# Chapter 5.
# KEY FINDINGS and SYNTHESIS

...wherein I summarize the key results of this project.

I conclude that rural cluster development in association with a mitigation policy that restores and conserves native habitat has the potential to reverse the declining trends of some uncommon and rare native wildlife species. At the same time, this policy can direct rural growth to selected areas of the basin, and minimize rural sprawl, while accommodating an additional 41,000 people in 60 years.

If current policies persist, habitat conditions for native species dependent on old growth conifer forests, grasslands, and oak savanna communities will continue to decline, increasing the risk of the extirpation of species from the basin.

Active management and restoration of Oregon white oak savanna and woodland, Lane Co., Oregon.

The results of this project indicate that continuing resource use in the farm and forest lands of the WRB under current management regimes will likely lead to future reductions in species populations and, eventually, a loss of vertebrate biodiversity within the basin. With a modest conservation network established in private lands in the foothills and lowlands of the valley, the decline in some uncommon and rare species may be reversed. Rural residential development should be considered as a means to leverage the establishment of this network. It has been shown here that when rural growth is constrained to certain areas of the basin, homes for over 40,000 people can be sited with reduced environmental impact when built as clusters, and losses of high value farm and forest lands to development can be kept to low percentages of the total inventories. Thus, a policy requiring restoration in return for allowing development can benefit both humans and wildlife.

Table 5.1 compares and contrasts some results for the alternative futures.

## KEY POINTS CONCERNING BIODIVERSITY

In this section, I summarize results from the habitat evaluation model. I present four key points showing that the restoration policy of conservation clusters creates superior conditions for wildlife when compared to any of the other alternative futures. I further discuss three issues that necessitate careful planning and management when implementing the restoration policy. I end with two observations concerning old-growth conifer forests and the future of old-growth dependent species.

***The main objective of this project was to investigate the use of rural residential development as an engine to fund a conservation network on private lands. Clearly, with this objective, a policy that has detrimental effects on wildlife is not worth pursuing. The results of this project are, however, promising. They indicate that rural cluster development when combined with prairie and oak savanna habitat restoration is likely to provide enhanced conditions for currently declining wildlife species associated with these habitats. These opportunities are not available in typical rural subdivisions.***

Three different types of modeled evaluations were used to arrive at this conclusion: changes in local species richness, trends in number of species with increasing or decreasing habitat conditions, and the responses of individual species to habitat changes.

• Modeled species richness changes show that of all future landscapes, that of scenario RR-CONS produces the greatest area in which local species richness increases with respect to 1990 conditions. And with the exception of scenario RR-CL, it has the least area among all other rural development scenarios in which local species richness decreases (Table 5.1).

• The landscape of scenario RR-CONS is predicted to support the greatest number of native species for which habitat improves (35), and the least number of native species for which habitat declines (28) (Table 4.10). This trend is also true for rare species. The landscapes of all other scenarios are predicted to have more species with negative habitat trends than those with positive trends, basinwide (Table 5.1).

• All species for which habitat conditions significantly decline in RR-CONS, except for one, also experience declining conditions in the other scenarios. RR-CONS therefore produces no greater negative impacts than any other scenario. Under RR-CONS, habitat scores improve for five additional native species beyond the group with increasing scores under all alternative futures (see page 4-33). Further, trends of decreasing habitat scores under PT-EX are reversed under RR-CONS for six species associated with grassland and oak-savanna communities.

Table 5.1 (right). Summary of key results from evaluations of the landscape of the alternative scenarios, and from the habitat evaluation.
** indicates not computed. (1) the 2-acre area around each home; (2) includes the 2-acre area around each home plus the increase in new road surface; (3) older than 80 years.

| | 1990 | 2050 Plan Trend | 2050 5-acre Parcels | 2050 15-acre Parcels | 2050 Clusters | 2050 Conserv. Clusters | REF. |
|---|---|---|---|---|---|---|---|
| Number new houses in RRZs | | 12,400 | 12,400 | 12,400 | 12,400 | 12,400 | |
| Number new houses in ROZ | | - | 21,570 | 7,661 | 17,390 | 17,390 | Table 4.2 |
| Number people in ROZ | | - | 50,450 | 18,030 | 40,930 | 40,930 | Table 4.3 |
| Rural population | 278,770 | 284,080 | 334,530 | 302,110 | 325,010 | 325,010 | Table 4.3 |
| % basinwide population in rural areas | 14.2% | 7.3% | 8.6% | 7.7% | 8.3% | 8.3% | Table 4.3 |
| | | | | | | | |
| Miles of new roads in ROZ | | - | 1,046 | 654 | 490 | 490 | Table 4.4 |
| Miles of new roads outside ROZ | | - | 6 | 5 | 8 | 8 | Table 4.4 |
| Houses/mile new road | | | 20.5 | 11.6 | 34.9 | 34.9 | |
| | | | | | | | |
| Acres of high value farm soils in ROZ | | - | 51,222 | 51,222 | 51,222 | 51,222 | Table 4.5 |
| % of basinwide inventory (private lands) | | | 2.6% | 2.6% | 2.6% | 2.6% | Table 4.5 |
| Acres of high value farm soils withdrawn from farm zoning | | - | 4,849 | 7,885 | 2,064 | 2,064 | Table 4.5 |
| % of basinwide inventory (private lands) | | | 0.2% | 0.4% | 0.1% | 0.1% | Table 4.5 |
| | | | | | | | |
| Acres of Site Class I-II Forest in ROZ | | | 63,319 | 63,319 | 63,319 | 63,319 | Table 4.6 |
| % of basinwide inventory (private lands) | | | 4.8% | 4.8% | 4.8% | 4.8% | Table 4.6 |
| Acres of Site Class I-II Forest withdrawn from resource zoning | | | 4,697 | 7,508 | 1,798 | 1,798 | Table 4.6 |
| % of basinwide inventory (private lands) | | | 0.35% | 0.57% | 0.14% | 0.14% | Table 4.6 |
| | | | | | | | |
| Acres of Site Class III-V Forests in ROZ | | | 117,671 | 117,671 | 117,671 | 117,671 | Table 4.6 |
| % of basinwide inventory (private lands) | | | 11.0% | 11.0% | 11.0% | 11.0% | Table 4.6 |
| Acres of Site Class III-IV Forest withdrawn from resource zoning | | | 67,996 | 70,691 | 32,409 | 32,409 | Table 4.6 |
| % of basinwide inventory (private lands) | | | 6.4% | 6.6% | 3.0% | 3.0% | Table 4.6 |
| | | | | | | | |
| Increase in "built low density" areas within RRZs wrt 1990, acres (1) | | 17,965 | 17,965 | 17,965 | 17,965 | 17,965 | App. A.7 |
| Increase in developed area in ROZ (acres) (1) | | - | 38,140 | 14,548 | 25,174 | 25,143 | App. A.7 |
| Developed area/home (acres) (2) | | - | 2 .0 | 2.5 | 1.6 | 1.6 | |
| | | | | | | | |
| Average conifer age/basinwide | 70 | 58 | 58 | 58 | 58 | 58 | |
| Old growth conifer forest area (acres) (3) | 1,490,054 | 1,205,832 | 1,200,179 | 1,200,103 | 1,203,745 | 1,202,173 | App A.7 |
| Change in old growth conifer area wrt 1990 | | -19.1% | -19.5% | -19.5% | -19.2% | -19.3% | |
| | | | | | | | |
| Acres of restoration area | | 0 | 0 | 0 | 0 | 84,819 | Fig. 4.16 |
| Lands managed for conservation purposes, lowlands (acres) | 60,516 | 60,516 | 60,516 | 60,516 | 60,516 | 145,335 | Table 2.1, Fig 4.16 |
| **Basinwide:** | | | | | | | |
| Area with reduced spp. richness (sq.mi) | | 2,422 | 2,534 | 2,520 | 2,486 | 2,513 | Table 4.9 |
| Area with increased spp. richness (sq. mi) | | 2,023 | 2,002 | 2,007 | 2,026 | 2,054 | Table 4.9 |
| Net number native species with improving habitat | | -8 | -4 | -7 | -6 | 7 | Table 4.10a |
| **For impact region:** | | | | | | | |
| Net number native species with improving habitat | | 3 | ** | ** | ** | 30 | Table 4.10b |
| Net number native species (concentrated in impact region), with improving habitat | | 13 | ** | ** | ** | 29 | Table 4.12 |
| Net number native species (rare and sensitive) with improving habitat | | 9 | ** | ** | ** | 21 | Table 4.13 |
| Net number grassland and oak associated species with improving habitat | | 1 | | | | 19 | Fig. 4.22 |

These results indicate that the policies of RR-CONS produce a superior result for a significant number of species on a basinwide scale when compared to all other alternative futures. Since the built areas of RR-CL are identical to those of RR-CONS and similar improving habitat trends are not observed in the landscape of the former, the responses within RR-CONS are due to the effects of the restoration policy.

***The current conservation network in the lowlands of the basin is increased by more than 140% with the addition of the restoration lands.***

Under the RR-CONS mitigation policy, a total of 84,819 acres were designated for restoration/conservation in private lands. This would result in more land being placed in conservation status than the combined amount of such land in the Coast Range, the valley, and the mid-elevation Cascades ecoregions -- 60,516 acres, circa 1990 (Table 5.1).

The location of the ROZ connects the upland public lands to the foothills, but the valley floor remains poorly represented in the extended conservation network (Fig. 4.3d). That this area was mostly excluded from the ROZ is due to the selection criteria that excluded areas with high value farm soils, and areas with poor septic suitability.

The mitigation policy of this project is but one tool among many that may be considered for expanding the conservation network. However, unlike other approaches that typically require infusion of public funds, mitigation is privately financed, and typically includes privately funded maintenance and monitoring.

***Rural subdivisions and rural cluster development without conservation/restoration areas cannot be justified on the basis of improving conditions for wildlife, even if the alternative is extractive resource use as carried out under current policies.***

While the landscapes of RR-5, RR-15 and RR-CL have several more native species that are predicted to "do better" under these scenarios than under PT-EX, most of these species are common with no need of a recovery plan. While three rare and uncommon bat species show improvements in marginal habitat due to increases in built low density habitat, experts indicate that they are susceptible to disturbance (Csuti et al., 1997). Thus, these results are not sufficiently compelling to argue that, on this basis, development should be encouraged. I conclude that the benefits of traditional patterns of rural development are limited with respect to biodiversity.

Typical land use/land cover changes made by small property owners around their homes are not conducive to improving habitat for those species most at risk in the basin, as shown by the results for the RR-5 and RR-15 scenarios. Even "benign neglect" can lead to appreciable loss of early and mid-successional vegetation, as was shown in Table 4.7. And since most small property owners probably do not have the inclination to actively coordinate and manage their 5 to 15 acre properties for habitat over the long term, I conclude that, no matter what changes in land use/land cover occur on small properties, management issues alone make this pattern of development unlikely to contribute to conservation of biodiversity.

Because of the limitations in the techniques used to describe cluster footprints, these footprints could in reality be more compact than those depicted here. This would reduce the amount of built low density area, and would improve the results for the RR-CL scenario. The results of the analysis of species richness shows that cluster development (without any other land cover changes outside the development area) causes the least decrease in local richness due to its compact footprint (Table 5.1). It is therefore, the least intrusive of all development patterns modeled.

However, the inconsequential net response of species to the changes within the RR-15 scenario (least amount of additional built area) indicate that the most important feature to wildlife in all the alternative futures scenarios is not the small size of the development footprint. Unlike the small parcel ownership pattern, the rural cluster pattern as a planned unit development does have the advantage of integrated management of open space outside the housing area. Thus, *if* an area of existing habitat is sufficiently large and *if* management is oriented toward maintaining this habitat, then benefits to wildlife would accrue over the long term through the preservation of that habitat. This landscape is, in this situation, identical to that of the conservation clusters scenario where if good habitat is present it would presumably be preserved rather than embarking on the restoration of a degraded area. But, without a regulatory policy requiring restoration, this decision would be entirely left to the discretion of the PUD management, and could not be relied upon.

***Species that rely on upland and wet prairies, and on oak-savanna communities benefit by restoration totalling 84,819 acres within the ROZ area. Since a significant number of these species are currently declining, the policies of the RR-CONS scenario are worthy of further consideration by planners seeking an approach to maintain biodiversity within the WRB.***

Under the RR-CONS scenario, positive responses were obtained from species that are associated with grassland and oak savanna communities. From a set of 31 declining and keystone species of oak and grassland communities, it was shown that, compared with plan trend (PT-EX), habitat was significantly better in the impact region of the RR-CONS landscape for nineteen of these species (Table 5.1). Only one species was projected to benefit more from current policies of scenario PT-EX. When evaluated over the entire basin, six species benefited from the restoration in RR-CONS, while trends for the other 25 were not significantly different from those in the PT-EX landscape (pg. 4-37).

***Restoration efforts should preserve old-growth conifer forests as part of a mosaic of restored plant communities.***

Species preferring closed mixed forests and older conifer forests, such as some salamanders, a few mammals and some birds (pgs. 4-35-4.36), are disadvantaged within the local restoration area of RR-CONS by activities that introduce early successional vegetative communities such as prairies, and that create oak savanna from mixed forests (Tables 4.12, 4.13). However, some designated areas could be targeted for restoration to old growth conifer conditions if current land cover is suitable. In this project, 29,218 acres were so identified, but over the 60-year time period of the simulation, these conditions were not yet achieved, as the land cover content of the restoration areas indicates (Fig. 4.16). This lengthy transition to an old-growth condition indicates the importance of *preserving* existing stands of old-growth as part of the restoration mosaic even if they are not the primary restoration objective. This follows the philosophy of saving the best and restoring the rest.

Properties with old-growth conifers could use these areas as part of their restoration "quota" toward mitigating development. Further, properties with *large* amounts of old-growth forests could forego all development and act as mitigation banks. Owners would thus profit by selling credits to other developers, while providing a useful core area of old-growth in the foothills of the basin.

***Effort would need to be expended to prevent introduced species from displacing native species and usurping habitat provided by restoration.***

As was shown in Tables 4.10 and 4.11, habitat improves for introduced species under all alternative futures. By extending development into areas that are not now currently developed, risks increase for native species that may be displaced by the generally more aggressive and adaptable exotic species. In particular, the European Starling is a secondary cavity nester, using tree cavities that would otherwise be available to native species for nesting.

Feral cats are another concern with potentially significant impact on small mammals, lizards and birds. The habitat model decreases habitat scores within the proximity of homes because of factors that include disturbance due to noise, lights, and pets. While this impact is thus represented within the results, some may question whether the impact should be more severe than is represented, particularly given the propensity of domestic cats to become feral and range over large areas of territory.

The importation of exotic plants is also a concern in developed areas. With clustered housing, a single, integrated management plan for each development is most likely. And in comparison to individual homeowner who is generally unknowledgeable and indifferent to the ideals of using native plants, landscape professionals employed for PUD landscaping are more likely to accept the need to utilize native plants in these types of developments. Ideally, native grasses would be used in place of pasture grasses whenever a grass land cover was needed, such as in horse pastures. Currently this would be quite expensive as seed sources for native grasses are not plentiful. However, in the future, this may be remedied in response to market demand, especially if restoration becomes a basinwide industry.

***Without active management to maintain early and mid-successional plant communities within the basin, biodiversity will decline as rare habitats become too small to sustain viable populations of specialist species.***

Modeling indicates that conversion of grasslands, shrub and oak hardwood forests through plant succession and conifer invasion may approximately equal or exceed the areas of habitat lost due to development throughout the basin over the next 60 years (Table 4.7). As discussed in Chapter 2, prairie burns and flooding were once common disturbances that reset communities to early seral stages. These have now been virtually eliminated except in some conservation reserves where fall burning has been reinstituted as a device to manage and preserve early successional grasslands (e.g. Bald Hill, Corvallis; Willow Creek Preserve, Eugene; Finley Wildlife Refuge, Benton Co.). However, the majority of these remnant plant communities are in unmanaged areas, scattered throughout the valley. This dispersal through many and varied ownerships precludes active management. Further, with generally small patches, the edge to area ratio is large, and the remnants are thus susceptible to exotic invasion and degradation.

The restoration policy within RR-CONS potentially reverses this trend by targeting these at-risk habitats in the foothills and valley ecoregions and setting aside relatively large restoration areas. Ideally, a mosaic of disturbance regimes on these lands would be sustained under active management by conservation experts.

***Under current policies (PT-EX scenario), the balance will continue to shift from a species aggregate based largely on 1850 conditions of old-growth conifer, prairie, and savannas, to one based on clearcuts, young conifers, and agricultural habitats. The trajectory of land cover change is toward large tracts of the least rich community: 20-40 year conifers.***

The results of the basinwide evaluation of the plan trend, PT-EX, landscape show a shift in species to those that prefer clearcuts, built landscapes, and more shrubby types of land cover (Fig. 4.21). While these species respond to habitat conditions more typical of short rotation forestry, others that require old growth forests are adversely affected. The results of this project indicate that without active efforts to restore and manage rare habitats within the basin, native species that are representative of pre-settlement conditions will continue to decline. Given that some of these are now marked as species of concern, this could result in regulatory actions being taken under the Federal ESA with all the associated economic and social disruption that comes with a listing.

***Species preferring old-growth conifers and closed forests decline under plan trend policies. Old-growth is rapidly being depleted on privately owned lands. Without Federal old-growth reserves, species dependent on this habitat would be at substantial risk in the future.***

Comparison of the land cover of the PT-EX landscape to that of 1990 and 1850, shows continuing and rapid depletion of old-growth conifers over the next 60 years (Table 5.1). Many of the species that rely on these forests utilize large wood on the ground or as standing snags . Sustainable forestry practices that maintain these structural properties may assist in expanding the use of younger forests. But, under current common management practices, 20-60 year conifer plantations support less native species than the older forests (Fig. 3.10). Most forests in this age group are in private industrial forest ownership; most of the old growth conifers are found on public land or in private nonindustrial ownership. The modeled response of the Marbled Murrelet, a listed threatened species, is indicative of the importance of long rotations in Federal forests. Habitat for this species improved (on the basin scale) by 28% under the PT-EX scenario (Table 4.11). This was entirely due to the older forests in the BLM lands of the Coast Range in the WRB portion of the bird's range. Given the small amount of source habitat that exists in 1990 for this species, small areal changes can have significant effect on the trajectory of habitat for the species. These old growth forests provide habitat that allows the Marbled Murrelet to persist within the WRB.

## KEY POINTS CONCERNING DEVELOPMENT

Here, I consider the implications of the development suggested in this project for farm and forest lands of the basin, and for rural sprawl. I also outline some of the costs and benefits to a developer, and to the State.

***Farm and forest protection does not have to be abandoned. The residential overlay zone can be defined so that only a small percentage of the basinwide inventory of high value farm and forest lands are included.***

Under the criteria used in this project to define the residential overlay zone, only 2.6% of the high value farmlands within the WRB were included in the ROZ, and less than 0.5% were taken out of resource use (Table 4-5). Cluster development reduces this use to less than 0.1%, and has the additional advantage of reducing fragmentation so that farming is still practical.

This project traded maximal preservation of farm land for less protection of forest lands. Nevertheless, timberland within the ROZ was only 7.6% of the total timberland in the WRB (Table 4-6), and less than 3.3% was removed from resource use.

In the productive Willamette River basin, as past debate over secondary lands has proved, it will be impossible to avoid developing lands that now produce crops or timber if anything other than incidental rural development is permitted.

***Current land use policies are under pressure from investors and rural landowners to permit exceptions to the ban on rural development. This is resulting in a slow accretion of houses across resource areas. By proactively directing growth to selected areas, and utilizing cluster development in association with a conservation mitigation program, rural population growth can be accommodated in a rational and useful way.***

Figures indicate that approximately 235 houses/year are built in resource lands within the basin (pg. 2-16). As these tend to be scattered throughout the valley and foothills, this could be considered to be rural sprawl. That there are twice as many existing houses outside existing rural residential zones than inside (Table 4.1, and pg. 4-7), reinforces this perception.

The results of this project indicate that up to 17,390 houses (accommodating about 40,930 people) can be sited in clusters within a residential overlay zone, close to existing roads, and occupying less than 53,000 acres of land (Tables 4.2, 4.3). This is a more compact and efficient development of land than has occurred to date within rural areas. On-site restoration areas provide open space for residents, and together with clustering, help maintain a rural atmosphere. Road networks are reduced in size from those of traditional subdivisions (Table 5.1).

Ideally, all rural growth would be targeted to the ROZ in the future so that resource lands would not be further impacted, and rural sprawl would be contained. This would mean transferring development rights from the exception areas in the resource lands. Given the location of the ROZ, and its proximity to both small and large urban centers (Fig. 4.3c), and to the valley farms, it is probable that homes could serve farm workers if low income housing was mandated for at least a portion of each development (extending State Goal 10 to rural growth areas).

***While the restoration area in RR-CONS appears both modest at 84,819 acres and useful for wildlife species, I cannot conclude whether developers would or would not find the policy attractive. This depends on market demand and acceptance of rural cluster housing as well as on the profit margin of the development.***

While the restoration area required as mitigation for development needs to be adequate to support targeted species, a developer also needs to be able to make a profit under the policy for it to be successful. The amount of area designated by the mitigation formula used in this project appears to be useful for wildlife. However, without a cost-benefit analysis, it is not possible to conclude whether this requirement would be acceptable or would be too onerous for developers. An economic analysis is required and should be considered by representatives of the real estate industry.

Table 5.2. Hypothetical example illustrating balance sheet for development of 60 acres with restoration. Seven building sites are developed with a total developed area of about 14 acres. These figures were adapted from a presentation by Pardue and Ruggiero (2002).

| | | | |
|---|---|---|---|
| TAXLOT AREA | 60 acres | | |
| purchase price (1) | $5,000/acre | $ 300,000 | |
| | | | |
| EXPENSES | | | |
| planning | | $ 50,000 | |
| attorney | | $ 25,000 | |
| design/engineer | | $ 25,000 | |
| road building | $50/ft * 2400 ft | $ 120,000 | |
| test well drilling | | $ 15,000 | |
| electricity | | $ 50,000 | |
| TOTAL EXPENSES (2) | | $ 285,000 | |
| | | | |
| financing costs (3) | 8% for 6 months | $ 23,400 | |
| TOTAL COST (4) | (1) + (2) + (3) | $ 608,400 | |
| | | | |
| SELLING PRICE | 7 units at $150,000/unit | $ 1,050,000 | |
| sale costs | 6% commission + 2% sales costs | $ 84,000 | |
| net profit timber sold | 12 acres * $2,500 | $ 30,000 | |
| NET INCOME (5) | | $ 996,000 | |
| | | | |
| NET PROFIT on development (6) | (5) - (4) | $ 387,600 | |
| net profit/acre | | $ 6,460 | |
| **%profit without restoration** | (6)/(4) | **64%** | |
| | | | |
| restoration | (a) 48 acres at $400/ac; (b) 48 acres at $2,000/ac | (a) $ 19,200 | (b) $ 96,000 |
| financing | 8% for 1 year | $ 1,536 | $ 7,680 |
| TOTAL RESTORATION COSTS (7) | | $ 20,736 | $ 103,680 |
| | | | |
| NET PROFIT after restoration (8) | (6) - (7) | $ 366,864 | $ 283,920 |
| **%profit before taxes** | | **58%** | **40%** |

Nevertheless, it is clear that land values for agricultural or forest lands can multiply many times if development is permitted. While this valuation reflects an investment in infrastructure and improvements, it is clear from the nationwide trend in the replacement of farm and forest land by housing developments that the process is profitable (Hulse and Ribe, 2000). The mitigation policy of RR-CONS expects that ecological restoration will be funded by a portion of the wealth produced by permitting rural development in what otherwise were unbuildable resource lands.

Restoration of mixed forests to an oak savanna, and agricultural lands to native grasses, is estimated to cost from $400 to $2000 per acre, depending on the starting condition (pers. comm Lynda Boyer, Allan Branscomb, Adam Novick, Hugh Snook). The spreadsheet shown in Table 5.2 represents a hypothetical case in which 7 cluster lots are developed on a 60 acre parcel of land, where 10 acres of forest is logged during site preparation. Depending on restoration costs, the profit on investment for the developer in this simple example ranges from 40% to 58% over a year versus about 64% if no restoration is required. Clearly there are many variables which could change the bottom line. It should be noted that there are economies of scale when homes are developed in cluster patterns, e.g., less roads are required (Table 5.1), electricity distribution lines are shorter.

Other costs are involved. A developer's bond would probably be needed to insure that the restoration was completed as required and was successful. This would entail monitoring and analysis costs for an additional outlay of capital for some time, probably several years. Whether the rate of return is sufficient to ensure adoption of the program is not known at this time.

Some costs would be borne by the owners of the homes. Once the restoration is complete, active management would be required, especially for restoration of plant communities that are threatened by exotic species, and by vegetative succession.

***In addition to developers, the State and county governments would need a cost-benefit analysis to evaluate the feasibility of the proposed policy.***

Typically the lands targeted by the ROZ are zoned for farm or forest use (Fig. 4.3b) with relatively low taxes under Oregon's state land use planning regulations. With development, the taxable property value would increase by a large amount. The costs to local government of new roads is likely to be low, since only a very few miles of new public roads are needed to access the taxlots of the ROZ (Table 4.4). Almost all new roads are internal to the taxlots, and hence would be privately funded.

Costs would be incurred for schools to accommodate the new students and for fire, sheriff, and emergency services. Because the ROZ area is not within a compact development zone, these costs of public infrastructure are probably higher than the costs to service a similar number of people inside urban growth boundaries. Sewer (septic), water, stormwater, parks and open space costs would be minimal as they would be provided privately within the developed area.

Further, the need for restoration and management of native communities on private lands might fuel the growth of a new industry in Oregon. This could utilize the expertise of farmers for growing out native seeds and plants, and of loggers and forest managers for thinning, establishing, and maintaining native forests. Business would benefit through sale and maintenance of equipment, chemicals, gasoline, etc.