of mass transit and land use elements (see Chapter 2) will reduce system-wide vehicle miles traveled. Also, the I-5 – Oregon 99W Connector could provide some cumulative reductions in miles traveled.

Travel Time

Growth in the number of commuters using automobiles has contributed to congestion on Oregon 99W. Historically, prior to current levels of congestion, the commute time between Newberg and the Portland metropolitan area was more attractive than at the present time. The addition of several new traffic signals and increased congestion on the highway in Sherwood and the lack of alternative modes or routes have increased travel time and reduced the ease of commuting between Yamhill County and the Portland metropolitan area. However, a highway connector is proposed to link I-5 with Oregon 99W in the vicinity of Sherwood. Modified 3J or any other Build Alternative, combined with the planned I-5 – Oregon 99W Connector, could improve travel time between Newberg, areas west, and the southern and southeastern portions of the Portland metropolitan area, including Tualatin, Wilsonville, Lake Oswego, and West Linn.

Although the total miles traveled system-wide will increase slightly under the Build Alternatives, the total hours of travel will not increase. There are no detectable differences among the Build Alternatives in the system-wide average number of passenger hours traveled or freight hours traveled. The greater distance on the Bypass options will be offset by generally higher speeds of travel, and more travelers will use the less congested Bypass rather than more congested alternative routes.

Further consideration of travel time and potential effects of this project on development patterns are discussed in Chapter 4 under Land Use.

Travel Patterns

The amount of time required for travel through Newberg and Dundee could affect future commuting patterns in the Oregon 99W corridor. Modified 3J or any other Build Alternative will provide a reduction in the amount of time it would take to travel from East Newberg to Dayton, as compared to the No Build. Each of the Build Alternatives will enable a driver to travel from the I-5/Oregon 99W intersection to Dayton within a 45-minute period, whereas the No Build will result in a travel time of more than 70 minutes for the same distance. This savings in travel time with the Build Alternatives could result in additional commute trips between the Yamhill Valley and Portland as well as between McMinnville and Newberg.

With a Bypass, the Gen²⁹1 model shows more travel of all types between the McMinnville area and the Portland metropolitan area, commensurate with the modest growth of population and jobs in the McMinnville area. These results are consistent with the finding that the McMinnville area's economy and population would grow more with a Bypass than without. If the McMinnville area has a larger economy, it will generate and attract more trips; however, the projected growth for McMinnville is so modest, given its relatively small economy, that its impact on the McMinnville Comprehensive Plan cannot be estimated.

Past improvements to rural roads in Marion County that connect Oregon 219 with I-5 (e.g., McKay Rd.) have increased their use as alternative corridors to Oregon 99W for accessing Newberg and points west. Project alternatives that provide an interchange at Oregon 219 will augment the bypass use by motorists

²⁸ ODOT TPAU Newberg Dundee Bypass Draft Environmental Impact Statement – Induced Growth Analysis Modeling Methodology and Results 1/23/2002.

²⁹ See Chapter 4 for a description of the Gen1 model.

(including freight) traveling this route to I-5. However, travel by road to the Portland metropolitan area will become more difficult due to congestion along Oregon 99W and on I-5, since I-5 north to Portland is expected to experience substantial congestion for longer peak periods.

Other Major Roadways in Newberg and Dundee

Modified 3J combined with other reasonably foreseeable actions probably will not increase traffic volumes on Oregon 219 and Oregon 240. Other route options to Oregon 219 for north-south travel through Newberg are constrained by the Willamette River and Chehalem Mountain. Likewise, neither Modified 3J nor any of the other Build Alternatives will provide a reduction in travel time or distance for drivers on Oregon 240, which terminates in downtown Newberg. Modified 3J, which includes operational improvements to Oregon 99W, could decrease the amount of traffic on the Northern Arterial in Newberg by 15 to 20 percent.

Modified 3J, when combined with the extension of Edwards Road to Dayton Road in Dundee will have cumulative impacts. If the Edwards Road – Dayton Road connection is constructed under the No Build, it is projected to carry more than 11,000 vehicles per day. This level of traffic is consistent with that expected on an arterial street. Further, more than 60 percent of this traffic will not be destined for Dundee and will constitute “cut-through” traffic in Dundee neighborhoods. With Modified 3J and all of the other Build Alternatives, the Edwards Road – Dayton Road connection is expected to serve only travelers destined for Dundee.

Traffic Signals in Dundee

Dundee’s TSP shows that as the city grows, additional traffic signals may be needed at key access points to the existing highway. The number of traffic signals allowable on Oregon 99W through Dundee will depend on the functional classification of Oregon 99W and the ability to meet signal warrants. Under the No Build, signals will be spaced at a minimum of 0.8 kilometers (0.5 miles), which provides little opportunity for any additional signals in Dundee unless design exceptions are granted.

With the Build Alternatives, Oregon 99W could be reclassified as a “district” level highway or transferred to local jurisdiction. This would enable signals to be located at Fox Farm-Dayton Road, 5th Street, 10th Street, and Niederberger-Parks as called for in the TSP without design exceptions. The addition of signals in Dundee will enable easier access to and across the highway for motorists, pedestrians, and bicyclists.

Land Use

Historically, Newberg, Dundee and the other cities in Yamhill County primarily served as agriculturally oriented resource-based communities. Outside the urban areas, land was parceled into family farms and native vegetation replaced with crops and orchards. South of the Willamette River in Marion County, agricultural land uses continue to follow this historical pattern.

Modified 3J displaces the lowest amount of Very Low Density Residential (rural residential) land at approximately 38 acres, compared to other Build Alternatives, which would displace approximately 42 to 146 acres. As a result of the lower level of rural land displacement, Modified 3J displaces the most urban land of the Build Alternatives. In Oregon, new roads, including bypasses, are allowed in urban areas but new roads in rural areas require exceptions of the statewide land use planning laws. To minimize the amount of land that would require an exception to the Statewide Planning Goals, Alternative 3J was modified to minimize impacts to rural lands, resulting in the development of Modified 3J.

The cities of Yamhill County have served as housing, economic and processing centers for a resource-based economy. Like most of Oregon, the economy of Yamhill County has evolved to be more complex and less dependent upon agriculture and timber. However, agricultural production – predominantly vineyards – has spawned tourism that is leading to related land use changes (such as development of wineries and supporting infrastructure). As the gateway to Oregon’s most productive wine region, tourism is playing an increasingly important role in the Yamhill County economy.

While both Newberg and Dundee are located near the Willamette River, in the past, neither city integrated the river into their communities. Rather, river-oriented land uses remained either industrial or agricultural in nature. Both cities have adopted community vision statements that identify the riverfront as a focus of future economic and recreational activity that is linked to the core areas of the cities. The vision also includes a greenway system to protect and conserve natural areas with pedestrian and bicycle paths along the streams and rivers. The Newberg City Council has adopted a master plan and comprehensive plan amendments for the Riverfront District to support transition to a greater mix of land uses along the riverfront, including open space, recreation, housing, and river-oriented commercial. The Dundee riverfront is still in productive agricultural use. Dundee's TSP includes a proposal to develop a parkway along the west bank of the Willamette River through the Dundee UGB in conjunction with a southerly Bypass alignment. The City is also developing a parks master plan.

Modified 3J provides greater awareness of the Willamette River as a community amenity, and could support mixed-use development of the Riverfront District in Newberg and a riverfront bikeway in Dundee. However, attention to the grade and design of the Bypass and grade-separated crossings in Tier 2 will be critical to minimize the potential for the facility to be a barrier to riverfront access or planned riverfront development. Modified 3J could provide an opportunity for coordinated planning of a separated bikeway that will link the Willamette Riverfront areas of Newberg. Implementation of this bikeway will be determined as part of the bikeway plan.

Historically, rail and road links have shaped land use patterns in Yamhill County. As with most of the United States, increased use of the road system by automobiles has incrementally and substantially changed land use patterns. Population increases along with an automobile-oriented public have created dispersed development in and around Newberg and Dundee. Rural residential subdivisions continue to develop in the large rural area between Newberg and Dundee. Development patterns along Oregon 99W in the Newberg-Dundee area over the past 20 years have created a linear urban core that is mostly automobile oriented and not very suitable for pedestrians. Development of a Bypass will substantially reduce traffic volumes on Oregon 99W in the downtown areas of Newberg and Dundee. When coupled with public investments to improve pedestrian amenities in the downtown and discourage commercial development at the new interchanges, Modified 3J could foster change to more densely populated, pedestrian-friendly urban centers.

Modified 3J will use land within the UGBs planned for urban uses (housing, commercial and industrial). The Cities of Newberg, Dundee, and Dayton will need to evaluate their land inventories to ensure that adequate land remains available within the UGBs to meet 20-year land needs. Newberg anticipates having its buildable lands inventory update complete by June, 2005. Under Modified 3J, the East Newberg Interchange, combined with the proposed relocation of the Providence Health Systems hospital in Newberg, will represent a major change in the land use at the east Oregon 99W entry into Newberg. The City of Newberg expanded its UGB for the relocation of the hospital to include a 22-acre site on the south side of Oregon 99W, immediately west of Modified 3J. The new facility, named the Providence Newberg Medical Center, will include a hospital, a healing and wellness garden, and a medical office building. Commercial development has been expanding along Oregon 99W to the east of Springbrook Road over the past 10 to 20 years. Newberg's adopted urban reserve area anticipates long-term expansion of the UGB to about Benjamin Road on the east. In addition to altering existing land use, the Bypass project and the hospital relocation could serve as catalysts for development. Modified 3J and all of the other Build Alternatives are similar in this regard.

Newberg adopted the Springbrook Oaks Specific Plan in 1999 to provide a coordinated framework for development of a 284-acre parcel located inside the Newberg UGB to the southeast of the Springbrook Road/Oregon 99W intersection. The Specific Plan will facilitate the area's development. It will also strengthen Newberg's ability to ensure the type and design of development it desires. The reduced congestion and improved visibility afforded by Modified 3J will make the Springbrook Oaks plan area more attractive for development. Alternative 3I provides the most access to the Specific Plan area due to an at-grade intersection. Directional East Newberg Interchanges that are featured in Modified 3J and

Build Alternatives 3G, 3H, 3J, provide the least improvement of access to the Specific Plan area compared to the other southern Bypass alternatives.

The Chehalem Park and Recreation District (CPRD) is developing a 27-hole golf course in Newberg. Nine holes are currently under construction on the eastern edge of Newberg's UGB. Plans for the other 18 holes, which are part of the 27-hole course, to be built in the future include a clubhouse and a driving range. The site for the 18-hole planned facility is generally located in the southeastern area of the City of Newberg, south of the nine-hole course and between Fernwood Road to the north and Wilsonville Road to the south. For more information on the CPRD properties, see Appendix E, Section 4(f).

Development of Roads Outside of the Study Area

The planned I-5 – Oregon 99W Connector in the vicinity of Sherwood could improve travel time between an area west of Newberg and the southern and southeastern portions of the Portland metropolitan area, including Tualatin, Wilsonville, Lake Oswego, and West Linn. The connector will not improve access to the Bypass project area from most of the Portland metropolitan area due to projected future system-wide congestion (including I-5).

Socioeconomics

In 1990, 31 percent of workers living in Yamhill County commuted to jobs located outside the County (but within the state). This percentage increased to 36 percent by the of the 2000 census. Newberg has and continues to lead (over Dayton, Dundee or McMinnville) in the proportion of working residents commuting outside Yamhill County. Newberg residents now account for approximately one-third of Yamhill County residents leaving the county for work (up from 30 percent in 1990).

Based upon the Gen1 model, Modified 3J and the other Build Alternatives will provide better regional access to the area. This could lead to a very small (less than 5 percent) increase in the number of Yamhill County households over a 40-year period between 2010 (the assumed year of Bypass completion) and 2050. Gen1 modeling results show most of the growth increases occur within 20 years of opening a Bypass (by 2030).

As described in Chapter 4, almost all of the increased growth in Yamhill County resulting from Modified 3J and the other Build Alternatives will occur in the McMinnville area. The larger economic base in this area will be most attractive to businesses with improved accessibility to the Portland metropolitan area. The Bypass, combined with other foreseeable actions, will make McMinnville more attractive as an employment center. McMinnville may become more attractive to some Portland commuters, even though the travel time will be longer than most commuters might find acceptable. However, the creation of more jobs in McMinnville will improve the jobs/housing balance, offsetting any increased commuting. Minimal effects are likely in the Newberg area, because accessibility from Newberg to the Portland area will remain about the same with or without a Bypass. Generally, small communities along the Oregon 99W/Oregon 18 corridor will experience little difference in job or population growth among the scenarios. Most of these communities do not have the economic base to attract substantial new business.

If Modified 3J or any of the other Southern Build Alternatives are designed during Tier 2 to be integrated with plans for redevelopment of Newberg's riverfront, then the alternatives will likely have a beneficial effect. Alternative 3I with two at-grade intersections will likely provide the best access to this area. The Bypass has the potential to create a barrier between neighborhoods to the north and the riverfront area, which could adversely affect economic viability. To address this issue, design options and mitigation measures related to riverfront access will be addressed and evaluated in Tier 2. Alternative 4C (the Northern Build Alternative) will not substantially affect the riverfront area or the surrounding neighborhood. The No Build would deter the riverfront as a destination for regional traffic.

Construction of the Providence Newberg Medical Center near the junction of existing Oregon 99W and Alternatives 3C, 3D, and 3K, which offer full movement at the East Newberg Interchange and the best

accessibility to the site, will likely benefit safety by improving travel time for emergency vehicles traveling to the medical center.

Even with construction of Modified 3J or any of the other Build Alternatives population and employment growth in Dundee will probably create the need for additional traffic signals on existing Oregon 99W in Dundee. This should help promote community cohesion by improving accessibility across Oregon 99W and providing better access between neighborhoods on opposite sides of Oregon 99W. While the Bypass alternatives will reduce traffic on existing Oregon 99W, provision of additional traffic signals could help business accessibility to vehicles traveling on Oregon 99W by increasing the number of left-turn movements and formal pedestrian crossings. Additional signals are identified for Oregon 99W in the Dundee Transportation System Plan as traffic volumes or other conditions warrant (2003).

Biological Resources

Farming and urbanization substantially altered the natural environment in the project area starting about 150 years ago. The least disturbed natural habitat is typically found on properties that are unsuitable for agricultural or urban development, such as ravines and other steep topography. (See Chapter 3 for a description of high quality habitat.) Areas that have undergone the most change – those with relatively flat topography – formerly supported prairie and oak savannah plant communities. Most of these plant communities have been eliminated from the entire Willamette Valley. Neither Modified 3J nor any of the other Build Alternatives impacts prairie or oak savannah, but they do impact some of the other remaining higher quality habitat (see Chapter 4, Environmental Impacts).

The introduction of invasive, non-native plants throughout much of the project area is the result of past human activities such as agriculture and development of transportation systems. Researchers have documented that weeds have historically spread along both rail and road transportation corridors. Weeds are also spread by domesticated animals such as sheep and cattle. The consequence of this introduction of weeds into the project area is that few areas are still dominated by native plants, and those that are also have substantial quantities of non-native plants. The construction of the Bypass (a potential new conduit for new species of weeds) will not lead to degradation of pristine natural plant communities since none currently exist, but could lead to a localized decline in habitat quality.

Ongoing farming practices and non-point pollution from urban areas contribute to poor water quality currently found in area streams. These issues and barriers to fish passage (such as culverts) have reduced the number of native fish in the tributaries to the Willamette River that flow through the project area. Combined with continued urbanization and farm practices, construction of Modified 3J or any of the other Build Alternatives has the potential to diminish fish habitat.

The net result of past human activities in the project area is a substantially modified ecosystem that supports a fraction of the native plants, fish and wildlife that were present 150 years ago. Development of Modified 3J will contribute incrementally to the modifications already undertaken. The combined influence of planned housing, which will take place independent of the Bypass, economic development, and construction of the Bypass, will lead to a likely net loss of rural lands, including farmland and wildlife habitat. See Chapter 6 for mitigation information that addresses loss of wildlife habitat.

The cities of Dayton, Dundee and Newberg will continue to grow, including areas adjacent to the Willamette and Yamhill Rivers. Planned urbanization near the rivers, also independent of the Bypass, while having community benefits, will likely further contribute to irreversible loss of important wildlife habitat. Mitigation associated with the Bypass project is likely to eliminate and/or reduce project-related adverse impacts. Mitigation may possibly result in net enhancements to the biological environment. Site-specific plans for mitigation will be developed during Tier 2.

Consistent with the conclusions of the Gen1 model, minimal indirect land use effects are expected due to the construction of Modified 3J. As a result, indirect effects on biological resources (habitat changes) that could be attributed to Modified 3J are not anticipated.

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