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TO: Jackson County Board of Commissioners and Planning Commission
FROM: Bob Parker and Beth Goodman
SUBJECT: HOUSING NEEDS MODEL RUNS FOR JACKSON COUNTY

Jackson County is in the process of updating the housing element of its comprehensive plan. The County contracted with ECONorthwest to assist with the technical aspects of updating the housing element. The project scope included running the Housing and Community Services (HCS) housing needs model to forecast housing needs in Jackson County by cost and type.

While the output of the housing needs model provided the County with useful information about the existing housing market in Jackson County, it has limitations that make the output of the model difficult to use to forecast housing needs in rural Jackson County. These limitations are summarized at the end of this memorandum but include: the model assumes that the income distribution will remain constant in real terms throughout the planning period; the output of the model suggests a shift in tenure in Jackson County with no explanatory factors for the shift; and the housing cost ranges assumed in the model are too low for Jackson County, which has some of the most expensive housing in Oregon.

The remainder of this memorandum presents the HCS model output. It includes the following sections:

- **HCS Housing model forecast by cost and type mix** presents the assumptions made for the two runs of the housing needs model for Jackson County.
- **Run #1: Baseline assumptions** presents the baseline output from the HCS model.
- **Run #2: Recent housing cost increase** presents the output of the HCS model with adjustments for increases in housing cost.
- **Summary** presents a summary of the limitations of the HCS model in Jackson County.

HCS HOUSING MODEL FORECAST BY COST AND TYPE MIX

Estimating the need for housing by income and housing type requires some estimate of the income distribution of future households in Jackson. These estimates are based on (1) secondary data from the Census, and (2) the HCS Housing Needs Model.

It is difficult, if not impossible, to develop a defensible forecast of the key variables that will affect housing choice in Jackson County: age, income, and household size. Based on the analysis of PUMS data, however, a general trend becomes evident: households with lower incomes tend to have much higher incidence of renting, and lower cost units have a higher percentage of renters than higher cost units.

It is reasonable to assume that if more affordable housing were available, that some households with employees would choose to live closer to where they work. Policies that encourage a range of housing types, densities, and price ranges will provide local workers with more housing options. For the most part, the focus of these policies will be the urban cities of Jackson County, which have greater variety of housing types and densities than rural Jackson County. Such policies would help decrease (but not eliminate) the jobs-housing imbalance that currently exists in some cities in the County. Thus, prevailing wage rates of local employers provide a good place to start when developing estimates of future housing need by type.

The HCS Housing Needs Model was used to identify current affordability gaps. The model considers the current and projected demographics, existing housing inventory, and regional tenure choices, to arrive at the number of needed housing units by tenure, price point, and housing type. The model output is for all of Jackson County; the model was not built in a manner that allows it to forecast housing need for unincorporated portions of a county.

Table 18 shows the current value input assumptions from the two model runs. The baseline assumptions were derived from analysis of 2000 Census data, the current cost assumptions from analysis of single-family sales data from the County Assessor and from rental values from Streetrents.com.

TABLE 18. HCS HOUSING NEEDS MODEL, CURRENT HOUSING DISTRIBUTION ASSUMPTIONS

Rental Units			Ownership Units		
Rent	Run #1: Baseline	Run #2: Current Cost	Value	Run #1: Baseline	Run #2: Current Cost
0 - 235	3%	2%	<66.9k	1%	2%
236 - 509	10%	8%	66.9k < 100.3k	5%	2%
510 - 784	35%	25%	100.3k < 133.7k	10%	4%
785 - 1074	35%	42%	133.7k < 167.2k	25%	7%
1075 - 1359	13%	17%	167.2k < 250.8k	35%	33%
1360 +	4%	6%	250.8k +	24%	52%
Total	100%	100%	Total	100%	100%

Note: distribution of rent and housing values were adjusted to 2006 values

The following sections summarize the output from the HCS Housing Needs Models.

RUN #1: BASELINE ASSUMPTIONS

Table 19 shows current unmet housing needs as indicated by the HCS model. The results indicate a deficit of more than 8,900 rental units in the under \$509 price level. The model output also indicates a deficit of rental units for prices above \$1,075. The output shows that 16% of the

need is met for \$0 - \$235 prices range, and 40% for the \$235 - \$509 price range. The model indicates a total unmet rental need of 4,357 units. In other words, as of 2005, Jackson County needed 4,357 additional rental units to meet the needs of households that rent or would be predicted to rent based on the expected tenure composite from the model base data.

The model also indicates a deficit of ownership units at prices less than \$133,700 and at prices more than \$250,800. The model indicates a total deficit of more than 3,000 ownership units.

TABLE 19. BASELINE MODEL RUN: CURRENT UNMET HOUSING NEEDS, 2006, HCS MODEL OUTPUT

Rental				Ownership			
Rent	Current Unmet Need / (Surplus)	% of Need Met	Cumulative Units Needed	Price	Current Unmet Need / (Surplus)	% of Need Met	Cumulative Units Needed
0 -235	4,614	15.5%	4,614	<66.9k	2,483	13.6%	2,483
236 -509	4,295	39.7%	8,909	66.9k < 100.3k	4,168	31.9%	6,651
510 - 784	(2,507)	133.9%	6,402	100.3k < 133.7k	1,756	69.0%	8,407
785 -1074	(4,234)	174.8%	2,169	133.7k < 167.2k	(3,917)	167.0%	4,490
1075 - 1359	959	79.3%	3,127	267.2k < 250.8k	(3,037)	128.6%	1,454
1360 +	1,230	47.9%	4,357	250.8k +	1,637	85.1%	3,091

Source: Oregon Housing and Community Services Housing Needs Model; output for Jackson County

Note: rents and values in 2006 dollars.

The HCS Housing Needs Model also outputs estimates of future housing needs. Table 20 shows that Jackson County will need 48,338 new dwelling units between 2006 and 2026. The model output shows the following needed housing characteristics:

- 54% of new housing units (16,719 dwellings) should be ownership units. This figure is significantly lower than the 63% observed by the 2000 Census. The implications of this output are that the model predicts many more households in Jackson County will choose (or need) to rent in the 20-year planning period.
- 75% of needed units (36,708 dwellings) should be single-family types (this figure includes manufactured housing in parks).
- More than 16,000 dwelling units should rent for less than \$509 (in 2006 dollars).
- If forecast trends continue, Jackson County will have a surplus of 1,092 rental units in the \$785-\$1,075 range.
- Jackson County will need 15,417 ownership units that are priced less than \$100,300 (in 2006 dollars).
- Jackson County will need a significant number of higher end rental units—the model predicts a need for 6,014 rental units that rent for more than \$1,075 (in 2006 dollars).
- Jackson County will need more higher end ownership units. The model predicts a need for 7,894 dwellings priced at more than \$250,800 (in 2006 dollars).

- The model projects a need for more than 5,000 manufactured dwelling units in parks. This figure could overestimate the need given that no new parks are being considered in the short term. The high cost of land and financing could be additional factors that reduce demand for manufactured homes. Jackson County is not required to plan for manufactured dwelling parks in rural areas of the County, according to ORS 197.480(1)(a) and (b), which says that planning for manufactured dwelling parks is required within UGBs or in residential zones where densities are 6-12 units per acre.

TABLE 20. BASELINE MODEL RUN: FUTURE DWELLING UNITS NEEDED BY TYPE AND PRICE, 2006-2026, JACKSON COUNTY, HCS MODEL OUTPUT

New Rental Units Needed							
Rent	Needed Units	Single Family Units	Manufactured Dwelling Park Units	Duplex Units	Tri-Quadplex Units	5+ Multi-Family Units	Total Units
0 -235	7,766	1,942	385	623	467	4,350	7,766
236 -509	8,454	3,382	1,690	676	846	1,860	8,454
510 - 784	1,060	424	106	106	159	265	1,060
785 -1074	(1,092)	(819)	(33)	(66)	(44)	(131)	(1,092)
1075 - 1359	3,493	3,493	0	0	0	0	3,493
1360 +	2,521	756	504	0	0	1,261	2,521
Totals	22,203	9,179	2,652	1,339	1,429	7,605	22,203
Percentage		41.3%	11.9%	6.0%	6.4%	34.3%	100.0%
New Ownership Units Needed							
<66.9k	9,482	5,254	4,228	0	0	0	9,482
66.9k < 100.3k	5,934	4,844	793	298	0	0	5,935
100.3k < 133.7k	4,105	3,489	294	121	0	201	4,105
133.7k < 167.2k	(1,280)	(1,024)	(616)	(13)	(13)	386	(1,279)
267.2k < 250.8k	3,351	3,490	(139)	0	0	340	3,691
250.8k +	4,543	4,361	(97)	0	0	278	4,543
Totals	26,134	20,416	4,462	406	(13)	1,206	26,477
Percentage		77.1%	16.9%	1.5%	0.0%	4.6%	100.0%
Total New Rental and Ownership Units							
Totals	48,338	29,594	7,114	1,745	1,416	8,811	48,681
% of Total Units		60.8%	14.6%	3.6%	2.9%	18.1%	100.0%

Source: Oregon Housing and Community Services Housing Needs Model; output for Jackson County

Note: rents and values in 2006 dollars.

RUN #2: RECENT HOUSING COST INCREASE

Recent housing data suggest that housing prices increased significantly in the County between 2002 and 2006. A second model run to accounts for the price increase (see Table 18 for the value assumptions). Based on information from the housing needs analysis for the Regional Problem Solving Process, other adjustments were made to the future planned supply of housing—most notably by decreasing the assumed percentage of manufactured homes.

Table 21 shows current unmet housing needs as indicated by the HCS model. The results indicate a deficit of more than 9,700 rental units in the under \$509 price level—nearly 1,000 more than the baseline model run. The model output also indicates a deficit of rental units for prices above \$1,360. The output shows that 10% of the need is met for \$0 - \$235 prices range, and 32% for the \$236 - \$509 price range. Consistent with the baseline run, the model indicates a

total unmet rental need of 1,198 units. In other words, as of 2005, Jackson County needed 4,357 additional rental units to meet the needs of households that rent or would be predicted to rent based on the expected tenure composite from the model base data.

The biggest change in output comes on the ownership side. Data suggest that housing prices have increased much faster than rents. The model also indicates a deficit of 14,640 ownership units at prices less than \$167,200. The model, however, indicates a total surplus of more than 11,500 ownership units for prices above \$167,200.

TABLE 21. COST INCREASE MODEL RUN: CURRENT UNMET HOUSING NEEDS, 2006, HCS MODEL OUTPUT

Rental				Ownership			
Rent	Current Unmet Need / (Surplus)	% of Need Met	Cumulative Units Needed	Price	Current Unmet Need / (Surplus)	% of Need Met	Cumulative Units Needed
0 -235	4,897	10.3%	4,897	<66.9k	2,094	27.1%	2,094
236 -509	4,862	31.7%	9,759	66.9k < 100.3k	5,339	12.8%	7,433
510 - 784	319	95.7%	10,078	100.3k < 133.7k	4,097	27.6%	11,530
785 -1074	(6,214)	209.8%	3,865	133.7k < 167.2k	3,110	46.8%	14,640
1075 - 1359	(171)	103.7%	3,693	267.2k < 250.8k	(2,256)	121.2%	12,385
1360 +	664	71.9%	4,357	250.8k +	(9,294)	184.4%	3,091

Source: Oregon Housing and Community Services Housing Needs Model; output for Jackson County

Note: rents and values in 2006 dollars.

The HCS Housing Needs Model also outputs estimates of future housing needs. Table 22 shows that Jackson County will need 48,338 new dwelling units between 2006 and 2026. The model output shows the following needed housing characteristics:

- 54% of new housing units (26,134 dwellings) should be ownership units. This figure is significantly lower than the 63% observed by the 2000 Census. The implications of this output are that the model predicts many more households in Jackson County will choose to rent in the 20-year planning period.
- 79% of needed units (38,020 dwellings) should be single-family types (this figure includes single-family attached and manufactured housing).
- More than 17,000 dwelling units should rent for less than \$509 (in 2006 dollars).
- If forecast trends continue, Jackson County will have a surplus of 3,072 rental units in the \$785-\$1,075 range.
- Jackson County needs 28,390 ownership units that are priced less than \$167,200 (in 2006 dollars).
- Jackson County has a large surplus of higher end ownership units. The model estimates a surplus of nearly 6,400 dwellings priced at more than \$250,800 (in 2006 dollars).

- The model projects a need for more than 4,050 manufactured dwelling units in parks under the cost increase assumptions. While this is considerably lower than the baseline run, it may still overestimate the number of units for the same reasons (high land costs and difficulties in financing).

TABLE 22. COST INCREASE MODEL RUN: FUTURE DWELLING UNITS NEEDED BY TYPE AND PRICE, 2006-2026, JACKSON COUNTY, HCS MODEL OUTPUT

New Rental Units Needed							
Rent	Needed Units	Single Family Units	Manufactd Dwelling Park Units	Duplex Units	Tri-Quadplex Units	5+ Multi-Family Units	Total Units
0 -235	8,049	2,013	399	646	484	4,508	8,049
236 -509	9,021	4,512	1,240	676	858	1,736	9,022
510 - 784	3,886	1,556	388	388	583	971	3,886
785 -1074	(3,072)	(523)	(330)	(422)	(242)	(1,556)	(3,072)
1075 - 1359	2,363	3,804	(96)	(240)	(144)	(961)	2,363
1360 +	1,955	952	26	0	0	978	1,955
Totals	22,203	12,313	1,627	1,048	1,540	5,676	22,204
Percentage		55.5%	7.3%	4.7%	6.9%	25.6%	100.0%
New Ownership Units Needed							
<66.9k	9,093	6,560	2,533	0	0	0	9,093
66.9k < 100.3k	7,105	6,117	633	357	0	0	7,106
100.3k < 133.7k	6,446	5,720	358	144	0	224	6,446
133.7k < 167.2k	5,747	5,022	14	58	58	596	5,748
267.2k < 250.8k	4,132	4,224	(433)	0	0	340	4,132
250.8k +	(6,388)	(5,992)	(674)	0	0	278	(6,388)
Totals	26,134	21,650	2,430	559	58	1,439	26,137
Percentage		82.8%	9.3%	2.1%	0.2%	5.5%	100.0%
Total New Rental and Ownership Units							
Totals	48,338	33,963	4,057	1,607	1,598	7,115	48,341
% of Total Units		70.3%	8.4%	3.3%	3.3%	14.7%	100.0%

Source: Oregon Housing and Community Services Housing Needs Model; output for Jackson County

Note: rents and values in 2006 dollars.

SUMMARY

The HCS Housing Needs Model is one method of estimating housing needs by housing type and price. The model has many limitations, however. One is that forecasting income distributions 20 years into the future is highly uncertain. The base model input assumes that incomes will remain constant in real terms over the 20-year analysis period.

Moreover, the model uses regional data to forecast future need by tenure. In the instance of the model run just presented, the model forecasts a significant tenure shift. It is difficult to determine the basis for this shift, particularly in light of the fact that the model suggests there will be a large need for high priced rental units. The shift suggested by the model does not seem representative of choices that households will make in Jackson County. For example, Census data indicate that far fewer manufactured homes were built in the 1990s than in the 1980s. The baseline model run forecast a manufactured housing share that was higher than the share in 2000—an output

inconsistent with development trends. The “Cost Increase” model was adjusted so that the future housing mix would account for this trend.

Some of the model outputs are difficult to interpret. For example, the model indicates that Jackson County has a surplus of rental units in the \$785-\$1,075 range. It appears to implicitly redistribute those units to other categories. The fact is that those units will likely still exist in the County in 2026 and be rented in comparable price ranges.

Another limitation of the model is that it does not specifically allocate to single-family attached housing products (ownership units that achieve multifamily densities). Such units are combined with multifamily housing types in the output summaries. As much as 10% to 15% of housing need could be single-family attached housing types either as townhouse style, row-house style or multi-story products. The model rolls single-family attached units into the single-family category.

Finally, the model identifies considerable need in the lowest price ranges. It seems likely that these needs exist and will probably exist during the 2006-2026 planning period, but it seems unlikely that the market will produce these units without significant financial incentives or subsidies. Based on existing program support, however, it appears the amount of funds available for government-assisted housing subsidies will be sufficient to build only a small fraction of these dwellings. Moreover, inclusionary zoning, one of the more effective affordable housing strategies is prohibited in Oregon under ORS 197.309. In other words, unless government allocation of funds to housing significantly increases, or the law prohibiting inclusive zoning is repealed, these low rent/price units will not be available. Moreover, land use policy is relatively limited in its ability to dictate what the market builds. The primary intent of land use planning and conducting a housing needs assessment is to ensure that local governments designate enough land for different housing types—particularly higher density housing types.