Function	Impact Area	Reference
	10-400 ft.	Johnson and Ryba 1992
Reduce excess nutrients, metal contaminants, and fecal coliform.	98 ft. 100 ft.	C. W. May 2000 Castelle, et al 1994
*SPTH =Site Potential Tree Height		

Table ES-3. Wetland Function and Impact Area

Function	Impact Area	Reference
Provides a hydrologic control function (slow runoff rates and reduce flooding)		
Provides diverse fish habitat	50-200 ft. 200 ft.	Knutson and Naef 1997 Castelle et al. 1992
Provides diverse wildlife habitat	100-600 ft. 328 ft.	FEMAT 1993 C. W. May 2000
Traps sediment	98 ft. 10-400 ft.	C. W. May 2000 Johnson and Ryba 1992
Provides nutrient attenuation	98 ft. 100 ft.	C. W. May 2000 Castelle, et al 1994

The analysis of conflicting uses requires that the impact on individual properties be examined. This was accomplished through the use of GIS (Geographic Information System) which linked tax lot information to individual resource sites and their associated impact areas. The property information comes from the Lane County Assessors Office. This Study summarizes the impact that residential, commercial, and industrial development would have on resource sites and their impact areas. This is captured in terms of potential acres of impacted property and resources. The Study also covers the potential impact of building transportation and public facilities and the impact of vegetation removal and grading.

Vacant property is a focal point for this study since the impacts of developed land have already affected the resource site. Vacant land is often associated with resource sites that still possess much of their function and value to the community. Vacant land also represents a community resource for development that provides jobs and housing. The purpose of using the "standards process" is to find a balance between the competing needs to preserve resources and to allow development.

Table ES-4 shows the total acreage of wetlands and riparian areas that impact residential, commercial, industrial and public land. The table shows acreages for both the resource sites and their surrounding impact areas. Table ES-5 shows the same information for vacant lands.

Table ES-4. Summary of Conflicting Uses for Vacant and Developed Land

Conflicting Uses Within Resource Sites					
Resource Area	**Residential Uses**	**Commercial Uses**	**Industrial Uses**	**Public Uses**	**Total Acres**
Riparian Sites	67.65	8.54	187.98	37.89	**302.06**
Wetland Sites	74.67	12.67	140.54	8.88	**236.76**
Total Acres	**142.32**	**21.21**	**328.52**	**46.77**	**538.82**
Conflicting Uses Within Impact Areas					
Resource Area	**Residential Uses**	**Commercial Uses**	**Industrial Uses**	**Public Uses**	**Total Acres**
Riparian Impact Areas	252.81	31.44	229.73	74.96	**588.94**
Wetland Impact Areas	180.90	28.05	249.15	33.12	**491.22**
Total Acres	**433.71**	**59.49**	**478.88**	**108.08**	**1080.16**

Table ES-5. Summary of Conflicting Uses for *Vacant Land

Conflicting Uses Within Resource Sites					
Resource Area	**Residential Uses**	**Commercial Uses**	**Industrial Uses**	**Public Uses**	**Total Acres**
Riparian Sites	23.21	2.78	29.24	12.63	**67.86**
Wetland Sites	41.57	.07	40.75	8.76	**91.15**
Total Acres	**64.78**	**2.85**	**69.99**	**21.39**	**159.01**
Conflicting Uses Within Impact Areas					
Resource Area	**Residential Uses**	**Commercial Uses**	**Industrial Uses**	**Public Uses**	**Total Acres**
Riparian Impact Areas	64.90	7.05	42.81	9.2	**123.96**

Conflicting Uses Within Resource Sites					
Resource Area	**Residential Uses**	**Commercial Uses**	**Industrial Uses**	**Public Uses**	**Total Acres**
Wetland Impact Areas	64.46	3.69	78.72	12.07	**158.94**
Total	**129.36**	**10.74**	**121.53**	**21.27**	**282.9**
*Vacant lands were identified through the use of property class codes which are used by the Lane County Assessor's Office.					

The Study estimated the impact on land with redevelopment potential and land that is underutilized. In both cases generally accepted statistical assumptions were used to predict which properties are likely to be rebuilt and which will be partitioned and developed at a higher density.

ES.5 General Consequences of Allowing, Limiting or Prohibiting Conflicting Uses

ES.5.1 Environmental Consequences

Section 7.1 of this report provides a description of the key functions that wetlands and riparian areas provide. Fully prohibiting conflicting land uses on or near Springfield's remaining wetland and riparian resource sites will preserve their existing functions. Fully allowing conflicting uses in Springfield's resource areas will reduce or remove existing functions, with associated negative impacts on fish, wildlife and people.

Limiting conflicting uses implies that some limited amount of development or other conflicting use will occur in conflict with the resource areas. The consequences depend on the extent and type of land use and the resource's ecological importance. The table below provides a general illustration of the potential environmental consequences of this decision process; actual consequences depend on the protection policies that are adopted for each resource site and the effectiveness of their implementation.

Range of Potential Consequences of Fully Allowing, Limiting, or Prohibiting Conflicting Land Uses

Fully Allow ← → **Limit** ← → **Prohibit**

Existing resource function greatly impaired or eliminated.	Retain the majority of resource functions with tolerable losses.	Preserve resource functions at existing levels.
Greatly increased non-native and invasive species.	Some increase in non-native species invasions	Retention of existing native plants and animals
Substantial loss of biodiversity	Some loss of biodiversity	More biodiversity

Substantial loss of riparian and wetland resource areas	Some riparian and wetland areas will be lost.	Retain existing system of streams and wetlands
Poor restoration potential	Good restoration potential	Good restoration potential
Flooding occurs with greater frequency and intensity	Some increase in flooding above current levels	Possible to restrict the flooding to present levels
Damaging soil loss and sedimentation	Increased soil loss and sedimentation	Soil loss continues at current levels
Probable loss of salmonid habitat	Some decline in salmonid habitat	Possible to retain salmonid habitat
Decreased need to expand the UGB	May need to expand the UGB into include additional natural areas.	Probable need to expand the UGB into natural areas.

Summary of Potential Tradeoffs

Allowing conflicting uses in general has significant consequences for the natural function of wetland and riparian areas. The severity of the impact depends on the prevalent type of development and to a large degree on the amount of impervious surface area created by that development. In surveying the available scientific literature, it was noted that the degradation of water quality and habitat accelerate rapidly in watersheds when impervious surface areas are 12-13% of the total area. Current studies indicate an even lower threshold for stream degradation.

This section includes a summary of the potential environmental tradeoffs of allowing, limiting, or prohibiting conflicting uses. Most of the environmental consequences are similar in all types of development. The analysis of environmental consequences is general in nature to account for variability within types of development, and also because consequences depend on the development standards that are applied where conflicting uses are allowed to impact natural areas. Below are some general consequences associated with decisions to fully allow, limit or to prohibit conflicting uses to impact riparian and wetland areas.

Allowing Conflicting Uses

- Extensive loss of the habitat functions of riparian and wetland areas.
- Degradation of fish habitat, particularly in those streams supporting salmonid populations.
- Extensive loss of wildlife habitat and functional values (size, interior habitat, connectivity, proximity to water).
- Continued loss of native species and at-risk species; reduction in migratory songbirds
- Loss of natural areas that provide education opportunities.
- Reduced need for UGB expansion; protects habitat from urban encroachment.

Limit Conflicting Uses

- Depends on the type of standards that are adopted to govern how development occurs in proximity to riparian and wetland areas. Results may range from minimal

protection to near-full protection of the natural functions of the wetland and riparian areas.
- Strong potential for restoration, mitigation and education activities to offset the negative impacts of development.
- Implementation of best management practices and low impact development standards could reduce negative impacts of development.
- Less harm to native species and fewer non-native invasive species that a decision to fully allow conflicting uses.
- Intrusion in some habitat areas will reduce the quality of other resources, especially if connector habitat is fragmented and interior habitat is reduced.
- May require UGB expansion, depending on the development standards adopted to limit the impact of conflicting uses on natural areas.

Prohibit Conflicting Uses

- Retention of some of important habitat functions and preservation of some of Springfield's best remaining riparian and wetland habitat areas.
- Provides strongest protection for streams that provide salmonid habitat
- Prevents further habitat fragmentation; preserves restoration opportunities
- Minimizes hydrologic alterations, reduces flooding, preserves water quality
- Provides breeding habitat for migratory songbirds, aquatic species habitat interior species, and other native species
- May require expansion of the UGB.

ES.5.2 Social Consequences

The social impacts of allowing conflicting uses to impact wetlands and riparian areas are varied but center on the livability issues. Marshlands, forested streams and open green space contribute to the livability of our communities. Development not only impacts wildlife habitat, but also, in an urban context, allowing conflicting uses to envelop wetlands and riparian areas impacts people even more. The Oregon Freshwater Wetland Assessment (OFWAM) analysis includes ratings of the recreational and educational values as well as the aesthetic value of wetland sites. These ratings are included in the site-specific ESEE analysis found in Section 7 of the Study.

Social impacts may overlap the economic impacts of allowing or prohibiting conflicting uses. If all vacant land with wetlands and riparian areas and their impact areas were fully protected from development, about 442 acres would be removed from Springfield's overall buildable land supply. A shortage of residential land impacts the cost of home sites, and reduces the affordability of housing. The 2000 Census showed that Springfield has one of the lowest per capita income levels in Lane County. Higher housing costs would have both a social and economic impact on Springfield residents on the lower end of the economic scale.

A shortage of industrial and or commercial land may result in the loss of the ability to locate job-producing businesses to our community. Springfield has a documented shortage of commercial land (Springfield Commercial Land Study 2000). The area's industrial land supply is currently being inventoried. The Lane County Homebuilders Association has expressed a desire to have a new residential lands inventory.

An extensive loss of buildable land within the existing Urban Growth Boundary and can lead to a premature expansion of the boundary to locate housing, industry and commerce. A corollary impact is the displacement of growth to nearby communities with an available supply of less expensive land. Such displacement can have dramatic impacts on small cities and school districts.

ES.5.3 Economic Consequences

Residential Development

An analysis of the economic consequences of prohibiting conflicting residential development requires consideration of the impacts on vacant land that can be feasibly developed in the future. Most of Springfield's wetlands and riparian corridors are already bounded by development. Of the 567 acres of land zoned for residential use, only about 250 acres are vacant. About 25 percent of the vacant wetland and riparian acreage consists of small fragments of land that are often not developable. For the purpose of this study, vacant lots that are ¼ acre or larger are considered as feasible for greenfield and infill development. Table ES-5 shows the total acreage (including impact areas) for all vacant lots that are ¼ acre or larger is about 194 acres.

Table ES-5. Vacant Wetland and Riparian Areas ¼ Acre or Larger*

Site Type	LDR	MDR	Total Acres
Wetland Acres	40.48	1.09	41.57
Riparian Acres	16.75	6.46	23.21
Total Acres	**57.23**	**7.55**	**64.78**
Wetland Impact Area Acres	62.26	2.2	64.46
Riparian Impact Area Acres	46.97	17.93	64.90
Total Acres	**109.23**	**20.13**	**129.36**
Grand Total	**166.46**	**27.68**	**194.14**

*Vacant lands were identified through the use of property class codes which are used by the Lane County Assessor's Office.

About 38 acres of underutilized land are located within the resource areas (including impact areas). Underutilized parcels include single family homes on parcels larger than ½ acre that could be subdivided and built at higher densities in the future. This acreage is

noted, but for the purposes of this study is not counted in to the potential loss of development acreage.

Prohibiting conflicting residential uses would mean the loss of about 194 acres of land for development. Table ES-6 indicates that about 997 potential dwelling units would be lost if all of the land were protected from any development. That figure does not account for the use of cluster development techniques that might mitigate the loss of units.

Table ES-6. Potential Dwelling Unit Capacity Affected by Prohibiting Conflicting Residential Uses

Site Type	LDR	Potential Dwelling Units @ 4 units per gross acre	MDR	Potential Dwelling Units @ 12 units per gross acre	Total Dwelling Units
Wetland Acres	40.48	162	1.09	14	176
Riparian Acres	16.75	67	6.46	76	143
Total Acres	**57.23**	**229**	**7.55**	**90**	**319**
Wetland Impact Acres	62.26	249	2.2	26	275
Riparian Impact Acres	46.97	188	17.93	215	403
Total	**109.23**	**437**	**20.13**	**241**	**678**
Grand Total	**166.46**	**666**	**27.68**	**331**	**997**

Commercial and Industrial Development

Statewide Planning Goal 9 (Economy) requires that cities conduct an "economic opportunities analysis" that describes the types of industries and businesses that are likely to locate in the community and identifies the siting needs of such "targeted industries." Goal 9 also requires local governments to provide "at least an adequate supply" of suitable industrial and commercial sites that meet local industrial and commercial siting criteria. At the study area level, there are measurable economic consequences associated with prohibiting industrial and commercial development within all resource sites and their impact areas. Table ES-7 shows the potential loss of about 291 acres of vacant commercial and industrial land that could result from full resource protection.

Table ES-7. Vacant Wetland and Riparian Resource Areas Affecting Lands With Commercial and Industrial Zoning

Site Type	CC	MRC	NC	GO	HI	LMI	CI	SHI	BK	QM	*Total Acres
Resource Areas											
Wetland Acres	.07	0	0	0	12.62	27.65	.35	0	.13	0	40.82
Riparian Acres	2.78	0	0	0	68.31	16.48	3.22	0	.21	0	91.00
Total Acres	**2.85**	**0**	**0**	**0**	**80.93**	**44.13**	**3.57**	**0**	**0.34**	**0**	**131.82**
150-Foot Impact Areas											
Wetland Impact Acres	3.69	0	0	0	52.76	20.72	4.25	0	.99	0	82.41
Riparian Impact Acres	5.14	1.91	0	0	26.83	32.87	8.53	0	1.41	0	76.69
*Total Acres	**8.83**	**1.91**	**0**	**0**	**79.59**	**53.59**	**12.78**	**0**	**2.4**	**0**	**159.1**
Grand Total	**11.68**	**1.91**	**0**	**0**	**160.52**	**97.72**	**16.35**	**0**	**2.74**	**0**	**290.92**

*Vacant lands were identified through the use of property class codes which are used by the Lane County Assessor's Office for taxation purposes.

At this writing, there are approximately 955 acres of vacant commercial and industrial land within Springfield's UGB. This is a rough estimate of the acreage available for future commercial and industrial development based on a search of the Assessors records for parcels with property class codes indicating vacant land. An estimated 132 acres of vacant wetland and riparian acres are affected by conflicting commercial and industrial uses. This represents about 14% of the vacant commercial and industrial land in Springfield. An additional 159 acres of impact area are affected by conflicting uses. In total, fully protecting wetland and riparian areas and their associated impact areas would mean a loss of 291 acres from the land which could conceivably be developed for commercial or industrial purposes.

Tables ES-8 and ES-9 below multiply resource and impact area acreages by the average assessed value-per-acre for vacant land as shown in the Assessors records. This provides a very rough estimate of the land value that might be lost if wetlands and riparian areas and their associated impact areas were fully protected. The market value of these properties at the time of sale is likely to be higher. The value-per-acre was derived by using the Assessor's property class codes to identify vacant commercial and industrial property within the Springfield UGB. The assessed land values were then totaled by zoning district and divided by the acreage for each zone. As can be seen, the value-per-

acre figures vary widely. Tables ES-8 and ES-9 show a potential loss $16,859,469 if both resource and impact areas were fully protected. The potential loss would be reduced to $6,875,171 if only the resource areas were fully protected.

Table ES-8. Assessed Property Value Impacts: Vacant Commercial and Industrial Resource Areas

Zoning District	Vacant Resource Acreage	Assessed Value per Vacant Acre	Estimated Value
Wetland Resource Area			
Light-Medium Industrial	27.65	$65,369	$1,807,453
Heavy Industrial	12.60	$32,467	$409,084
Special Heavy Industrial	0	$32,467	$0
Campus Industrial	.35	$165,772	$58,020
Quarry Mining	0	$5,035	$0
Booth Kelly MU	.13	$45,311	$5,890
Community Commercial	.07	$265,376	$18,576
Neighborhood Commercial	0	$265,376	$0
General Office	0	$265,376	$0
Major Retail Commercial	0	$539,360	$0
Total Acres	**40.8**		**$2,299,023**
Riparian Resource Area			
Light-Medium Industrial	16.48	$65,369	$1,077,281
Heavy Industrial	68.31	$32,467	$2,217,821
Special Heavy Industrial	0	$32,467	$0
Campus Industrial	3.22	$165,772	$533,786
Quarry Mining	0	$5,035	$0
Booth Kelly MU	.21	$45,311	$9,515
Community Commercial	2.78	$265,376	$737,745
Neighborhood Commercial	0	$265,376	$0
General Office	0	$265,376	$0
Major Retail Commercial	0	$539,360	$0
Total Acres	**91**		**$4,576,148**
Grand Total Acres	**131.80**		**$6,875,171**

Table ES-9. Assessed Property Value Impacts: Vacant Commercial and Industrial Resource Impact Areas

Zoning District	Vacant Impact Acreage	Assessed Value per Vacant Acre	Estimated Value
Wetland Impact Area			
Light-Medium Industrial	20.72	$65,369	$1,354,446
Heavy Industrial	52.76	$32,467	$1,712,959
Campus Industrial	4.25	$32,467	$137,985
Special Heavy Industrial	0	$165,772	$0
Quarry Mining	0	$5,035	$0

Zoning District	Vacant Impact Acreage	Assessed Value per Vacant Acre	Estimated Value
Booth Kelly MU	.99	$45,311	$44,858
Community Commercial	3.69	$265,376	$979,237
Neighborhood Commercial	0	$265,376	$0
General Office	0	$265,376	$0
Major Retail Commercial	0	$539,360	$0
Total Acres	**82.41**		**$4,229,485**
Riparian Impact Areas			
Light-Medium Industrial	32.87	$65,369	$2,148,679
Heavy Industrial	26.83	$32,467	$871,090
Campus Industrial	8.53	$32,467	$276,944
Special Heavy Industrial	0	$165,772	$0
Quarry Mining	0	$5,035	$0
Booth Kelly MU	1.41	$45,311	$63,889
Community Commercial	5.14	$265,376	$1,364,033
Neighborhood Commercial	0	$265,376	$0
General Office	0	$265,376	$0
Major Retail Commercial	1.91	$539,360	$1,030,178
Total Acres	**76.69**		**$5,754,813**
Grand Total Acres	**139.06**		**$9,984,298**

Tables ES-10 and ES-11 show the assumed ratio of employees-per-acre in commercial and industrial zoning districts and the potential job capacity that would be lost if the resource and associated impact areas were fully protected. The employees per acre ratios were derived from the Springfield Commercial Lands Study (pg. B-4) that was adopted in 2000. The table indicates that would be the lost capacity of approximately 2995 commercial and industrial jobs if all resource sites and their respective impact areas were fully protected. If only the resource areas were fully protected and development occurred in the impact area, the lost job capacity would fall to 1316.

Springfield has invested considerable public dollars in providing infrastructure (transportation, sewer, water, storm drainage, utilities) to commercial and industrial land within the UGB. The return on public investment would be reduced in proportion to the amount of industrial land that cannot be developed due to wetland or other constraints.

Table ES-10. Job Capacity Losses: Vacant Commercial and Industrial Resource Areas

Zoning District	Vacant Acreage	Assumed Jobs per Acre	Potential Lost Job Capacity
Wetlands			
Light-Medium Industrial	27.65	13.4	371
Heavy Industrial	12.60	6.5	82
Special Heavy Industrial	0	6.5	0
Campus Industrial	.35	25	9
Quarry Mining	0	6.5	0
Booth Kelly MU	.13	13.4	2

Zoning District	Vacant Acreage	Assumed Jobs per Acre	Potential Lost Job Capacity
Community Commercial	.07	36.1	3
Neighborhood Commercial	0	36.1	0
General Office	0	25	0
Major Retail Commercial	0	31.1	0
Total	**40.8**		**467**
Riparian Area			
Light-Medium Industrial	16.48	13.4	221
Heavy Industrial	68.31	6.5	444
Special Heavy Industrial	0	6.5	0
Campus Industrial	3.22	25	81
Quarry Mining	0	6.5	0
Booth Kelly MU	.21	13.4	3
Community Commercial	2.78	36.1	100
Neighborhood Commercial	0	36.1	0
General Office	0	25	0
Major Retail Commercial	0	31.1	0
Total Acres	**91**		**849**
Grand Total Acres	**131.80**		**1316**
The employees per acre ratios were derived from the Springfield Commercial Lands Study (pg. B-4) that was adopted in 2000.			

Table ES-11. Job Capacity Losses: Vacant Commercial and Industrial Resource Impact Areas

Zoning District	Vacant Impact Acreage	Assumed Jobs per Acre	Potential Lost Job Capacity
Wetlands			
Light-Medium Industrial	20.72	13.4	278
Heavy Industrial	52.76	6.5	343
Campus Industrial	4.25	25	106
Special Heavy Industrial	0	6.5	0
Quarry Mining	0	6.5	0
Booth Kelly MU	.99	13.4	13
Community Commercial	3.69	36.1	133
Neighborhood Commercial	0	36.1	0
General Office	0	25	0
Major Retail Commercial	0	31.1	0
Total Acres	**82.41**		**873**
Riparian Areas			
Light-Medium Industrial	32.87	13.4	214
Heavy Industrial	26.83	6.5	174
Campus Industrial	8.53	25	213
Quarry Mining	0	6.5	0
Booth Kelly MU	1.41	13.4	19
Community Commercial	5.14	36.1	186

Zoning District	Vacant Impact Acreage	Assumed Jobs per Acre	Potential Lost Job Capacity
Neighborhood Commercial	0	36.1	0
General Office	0	36.1	0
Major Retail Commercial	1.91	31.1	0
Total Acres	**76.69**		**806**
Grand Total Acres	**139.06**		**1679**
*The employees per acre ratios were derived from the Springfield Commercial Lands Study (pg. B-4) that was adopted in 2000.			

ES.5.4 Energy Consequences

Energy consequences of full wetland and riparian protection are mixed in residential, commercial and industrially zoned areas and with the installation of public facilities. This section summarizes the energy impacts of these categories of conflicting uses.

Concerning conflicting residential uses: without density transfer provisions, there could be significant loss of housing unit potential, and premature UGB expansion. This could result in increased vehicle miles traveled and other impacts associated with "urban sprawl." Public transportation options would also be less attractive. Full protection of wetlands and riparian areas also makes a grid street system more difficult to achieve, with further adverse impacts on energy consumption.

On the positive side, wetland and riparian vegetation has a moderating effect on climate. Where trees are present, they provide shade that cool buildings in the summer and serve as a windbreak in the winter. Less impervious surface means less summer heat. At a macro level, plants absorb sunlight and transpire during the growing season, slightly reducing ambient air temperatures. Wetlands also provide local recreational opportunities, thus reducing the need to drive for outdoor experiences. Thus, conservation of wetland vegetation would have some positive energy consequences.

The energy consequences as they apply to commercial and industrial uses are mixed, but would they be largely negative. Resource lands cannot be preserved on commercial/industrial land without impacts on the acreage needed to accommodate jobs. Springfield jobs could be displaced to more distant areas (Coburg is an example of this trend), increasing travel time, congestion, and stress. Along the major corridors, where transportation access is a key locational factor, the energy consequences of resource conservation would be significant and adverse.

It is less likely that vegetation from forested wetlands riparian areas would shade large industrial or commercial users, or significantly impair solar access. Riparian vegetation can have a moderating effect on nearby areas. Trees provide shade that cools buildings in the summer serve as a windbreak in the winter. At a macro level, plants absorb sunlight and transpire during the growing season, slightly reducing ambient air temperatures. Resource sites can also provide local recreational opportunities, thus reducing the need to drive for outdoor experiences. Thus, conservation of wetland and riparian vegetation would have additional positive energy consequences.

The energy consequences of allowing public and transportation facilities to be routed through resource sites – where there are not reasonable alternatives and with environmental impact reduction – are generally positive. Simply put, out-of-direction travel increases energy usage. The decrease in travel distance needs to be weighed against energy conservation benefits associated with wetlands and riparian vegetation (i.e., temperature modification, shade, reduced heat reflection from impervious services).

ES.6 Proposed Goal 5 Program for Protection

This study recommends a program decision to "limit conflicting uses" that would impact wetland and riparian resources. Keep in mind that this study only addresses "locally significant" wetlands and riparian corridors. There are several lower quality wetlands and watercourses which are not recommended for protection by this study. These sites not protected by this study are still under the jurisdiction of the Oregon Division of State Lands and or the Corps of Engineers. These agencies will continue to be the sole authority for issuing permits to impact wetlands and streams.

To implement a "limited" protection program, this study recommends the following policies:

1. Support of the existing protections implemented through Springfield's Stormwater Quality Management Program. The recommended Goal 5 limited protection program defers in part to existing Stormwater Management policies detailed in Section 32.110 of the Springfield Development Code and in particular those provisions which support the City's response to state and federal regulations concerning surface and subsurface discharging stormwater management systems (32.110(6)). Sites protected by the Stormwater Management Program are not recommended for additional protection.

2. Establishment of 25-foot development setbacks from inventoried wetlands and riparian resource sites that are not already protected by stormwater policies. The 50 and 75 foot setbacks established by the Stormwater Quality Management Program would be retained.

3. Protection policies would apply to new development. Developed properties would not be required to retroactively comply with the new policies. The recently adopted provisions of Article 5—Non-Conforming Uses, provides "grandfather" protections to existing development. Expansion of existing development would be allowed where such expansion was outside of the resource area.

4. Site plan review would be required for all commercial, industrial and multi-family residential development within 150-feet of resource sites. Articles 31.240 (3) and 32.110 of the Springfield Development Code describe wetland and riparian protections that are applied in the site plan review process that help reduce the impact of development. This requirement coincides with the defined 150-foot impact area recommended by this study and the 150-foot site plan review area already required

for many of Springfield's resource areas by the Stormwater Quality Management Program. Construction of a single-family home within an existing subdivision would not require site plan review.

5. Future adoption and implementation of a Low Impact Development Design Handbook to reduce the impact of development on nearby wetlands and riparian areas. As mentioned above, Articles 31 and 32 of the Springfield Development Code already provide some protection for resource areas. A Low Impact Development Design Handbook would supplement the existing protections. The Low Impact Design Handbook will be jointly developed by the planning and public works staff using resources that have been in use in other communities as a starting point.

6. The Low Impact Design Handbook will include a compilation of design standards that are practical, cost efficient and flexible to enough to meet a variety of development situations. The National Homebuilders Association generally supports low impact design techniques, citing the reduced cost of infrastructure that has been achieved as well as the increased value of home sites which have natural amenities. Low impact design standards would be applied through the site plan review process mentioned above, where a proposed development or land division is within 150-feet of a resource site.

7. The protection program would primarily affect vacant land and future development. Existing uses and structures within the proposed 25-foot setbacks would be allowed to continue. Expansion of such uses would be permitted outside the setback. Development within 50 and 75-foot setbacks established under Springfield's Stormwater Quality Management Program would be subject to the policies of that program.

8. Where the proposed 25-foot setback renders a property unbuildable for the purposes for which it was zoned, a hardship variance may be requested to assist the owner to achieve a viable development design. Such a hardship variance is required under state administrative rules (OAR 660-023-0090 (8)(d) and 660-023-0100(4)(b)(d)).

Table ES-12 and ES-13 summarize the proposed protections for Springfield's significant wetlands and riparian areas and shows those sites which are already protected by stormwater policies.

Table ES-12. Goal 5 *Recommendations for Protection and Impact on Vacant Wetland Acreage

Site ID/Name	Program Decision	Setbacks (feet)*	Vacant Site Acres	Vacant Setback Acres	Total Acres	Comments
M04--Cascade Drive In	Limit Conflicting Uses	25				Specific provisions of the approved site plan for Jenna

Site ID/Name	Program Decision	Setbacks (feet)*	Vacant Site Acres	Vacant Setback Acres	Total Acres	Comments
						Estates will be implemented.
M05—Aster Street Wetland	Limit Conflicting Uses	25	3.13	.9	4.03	
M14—75th Street	Limit Conflicting Uses	25	21.9	2.76	24.66	
M16(a-c)—Irving Slough	Limit Conflicting Uses	25	6.08	4.85	10.93	
M20--Maple Island Slough	Limit Conflicting Uses	50	.35	1.28	1.63	Protected by the Stormwater Quality Protection Program
M26—Guy Lee	Limit Conflicting Uses	25	1.62	.52	2.14	
M28—Gateway Channel	Limit Conflicting Uses	25	1.50	1.47	2.97	
M29—Daisy St. and Haul Rd.	Limit Conflicting Uses	25	.64	.44	1.08	
M30—48th St. and Haul Rd.	Limit Conflicting Uses	50	.35	1.28	1.63	Protected by the Stormwater Quality Protection Program
M33a—48th St. and Weyco Channel	Limit Conflicting Uses	50	9.28	17.46	26.74	Protected by the Stormwater Quality Protection Program
W02—Daisy St. and 42nd St.	Limit Conflicting Uses	25	.89	0	.89	
W03a—Jasper Slough	Limit Conflicting Uses	50	0	.41	.41	Protected by the Stormwater Quality Protection Program
W04a—South Dorris Ranch	Limit Conflicting Uses	75	.65	3.19	3.84	Protected by the Stormwater Quality Protection Program
W12—Island Park Slough	Limit Conflicting Uses	50	1.05	3.13	4.18	Protected by the Stormwater Quality Protection Program
W16—Dorris Creek	Limit Conflicting	50	.69	2.69	3.38	Protected by the Stormwater Quality

Site ID/Name	Program Decision	Setbacks (feet)*	Vacant Site Acres	Vacant Setback Acres	Total Acres	Comments
	Uses					Protection Program
W18a--Natron	Limit Conflicting Uses	25	34.56	5.15	39.71	
W19—Millrace and Pond	Limit Conflicting Uses	50	1.13	5.82	7.01	Protected by the Stormwater Quality Protection Program
W20—Glenwood Slough	Limit Conflicting Uses	50	.44	.82	1.26	Protected by the Stormwater Quality Protection Program
Total Protected Wetland Acres			**84.26**	**52.17**	**136.49**	

Table ES-13. Goal 5 *Recommendations for Protection and Impact on Vacant Riparian Acreage

Riparian Sites						
Site ID/Name	**Recommended Program Decision**	**Recommended Setbacks (feet)***	**Vacant Site Acres**	**Vacant Setback Acres**	**Total Acres**	**Comments**
S03--Millrace A (Natural)	Limit Conflicting Uses	50	11.45	5.30	16.75	Protected by the Stormwater Quality Protection Program
S04--Millrace B (Urban)	Limit Conflicting Uses	50	.84	1.63	2.47	Protected by the Stormwater Quality Protection Program
S07--Brand S / Natron	Limit Conflicting Uses	25	10.89	2.05	12.94	
S09--Weyerhaeuser B	Limit Conflicting Uses	50	56.15	5.14	61.29	This site contains cooling ponds which are not likely to be developed.
S10--Weyerhaeuser A	Limit Conflicting Uses	50 / 75	.06	.33	.39	Site includes portions of Marcola Slough (50') and the McKenzie River (75') inside the UGB.
S12/13--Q St. Ditch	Limit Conflicting Uses	50	1.47	5.15	6.62	Protected by the Stormwater Quality Protection Program

S14--Guy Lee	Limit Conflicting Uses	25	2.14	.56	2.70	
S17--Maple Is. Slough / McKenzie River	Limit Conflicting Uses	50 / 75	19.12	8.96	27.08	This site includes both the McKenzie River (75') and Maple Is. Slough (50') inside the UGB. Provisions of the Riverbend Master Plan will be implemented.
S18–SCS Channel #6	Limit Conflicting Uses	25	2.25	1.96	4.21	
S20--Irving Slough North	Limit Conflicting Uses	25	4.21	1.73	5.94	
S21--Irving Slough South	Limit Conflicting Uses	25	2.81	1.22	4.03	
S22--Jasper Slough	Limit Conflicting Uses	50	3.32	3.13	6.45	Protected by the Stormwater Quality Protection Program
S24--Gray Creek	Limit Conflicting Uses	25	1.47	1.25	2.72	
Willamette River	Limit Conflicting Uses	75	6.95	13.08	11.92	Protected by the Stormwater Quality Protection Program
Glenwood Slough	Limit Conflicting Uses	50	4.54	2.68	7.22	Protected by the Stormwater Quality Protection Program
Total Protected Riparian Acres			**127.67**	**54.17**	**172.73**	
Total Protected Wetland and Riparian Acres			**211.93**	**106.34**	**309.22**	

* In addition to the development setbacks, low impact development practices, when adopted, shall be employed within 150 feet of theses resource sites.

ES.7 Impact of Resource Protection on Residential, Commercial and Industrial Buildable Lands Inventories

One of the final steps of the Goal 5 process is the computation of the impact of adopted protection measures on local buildable lands inventories. OAR 660-023-0070 (1) (a)-(c) states:

" (1) If measures to protect significant resource sites inside urban growth boundaries affect the inventory of buildable lands in acknowledged plans required by Goals 9, 10 and 14, a local government outside of the Metro UGB, and Metro inside the Metro UGB, prior to or at the next periodic review, shall:

(a) Amend its urban growth boundary to provide additional buildable lands sufficient to compensate for the loss of buildable lands caused by the application of Goal 5;

(b) Redesignate other land to replace identified land needs under Goals 9, 10, and 14 provided such action does not take the plan out of compliance with other statewide goals; or

(c) Adopt a combination of the actions described in subsections (a) and (b) of this section."

ES.7.1 Impact of the Proposed Protections on Buildable Land Inventories

This section estimates the impact of the recommended program for protecting Springfield's resource areas on the inventory of buildable residential, commercial and industrial land. The administrative rule quoted above is somewhat vague about how to compute the impact. Some contend that the protected acreage should be subtracted from the current inventory of buildable land. Others contend that the protected acreage should be subtracted from the surplus of buildable land that was determined at the adoption of the inventory. Case law supports subtracting the protected acreage from the surplus of buildable land.

Tables ES-14, ES-15, and ES-16 below summarize the amount of land that would be subtracted from the Eugene-Springfield inventories of surplus of buildable residential, commercial and industrial lands that were identified when each inventory was adopted.

Table ES-14. Analysis of Maximum Possible Impact on Supply of Residential Lands within the Eugene-Springfield Metropolitan Area

Residential Land Supply	Acres
Eugene-Springfield Metropolitan Area Residential Lands and Housing Study Surplus Acres	
Low Demand Assumption	1862.00
or	or
High Demand Assumption	790.00

Residential Land Supply	Acres
Acres Removed from Residential Designation by Previous Plan Amendments*	
Eugene	-84.90
Springfield	**-52.03**
Total	**-136.93**
Maximum Possible Residential Acres Impacted by Eugene Goal 5 Protection Measures	-445.77
Maximum Possible Residential Acres Impacted by Springfield Goal 5 Protection Measures	**-14.18**
Remaining Surplus	**1265.12 or 193.12**

Table ES-15. Analysis of Maximum Possible Impact on Supply of Commercial Lands within the Springfield Urban Growth Boundary

Commercial Land Supply	Acres
Springfield Commercial Lands Study (2000) projects a deficit of commercial land.	**-158 acres**
Acres Removed from Commercial Designation by Previous Plan Amendments*	**-2.8 acres**
Maximum Possible Commercial Acres Impacted by Springfield's Goal 5 Protection Measures	**-11.56 acres**
Remaining Surplus (Deficit)	**(-172.36 acres)**

Table ES-16. Analysis of Maximum Possible Impact on Supply of Industrial Lands within the Eugene-Springfield Metropolitan Area

Industrial Land Supply	Acres
Metropolitan Industrial Lands Inventory Report Surplus Acres	
Low Demand Assumption	2954.28
or	or
High Demand Assumption	2432.28
Acres Removed from Industrial Designation by Previous Plan Amendments*	
Eugene	-642.30
Springfield	**-90.80**
Total	**-732.80**
Maximum Possible Industrial Acres Impacted by Eugene Goal 5 Protection Measures	-44.73

Industrial Land Supply .	Acres
Maximum Possible Industrial Acres Impacted by Springfield Goal 5 Protection Measures	**-71.40**
Remaining Surplus	**2105.05 or 1583.05**

* Does not consider actions taken by Eugene to add additional lands to the surplus.

ES.7.2 Impact on the Residential Lands Inventory

In 1999, the Eugene-Springfield Metropolitan Area Residential Land and Housing Study (Residential Lands Study) estimated the amount of vacant buildable residential land in the area. In Springfield, a total of 3,087 acres of buildable lands were identified. The Study classified wetlands listed on the Springfield Local Wetland Inventory as unbuildable and were not included in the estimated supply of buildable residential lands. Other types of constraints were also considered and classified as unbuildable and were not counted in the buildable residential land inventory. The list of constraints included:

- Floodways;
- **Wetlands listed on the Springfield Local Wetlands Inventory larger than .25 acres;**
- Land within the easement of 230 KV power lines;
- Land within 75 feet of a Class A stream or pond;
- Land within 50 feet of a Class B stream or pond; and
- Small irregularly shaped lots.

Since the Residential Lands Study did not include wetlands listed on the Local Wetlands Inventory in the buildable lands inventory, it is assumed that protecting these wetland sites from conflicting residential development will not reduce that inventory. The development setbacks recommended for significant wetland sites in this study will slightly reduce the inventoried acreage of vacant buildable land adjacent to wetland features.

Wetland Setbacks

As noted in Table ES-17 below, about 9.95 acres of low-density residential (LDR) and .59 acres of medium density residential (MDR) land will be removed from the residential lands inventory by the 25-foot setback recommended for those wetlands not already protected by the 50 and 75 foot setbacks required by Springfield's stormwater quality protection policies. Keep in mind that this is a worst case scenario and assumes that the developer is unable to locate required stormwater facilities within the recommended setbacks and that subdivision design cannot arrange for the yard areas of affected dwelling units to be placed adjacent to the wetland, thus reducing or eliminating lost development area.

Riparian Setbacks

In addition to wetland setbacks, recommended riparian setbacks will also result in the removal of vacant acreage from the inventory of buildable residential lands. As noted in Table ES-17, about 3.42 acres of low-density residential (LDR) and .22 acres of medium density residential (MDR) land will be removed from the residential lands inventory by the 25-foot setback recommended for those wetlands not already protected by the 50 and 75 foot setbacks required by Springfield's stormwater quality protection policies.

The combined impact of the proposed 25-foot setbacks for wetlands and riparian areas is 14.18 acres. This represents .45% of the 3,087 acres of buildable residential land described in the 1999 Residential Lands Study.

In May 2004, a Residential Lands Study Monitoring Report was published, updating the residential lands inventory to reflect development through 2003. The report estimated that at the end of 2003 there was 1,361 acres of remaining buildable residential land in Springfield. The amount of land removed from the buildable inventory by the 25-foot wetland and riparian setbacks proposed by this report represents about 1% of remaining 1,361 acres.

Table ES-17. Vacant Residential Land within Proposed Protection Setbacks

Setback Distance	Vacant LDR Acres	Vacant MDR Acres	Total Acres
Wetland Setbacks			
25 foot	9.95	.59	**10.54**
50 foot	9.4	2.73	**12.13**
75 foot	4.97	4.15	**9.12**
Total	**24.32**	**7.47**	**31.79**
Riparian Setbacks			
25 foot	3.42	.22	**3.64**
50 foot	6.06	2.73	**8.79**
75 foot	4.97	4.15	**9.12**
Total	**14.45**	**7.1**	**21.55**
Grand Total	**38.77**	**14.57**	**53.34**

ES.7.3 Impact on the Commercial Lands Inventory

The Springfield Commercial Lands Study (2000) listed several types of development constraints that affected commercial properties. These development constraints included:

Major transmission lines;
Hazardous waste sites;

Slopes greater than 15%;
Lots less than 6,000 square feet in size;
Lots with poor visibility;
Lots with inadequate access;
Hydric soils;
Unstable soils;
Willamette Greenway and Greenway setbacks;
Floodway and floodway fringe;
Wellhead zone of influence;
Wetlands listed on the Springfield Local Wetland Inventory;
Other potentially regulated natural resource sites [Natural Resources Study Inventory];
Sites with Plan/Zone conflicts.

The Commercial Lands Study classified sites on the on the Springfield Local Wetland Inventory as constrained. The presence of these wetlands was noted and the inventory of vacant commercial lands was noted to reflect the constraint. The riparian sites which are part of this study were also included as constrained, since they were part of the draft Springfield Inventory of Natural Resource Sites at the time Commercial Lands Study was conducted.

Since the Springfield Commercial Lands Study did not remove wetlands and riparian sites, protection measures proposed by this study will have an impact on the inventoried acreage of vacant commercial lands. The development setbacks recommended for significant wetland and riparian sites will further reduce the inventoried acreage of vacant buildable commercial land adjacent to these resource sites. The extent of this impact is discussed below.

The Commercial Lands Study concluded that there was about 85 acres of vacant buildable commercial land in Springfield. An additional 12 acres was projected for redevelopment by the Study bringing the total to 97 buildable acres. Demand for vacant commercial land for the planning horizon 2015 was 255 acres. The 2000 Commercial Lands Study concluded that there was a 158 acre deficit of buildable commercial land.

Wetland Impacts

A GIS analysis shows that .07 acres of vacant commercial land would be removed from the Commercial Lands Inventory if wetland sites zoned for commercial development were fully protected. The 25-foot wetland setback recommended by this study would remove an additional 1.47 acres of vacant commercial land from development. This figure assumes that the developer is unable to locate required stormwater facilities or required landscaping within the recommended setbacks, thus reducing or eliminating lost development area.

The total impact on the Commercial Lands Inventory would be a reduction of 1.54 acres if wetland sites and their setbacks were fully protected.

Riparian Site Impacts

A GIS analysis shows that about acres 2.78 of vacant commercial land lies within inventoried riparian sites that are protected by the Springfield's Stormwater Quality Management program. Therefore, no commercial acreage is removed from the Commercial Lands Inventory by the implementation of proposed protections in this study. As noted in Table ES-18 below, no vacant commercial land will be removed from the inventory by the proposed 25-foot setbacks.

The total impact on the Commercial Lands Inventory would be a reduction of 1.54 acres if wetland and riparian sites and their setbacks were fully protected. This represents 1.8% of the 85 acres of buildable commercial land described in the Springfield Commercial Lands Study.

Table ES-18. Vacant Commercial Land within Proposed Protection Setbacks

Zoning District	Site Acreage	25 ft. Setback	50 ft. Setback	75 ft. Setback	Total Acres
Wetlands					
Community Commercial	.07	1.47	.11	0	1.65
Neighborhood Commercial	0	0	0	0	0
General Office	0	0	0	0	0
Major Retail Commercial	0	0	0	0	0
Wetland Total	**0.07**	**1.47**	**0.11**	**0**	**1.65**
Riparian Areas					
Community Commercial	2.78	0	0	2.6	5.38
Neighborhood Commercial	0	0	0	0	0
General Office	0	0	0	0	0
Major Retail Commercial	0	0	.24	0	.24
Riparian Total	**2.78**	**0**	**0.24**	**2.6**	**5.62**
Grand Total	**2.85**	**1.47**	**.35**	**2.6**	**7.27**

ES.7.4 Impact on the Industrial Lands Inventory

The 1992 Metro Area Industrial Lands Study assessed the supply and demand for industrial land in the greater Eugene-Springfield area. The study concluded that there was about 709 acres of buildable industrial land within Springfield's UGB. Like the Springfield Commercial Lands Study, the Industrial Lands Study noted those industrial

sites with wetland and riparian constraints but did not exclude them from the inventory. For that reason, protection of wetland and riparian lands under the policies proposed by this study will reduce the inventory of buildable industrial lands. The extent of this impact is discussed below.

Wetland Impacts

A GIS analysis shows that about 44.34 acres of vacant industrial land are affected by wetlands that are not already protected by the Springfield Stormwater Quality program. These wetlands are recommended for protection by a 25-foot development setback. These setbacks add another 6.82 acres to the amount of industrial zoned land that would be removed from the Industrial Land Inventory if wetland sites and the setbacks were fully protected under the policies recommended by this study. The total impact to the inventory of industrial lands would be 51.16 acres.

Riparian Impacts

A GIS analysis shows that 13.70 acres of vacant industrial land are affected by riparian areas are that not already protected by the Springfield Stormwater Quality program. These riparian areas are recommended for protection by a 25-foot development setback. These setbacks add another 3.27 acres to the amount of industrial zoned land that would be removed from the Industrial Land Inventory if wetland sites and the setbacks were fully protected under the policies recommended by this study. The total impact to the inventory of industrial lands would be 16.97 acres.

The total impact on the Industrial Lands Inventory would be a reduction of acres 68.13 acres if wetland and riparian sites and their setbacks were fully protected. This represents 1% of the 709 acres of buildable industrial land for Springfield in the Industrial Lands Study.

Table ES-18. Vacant Industrial Land within Proposed Protection Setbacks

Zoning District	Site Acreage	25 ft. Setback	50 ft. Setback	75 ft. Setback	Total Acres
Wetlands					
Light-Medium Industrial	27.65	4.81	.82	0	33.28
Heavy Industrial	12.60	2.01	19.15	0	33.76
Campus Industrial	.35	0	2.56	0	2.91
Special Heavy Industrial	0	0	0	0	0
Quarry Mining	0	0	0	0	0
Booth Kelly MU	.13	0	.47	0	0.6
Wetland Total	**40.73**	**6.82**	**23**	**0**	**70.55**
Riparian Areas					
Light-Medium	16.48	2.05	4.72	1.26	24.51

Zoning District	Site Acreage	25 ft. Setback	50 ft. Setback	75 ft. Setback	Total Acres
Industrial					
Heavy Industrial	68.31	1.22	8.93	0	78.46
Campus Industrial	3.22	0	2.83	.03	6.08
Special Heavy Industrial	0	0	0	0	0
Quarry Mining	3.22	0	0	0	3.22
Booth Kelly MU	.21	0	.82	0	1.03
Riparian Total	**91.44**	**3.27**	**17.3**	**1.29**	**113.3**
Grand Total	**132.17**	**10.09**	**40.3**	**1.29**	**183.85**

Appendix A: Wetland and Riparian Assessment Summaries

It would be impossible in the confines of this summary to include a comprehensive site by site analysis. That detail is provided in Section 7 of the Springfield Natural Resources Study. Tables ES-20 and ES-21 provide a brief overview of Springfield's wetland and riparian resource sites. The Site ID/Names correspond to maps found in Section 3 and Section 8 of this study.

Table ES-20. Wetland Resource Overview and Functional Assessment

Site ID/Name	Site Acres	Impact Area Acres	Wetland Functional Assessment (Results of the OFWAM* analysis)	High or Moderate Quality Wetlands
M04--Cascade Drive In	5.03	12.33	Special interest for protection: site is inhabited by a federally listed endangered plant species.	High Quality
M05—Aster Street Wetland	9.12	19.43	Provides diverse wildlife habitat; Hydrologic control function is intact (flood retention).	High Quality
M14—75th Street	30.73	34.82	Provides diverse wildlife habitat Wetland is aesthetically pleasing	High Quality
M16(a-c)—Irving Slough	12.53	51.49	M16a- Water quality and hydrologic functions are intact. M16b- Hydrologic functions are intact. M16c- Hydrologic functions are intact.	(a) High Quality (b)Moderate Quality (c)Moderate Quality
M20–Maple Island Slough	.35	4.52	Provides diverse wildlife habitat; Hydrologic control function is intact.	High Quality
M26—Guy Lee	1.82	5.16	Provides diverse wildlife habitat; Wetland provides educational and recreational opportunities and is aesthetically pleasing.	High Quality
M28—Gateway Channel	1.50	8.52	Special interest for protection (mitigation site)	Moderate Quality
M29—Daisy St. and Haul Rd.	1.08	6.29	Special interest for protection: wetland is inhabited by a specie listed as sensitive threatened or endangered.	High Quality
M30—48th St.	6.48	28.21	Water quality function is intact	Moderate Quality

Site ID/Name	Site Acres	Impact Area Acres	Wetland Functional Assessment (Results of the OFWAM* analysis)	High or Moderate Quality Wetlands
and Haul Rd.				
M33a—48th St. and Weyco Channel	12.07	72.07	Provides diverse wildlife habitat Hydrologic control function is intact	High Quality
W02—Daisy St. and 42nd St.	.89	3.33	Special interest for protection: wetland is inhabited by a specie listed as sensitive threatened or endangered.	High Quality
W03a—Jasper Slough	1.58	10.29	Water quality function is intact	Moderate Quality
W04a—South Dorris Ranch	.65	5.45	Water quality is intact Wetland is aesthetically pleasing and has potential for recreational and educational use.	High Quality
W12—Island Park Slough	1.15	11.98	Water quality function is intact Hydrologic control function is intact Wetland has potential for educational and recreational use.	High Quality
W16—Dorris Creek	1.71	23.23	Water quality function is intact Hydrologic control function is intact	High Quality
W18a–Natron	108.00	136.51	Water quality function is intact Hydrologic control function is intact	High Quality
W19—Millrace and Pond	41.65	53.67	Hydrologic control function is intact Wetland has potential for enhancement	High Quality
W20—Glenwood Slough	3.31	11.27	Water quality function is intact Hydrologic control function is intact	High Quality
*OFWAM is the Oregon Freshwater Wetland Assessment Methodology, a site-specific wetland assessment tool that identifies and rates wetland functions.				

Table ES-21. Riparian Resource Overview and Habitat Assessment

Site ID/Name	Site Acres	Impact Area Acres	*Habitat Assessment Score	High or Moderate Quality Riparian Site
S03—Springfield Millrace (Natural) A	25.15	44.09	61-62	High Quality
S04—Springfield Millrace and Pond B (Industrial)	42.51	34.28	40-41	Moderate Quality
S07—Brand S/Natron	23.66	33.1	41	Moderate Quality
S09—Weyerhaeuser B	62.11	21.27	50	High Quality
S10—Weyerhaeuser A	1.11	8.3	70	High Quality
S12/13—Q Street Ditch	13.64	87.16	45 (with trees) 36 (without trees)	High Quality Moderate Quality
S14—Guy Lee	2.14	5.39	35	Moderate Quality
S17—Maple Island Slough	31.92	46.95	67	High Quality
S18—SCS Channel #6	7.51	52.29	22-23	Moderate Quality
S20—Irving Slough North	14.71	37.22	67	High Quality
S21—South Irving Slough	11.86	17.08	47	High Quality
S22—Jasper Road Slough	13.28	33.71	67	High Quality
S24—Gray Creek	6.63	34.67	55	High Quality
E-39—Glenwood Slough	24.51	56.81	46-47	High Quality
WA/WB—Willamette River	22.13	72.89	72-74 (Natural) 64-66 (Urban)	High Quality
*The Wildlife Habitat Assessment (WHA) tool was used to rate the habitat values of riparian areas				

Appendix B: Protection Program Details

This report recommends that the City follow a policy of "limiting conflicting uses." The following section provides more policy detail for how a "limiting conflicting uses" policy would be fleshed out. The standards below are adapted from the model wetland and riparian protection ordinances published in the handbooks for wetland and riparian planning by the Oregon Division of State Lands. The standards and policies below would form the basis for an implementing ordinance that would be adopted by the City.

I. Applicability

A. The proposed protection program is applicable to "locally significant wetlands" as identified by the Oregon Wetland Assessment Methodology (OFWAM) analysis of the Springfield Local Wetland Inventory.

B. Wetlands on the Springfield Local Wetland Inventory not meeting the OFWAM criteria for "locally significant wetlands," are not the subject to the setbacks and other protections described in this program. Wetlands not meeting the OFWAM significance criteria are still subject to those protections levied by state and federal agencies with authority over wetland impacts.

C. The proposed protection program is also applicable to riparian sites identified on the Springfield Inventory of Natural Resource Sites.

D. The Springfield Local Inventory map and the Springfield Inventory of Natural Resource Sites map shall be used to provide a visual reference for locating known wetland and riparian sites, but shall not be relied upon as the final authority for locating the actual boundaries of these sites. When a development is proposed that may impact an inventoried wetland or riparian corridor, a site delineation shall be required to locate the boundaries of the resource for the purpose of applying development setbacks or other protections described in this report.

II. Development Setbacks

A. Development setbacks are described in the report as a basic element of the protection program for Springfield's wetland and riparian sites. Several wetland and riparian sites are already protected with 50-foot or 75-foot development setbacks under Springfield's Stormwater Quality Protection program. These sites are shown on the Springfield Water Quality Limited Watercourses Map. Locally significant wetlands on the Springfield Local Wetland Inventory and riparian areas identified on the Springfield Inventory of Natural Resource Sites which <u>are not</u> protected under the provisions of the Stormwater Quality Protection program shall be protected by a 25-foot development setback.

B. Development setbacks from wetland sites shall be measured from the delineated edge of the wetland as acknowledged by the Oregon Division of State Lands.

C. Development setbacks from riparian sites shall be measured from the "top of bank" as defined in Article 2 of the Springfield Development Code.

D. In some cases, wetlands are associated riparian area boundaries. In such cases, the setback distance from the outward edge of the delineated wetland that is associated with the riparian feature shall be used to measure the boundaries of the development setbacks described in the report.

III. Site Plan Review Required for Projects within 150-feet of a Resource Site.

A. Site plan review as described in Article 31 of the Springfield Development Code is required for commercial, industrial and multi-unit residential developments which are proposed within 150-feet of a wetland or riparian area. Design standards and policies described in Section 31.110 of the Springfield Development Code (Stormwater Management) shall be applied to these development proposals.

B. It is the recommendation of this report that a Low Impact Development Design Handbook be prepared and adopted to detail additional protections that would be both feasible in their cost and effective in their application for protecting wetland and riparian sites.

IV. Activities that would be allowed within Wetland and Riparian Resource Area Boundaries

A. Any use, signs, or structures, and the maintenance thereof, that were lawfully existing when these protection measures were adopted, is allowed to continue within a wetland or riparian protection area. Such use, sign, or structure may continue at a similar level and manner as existed on the date of adoption of these protections. The maintenance and alteration of pre-existing ornamental landscaping is allowed within a wetland or riparian protection area so long as no additional native vegetation is disturbed. The provisions of this section shall not be affected by any change in ownership of properties containing a wetland or riparian protection area.

B. The following activities and maintenance thereof are allowed within a wetland or riparian protection area, provided that any applicable state or federal permits are secured:

1) Wetland and or riparian restoration and rehabilitation activities.

2) Restoration and enhancement of native vegetation, including the addition of canopy trees.

3) Cutting and removal of trees that pose a hazard to life or property due to threat of falling.

4) Perimeter mowing and other cutting necessary for hazard prevention.

5) Removal of non-native vegetation, if replaced with native plant species at a similar coverage or density so that native species dominate.

6) Normal farm practices such as grazing, plowing, planting, cultivating and harvesting, that meet the following criteria and limitations:

   a. The farm practices were in existence or occurring on the property on the date of adoption of the provisions herein,

   b. The farm practices are of no greater scope or intensity than the operations that were in existence on the date of adoption of the provisions herein, and

   c. Normal farm practices do not include new or expanded structures, roads, or other facilities involving placement of fill material, excavation, or new drainage measures; and

7) Maintenance of existing drainage ways, ditches, or other structures, to maintain flow at original design capacity and mitigate upstream flooding, provided that management practices avoid sedimentation and impact to native vegetation and any spoils are placed in uplands.

8) Waterway restoration and rehabilitation activities such as channel widening, realignment to add meanders, bank grading, terracing, reconstruction of road crossings, or water flow improvements.

9) Maintenance and expansion of existing public drinking water facilities and the establishment of new public drinking water facilities. This includes essential and ancillary infrastructure and services needed for the operation of these drinking water facilities.

10) Replacement of a permanent, legal, nonconforming structure in existence on the date of adoption of this ordinance with a structure on the same building footprint, if it does not disturb additional area, and in accordance with the provisions of Article 5 of the Springfield Development Code.

11) Expansion of a permanent, legal, nonconforming structure in existence on the date of adoption of this ordinance, if the expansion area is not within and does not disturb the wetland protection area, and in accordance with the provisions of Article 5 of the Springfield Development Code.

12) Emergency stream bank stabilization to remedy immediate threats to life or property. (State or federal emergency authorization may be needed for in-stream work.)

13) Maintenance and repair of existing roads and streets, including repaving and repair of existing bridges, and culverts, provided that such practices avoid sedimentation and other discharges into the wetland or waterway.

C. New fencing may be allowed by the Planning Director or the Director's designee where the applicant demonstrates that the following criteria are satisfied:

1) The fencing does not affect the hydrology of the site;

2) The fencing does not present an obstruction that would increase flood velocity or intensity;

3) Fish habitat is not adversely affected by the fencing;

4) The fencing is the minimum necessary to achieve the applicant's purpose;

Applications for new fencing within a wetland protection area shall contain a scale drawing that clearly depicts the wetland and wetland buffer area boundary.

V. Activities the would be allowed within Wetland and Riparian Development Setback Areas

Provided any required state or federal permits are secured, the following uses are allowed within the wetland and riparian buffers authorized in the Comprehensive Plan:

A. Docks, boat shelters, piers, boat ramps, and similar water dependent uses;

B. Utilities including but not limited to water, wastewater, stormwater, electrical facilities, natural gas facilities, telecommunications or other public improvements;

C. Streets, roads, or bridges where necessary for access or crossings;

D. Bioswales or similar water quality improvement projects;

E. Public multi-use paths, boardwalks, access ways, trails, picnic areas, or interpretive and educational displays and overlooks, including benches and outdoor furniture;

F. Wetland and riparian restoration.

VI. Prohibited Activities within Wetland and Riparian Resource Areas

The following activities are prohibited within a wetland protection area, except as allowed in Section IV "Allowed Activities within Wetland and Riparian Resource Areas"

and Section V "Allowed Activities within Wetland and Riparian Development Setback Areas":

A. Placement of new structures or impervious surfaces.

B. Excavation, drainage, grading, fill, or removal of vegetation except for fire protection purposes or removing hazard trees.

C. Expansion of areas of landscaping with non-native species, such as a lawn or garden, into the wetland or riparian protection area.

D. Disposal or temporary storage of refuse, yard debris, or other material.

E. Discharge or direct runoff of untreated stormwater.

F. Uses not allowed in the list of permitted uses for the underlying zone.

G. Any other activities not identified in Sections IV and IV.

VII. Conservation and Maintenance of Wetland and Riparian Protection Areas

When approving applications for Land Divisions, Site Plans, Master Plans, Discretionary Use Permits, and Variances, or for development permits for properties containing a wetland or riparian protection area or portion thereof, the City shall assure long term conservation and maintenance of the wetland or riparian protection area through one or more of the following methods:

A. The area shall be protected in perpetuity by a conservation easement recorded on deeds and plats prescribing the conditions and restrictions set forth in Sections IV through VI, and any imposed by state or federal permits; or

B. The area shall be protected in perpetuity through ownership and maintenance by a private nonprofit association and through a conservation easement or through conditions, covenants, or restrictions (CC&Rs), prescribing the conditions and restrictions set forth in Sections IV through VI, and any conditions imposed by state or federal permits; or

C. The area shall be transferred by deed to a willing public agency or private conservation organization with a recorded conservation easement prescribing the conditions and restrictions set forth in Sections IV through , VI and any conditions imposed by state or federal permits; or

Note: Other mechanisms for long-term protection and maintenance as deemed appropriate and acceptable by the City Attorney, that are clear and objective standards,

could be added to this list. Such mechanisms should be consistent with the purposes and requirements of this ordinance.

VIII. Notification and Coordination with State Agencies

A. Springfield staff shall notify the Oregon Division of State Lands in writing of all applications to the City for development activities - including development applications, building permits, and other development proposals - that may affect any wetland or riparian areas identified in the Springfield Local Wetlands Inventory or the Springfield Inventory of Natural Resources Map. This applies for both significant and non-significant wetlands and riparian corridors. The Division provides a Wetland Land Use Notification form for this purpose. [See OAR 660-23-100(7); ORS 227.350 for cities and ORS 215.418 for counties.]

B. When reviewing wetland and riparian development permits, the City shall consider recommendations from the Oregon Department of Fish and Wildlife regarding OAR 635-415 "Fish and Wildlife Habitat Mitigation Policy." Note: recommendations from ODFW are advisory only.

IX. Variances

A. The Planning Commission or Hearings Officer shall be the approving authority for applications for variances to the wetland and riparian protection provisions contained in Section I through III above. The procedures of Article 11 of the Springfield Development Code shall be followed for approval of a variance except that the variance criteria of this section shall also apply.

B. Mapping Error Variances and Corrections. The Planning Director or the Director's designee may correct the location of a wetland or riparian boundary when it has been demonstrated by a property owner or developer that a mapping error has occurred and the error has been verified by the DSL. Wetland delineations verified by DSL shall be used to automatically update and replace Springfield's Local Wetland Inventory mapping. No formal variance application or plan amendment is needed for map corrections where approved delineations are provided. If the map correction alters the significance or ESEE findings, a plan amendment may be necessary.

C. Hardship Variances. The Planning Commission or Hearings Officer may grant a variance to the provisions of this ordinance only when the applicant has shown that all of the following conditions exist:

    1) Through application of this ordinance, the property has been rendered not buildable;

2) The applicant has exhausted all other options available under to relieve the hardship;

3) The variance is the minimum necessary to afford relief;

4) No significant adverse impacts on water quality, erosion, or slope stability will result from approval of this hardship variance, or these impacts have been mitigated to the greatest extent possible; and

5) Loss of native vegetative cover shall be minimized.

D. Reduction or Deviation of Wetland and Riparian Development Setbacks. A request to vary the setback area, such as averaging of setback width, may be submitted for consideration by the Planning Director or the Director's designee. Such a request may be approved only if equal or better protection of the wetland or riparian area will be ensured through a plan for restoration, enhancement, or similar means. Such a plan shall be submitted to the Oregon Department of Fish and Wildlife for a mitigation recommendation pursuant to OAR 635-415 "Fish and Wildlife Habitat Mitigation Policy." In no case shall activities prohibited in Section VI "Prohibited Activities Within Wetland and Riparian Protection Areas" subsections A through C occupy the wetland or riparian resource site or more than 50% of the resource buffer area. The Planning Director or the Director's designee shall be the approving authority for applications to alter the buffer area.

To determine the average setback width, measurements shall be made at no greater than 50 foot intervals over the distance the property abuts the wetland or riparian site.

X. Transportation Facilities and Structures Development Standards

A. General. The following standards shall apply to transportation facilities and structures within wetland protection areas, including roads and driveways, bridges, bridge crossing support structures, culverts, and pedestrian and bike paths.

B. Standards for review of conditional uses include the following:

1) Wetland and riparian protection areas shall be crossed only where there are no practicable alternatives to avoid the resource;

2) Transportation facilities and structures crossing wetland and riparian protection areas shall be no wider than necessary to serve their intended purposes; and

3) Within buffer areas, new roads, driveways, and pedestrian and bike paths shall be located or constructed so as not to alter the hydrology of the adjacent wetland or riparian corridor.

XI. Utility Development Standards

A. General. The following standards shall apply to permitted crossing, trenching, or boring for the purpose of developing a corridor for communication, energy, or other utility lines within or crossing parcels in wetland or riparian protection areas.

B. Standards for review of all utility uses include the following:

1) Utility maintenance roads in or crossing protected resources shall meet applicable standards for transportation facilities and structures in protected resources; and

2) For underground utilities, the following additional standards shall apply:

a. Boring under the waterway, directional drilling, or aerial crossing is preferable to trenching. If trenching is the only alternative, it shall be conducted in a dry or dewatered area with stream flow diverted around the construction area to prevent turbidity;

b.Common trenches, to the extent allowed by the building code, shall be required in order to minimize disturbance of the protected resource;

c.Materials removed or excavated during trenching, boring, or drilling shall be deposited away from the protected resource, and either returned to the trench as back-fill, or if other material is to be used as back-fill in the trench, excess materials shall be immediately removed from the protected resource and its associated buffer. Side-casting of removed material into a protected resource shall not be permitted;

d.The ground elevation of a protected resource shall not be altered as a result of utility trench construction or maintenance. Finish elevation shall be the same as starting elevation; and

e.Topsoil and sod shall be conserved during trench construction or maintenance, and replaced on top of the trench.

C. In addition to the other conditional use criteria, conditional use approval of utility corridor routes shall be based on evidence that:

1) Hydraulic impacts on protected resources are minimized; and

2) Removal of native vegetation is minimized.

Where feasible, crossings of wetland and riparian protection areas shall be perpendicular to minimize impact area.

XII. Vegetation Management Standards

A. General. The following standards shall apply to vegetation in wetland and riparian protection areas:

B. Standards for review of conditional uses include the following:

1) Vegetation removal, pruning, or mowing in a significant wetland or riparian corridor shall be the minimum necessary and in no case shall substantially impair any resource functions and values. Vegetation removal, pruning, or mowing in the buffer shall be the minimum necessary. Removal, pruning, or mowing of vegetation shall be allowed if the applicant demonstrates one of the following:

a. The action is necessary for the placement of a structure or other allowed use for which a building permit has been issued;

b. The action is necessary for maintenance of an existing structure or transportation facility;

c. The action is necessary for correction or prevention of a hazardous situation;

d. The action is necessary for completion of a land survey;

e. The action involves the maintenance of a landscaped area that existed prior to the date of this ordinance;

f. The action is part of an approved restoration, enhancement, mitigation, or erosion control plan, including, but not limited to, invasive or noxious species removal and replacement with native species, and wetland area restoration, mitigation, or enhancement;

g. The action is part of a landscape plan approved by the City, and any other appropriate agencies, in conjunction with a building permit that minimizes adverse impacts on protected resources; or

2) Planting shall be permitted in accordance with the following standards:

a. The planting is part of an approved restoration, enhancement, mitigation, or erosion control plan;

b. The planting is part of a landscape plan using appropriate native plant species, and the plan is approved by the City in conjunction with approval of a building permit; or

c. The planting is to replace dead or damaged plants that were either part of a maintained landscape or part of the existing native plant community.

Appendix C: Springfield Local Wetland Inventory and Inventory of Natural Resource Sites Maps.

The Springfield Natural Resources Study
Potential for Measure 37 Claims Resulting from the Recommended Program for Protection

Subsection 3(C) of the Measure 37 text exempts state and local planning land use regulations that are necessary to comply with federal law. The exemption appears limited to the extent that a regulation is the minimum necessary to comply with federal requirements. A number of federal statutes provide a regulatory framework that governs Springfield's wetland and riparian resources. This regulatory context is described in Appendix A of this document.

The Springfield Natural Resources Study is predicated on a set of policies that will not eliminate all Measure 37 claims, but they should minimize the exposure of the City and County as they are applied.

The NR Study adopted a safe harbor approach to the protection of Upland Wildlife Habitat.

Many of the lands which have been subject to Measure 37 claims have been upland areas that can be developed. Springfield chose the "safe harbor approach" under state planning rules to address upland wildlife habitat. This had the effect of removing the upland areas from the Springfield Inventory of Natural Resource Sites. That Inventory was approved by the Board of County Commissioners on September 15, 2004.

OAR 660-023-0110 (4) states that local governments may determine wildlife habitat significance under OAR 660-023-0040 (4) or apply the safe harbor criteria in this section. Under the safe harbor, local governments may determine that significant wildlife habitat is only those sites where sites have been documented to perform a life support function for a wildlife species listed by the federal government as a threatened or endangered species or by the state of Oregon as a threatened, endangered, or sensitive species.

Springfield staff commissioned a database search by the Oregon Natural Heritage program to determine if there were any inventoried upland species within Springfield's planning jurisdiction that fit the state safe harbor criteria for significance. A search of the ONHP database found that there were no species that met the criteria that define a significant upland wildlife habitat.

Springfield chose the "standard process" for evaluating and protecting wetlands and riparian corridors.

The "standard process" described in OAR-660-023-0040 (5) to evaluate the environmental, social, economic and energy (ESEE) impacts of allowing development to impact locally significant wetlands and riparian corridors. That process leads to one of three decisions: fully allow conflicting land uses to impact the resource sites; fully protect

the resource sites; or allowed conflicting in a limited way that protects the resource site to a desired extent.

City of Springfield chose to allow conflicting uses on a limited basis. This choice allowed staff to work with property owners to minimize the loss of developable land that might occur by resource protection measures such as development setbacks.

Wetland and riparian protection is a federal mandate.

Wetlands and most riparian corridors are protected by federal mandate. Cities do not have the authority to allow the alteration or fill of wetland and riparian areas. Development proposals submitted to the City which affect known wetlands or riparian corridors are referred to both the US Army Corps of Engineers and the Oregon Department of State Lands who hold the authority to issue permits to impact these resources. The federal mandate to protect streams and wetlands establishes at least partial exemption from M37 claims.

One could argue that the City's protections might exceed the minimum protection required under federal law. Federal protection policies do not detail specific protections that apply in all cases. The Corps of Engineers does not have set standards for setbacks from wetlands or riparian corridors. EPA rules stemming from the Clean Water Act and the US Fish and Wildlife Service rules related to the Endangered Species Act each tailor protection measures to specific species. It would be difficult to argue that Springfield's local protection exceeds federal minimums when federal minimums are not stated for most resources and species. Federal protections are levied by agencies after a thorough study of the resource and or species.

Many of Springfield's wetland and riparian corridors are protected under the stormwater quality provisions of the Clean Water Act.

Several of Springfield's wetland and riparian resource sites are mapped as water-quality limited streams or tributaries to water quality limited streams and come under the protection of the federal Clean Water Act.

Springfield's regulating ordinance for resource protection allows a hardship variance.

The regulating ordinance that was adopted by the City to implement its protection program for wetland and riparian resources is derived from the model ordinances for wetland and riparian protection that were developed and published by the Oregon Department of State Lands (DSL) and the Department of Land Conservation and Development (DLCD). The ordinance includes provisions for a hardship variance whose land has been rendered unbuildable by development setbacks or other resource protection measures. Such a hardship variance is mandated by state administrative rules (OAR 660-023-0100(4) (b) (B) and 660-023-0090(8) (d)). This also reduces the impact of protections and narrows potential M37 claims.

Any significant development proposal outside the city limits but within the Urban Growth Boundary requires annexation.

Annexation is required before significant development proposals can be approved. Through the annexation process, the City can require that new developments comply with city resource protection measures. A property owner is unlikely to file a M37 claim for relief from resource protection measures since annexation to the City is required for development of an urban character. Such annexation processes often include annexation agreements that condition annexation with compliance city regulating ordinances or exactions. Annexation would cause subject properties to surrender their M37 rights in exchange for the privilege of annexation.

PLANNING AND REGULATORY FRAMEWORK

There are a variety of federal, state and local policies that recognize the value and need for habitat protection and watershed planning and management. These policies are the foundation for current and future resource protection efforts in Springfield. This section describes applicable policies that relate to the protection of fish and wildlife habitat.

Federal Policy

Endangered Species Act (ESA)

The National Marine Fisheries Service (NMFS) listed the Upper Willamette Spring Chinook salmon among 12 salmonid evolutionarily significant units (ESUs) in the Columbia River Basin under the ESA (Federal Register/Vol. 64, No. 24, 1999). Spring Chinook migrate through the metropolitan area in the McKenzie and Willamette Rivers and their tributaries as adults and juveniles. Others spawn and/or rear in metropolitan area streams.

A number of other federally listed fish and wildlife endangered species and species of concern may also be found in the greater Springfield area. These include as listed species: the Oregon Chub, Bull trout, Bald eagle, Northern spotted owl and Fender's butterfly; species of concern: Townsend's big-eared bat, Pacific pallid bat, Northwestern pond turtle, Oregon vesper sparrow, Purple martin, and Northern red-legged frog.

The ESA listings elevate the importance of protecting and restoring riparian corridors and wetland areas because the many of the listed species are dependent on healthy riparian corridors during their lifecycles. Additionally, riparian corridor protection and restoration are important because once protective regulations are issued by the federal government, NMFS requires that all parties must avoid killing or harming a listed species, and avoid adversely modifying the habitat that supports listed species.

Clean Water Act (CWA)

The Clean Water Act (CWA) is the 1977 amendment to the Federal Water Pollution Control Act of 1972. The goal of the CWA is to maintain and restore the physical, chemical and biological integrity of water in the United States. The CWA prohibits discharges of pollutants into waters of the United States, unless the discharge is in compliance with a National Discharge Elimination System (NPDES) permit. In Oregon, the CWA is implemented by DEQ with review and approval by the U.S. Environmental Protection Agency (EPA).

Section 303(d) of the Clean Water Act

Surface water quality is addressed in the CWA. Section 303(d)(1) and (2) of the CWA requires each state to identify those waters that do not meet water quality standards. The State is also required to submit to the EPA reports which "establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters." These reports describe the following: 1) water quality status of rivers and

streams, including water quality limited streams, 2) a list of water quality limited streams still requiring total maximum daily loads (TMDL), and 3) a ranking of these streams according to severity of pollution.

The Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Act) was originally passed in 1976. This Act provided the NMFS legislative authority for fisheries regulation in the United States in the area between three miles and 200 miles offshore, and established the eight regional fishery councils that manage the harvest of fish and shellfish in these waters. In 1996, the Act was reauthorized and changed extensively by amendments in the Sustainable Fisheries Act (SFA).

These amendments emphasize the importance of habitat protection and strengthen the ability of NMFS to protect "Essential Fish Habitat," which is broadly defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." Portions of "Essential Fish Habitat" may lie in urban areas, which are often important habitat for salmon, such as areas with low gradients, that contain wetlands, floodplains or are along major rivers, tributary junctions and estuaries.

State Policy

Statewide Planning Goal 5

Statewide Planning Goal 5 addresses natural resources, scenic and historic areas, and open spaces. The legal requirements to meet Goal 5 are embodied in Oregon Administrative Rule 660, Division 23 – the "Goal 5 rule." It prescribes a process for local governments to follow for inventorying and evaluating Goal 5 resources and for developing land use programs to conserve and protect significant Goal 5 resources. The rule requires communities to inventory and evaluate regional Goal 5 resources, including but not limited to, riparian corridors, wetlands or open space areas. See Section E of this chapter for a complete discussion of Goal 5.

The Oregon Forest Practices Act

The Oregon Forest Practices Act (OFPA) was enacted in 1972 and significant changes were made in 1994. The OFPA administrative rules regulate forestry activities and were developed to protect forest-related resource values, including waters of the State. The OFPA includes water protection rules for riparian management areas (629-635-000). The overall goal of the water protection rules is to provide resource protection during operations adjacent to and within streams, lakes, and wetlands and to provide riparian management areas so that, while continuing to grow and harvest trees, the protection goals for fish, wildlife and water quality are met.

Oregon Endangered Species Rules

It is the State of Oregon's policy "to maintain all species of wildlife at optimum levels and prevent the serious depletion of any indigenous species" [ORS 496.012 (1)]. The Oregon Endangered Species Rules (OAR 635-100 to 635-100-130) help carry out this policy. In accordance with these rules, species can be classified as "threatened" or "endangered" and steps can be taken to recover them. To carry out the policy expressed in this rule, and for other reasons – biological, ethical and economic - a "sensitive" species classification was created under Oregon's Sensitive Species Rules (OAR 635-100-040) to help prevent species from qualifying for listing as "threatened" or "endangered" (ODFW 1992).

Oregon Sensitive Species Rules

Sensitive species constitute those naturally reproducing native animals that may become threatened or endangered in all or a significant portion of their range. Factors to consider in listing species as sensitive are the same as those in the Endangered Species Rules. The Oregon Department of Fish and Wildlife (ODFW) maintains a list of sensitive species that is updated biennially. The list of sensitive species serves as an early warning system for land managers and the public.

Oregon Plan for Salmon and Watersheds

The mission of the Oregon Plan for Salmon and Watersheds is "to restore our native fish populations– and the aquatic systems that support them – to productive and sustainable levels that will provide substantial environmental, cultural and economic benefits." It was initiated in 1995 to address restoration of coastal coho salmon. In April 1997, the Oregon Legislature incorporated other related efforts into one overarching framework: "The Oregon Plan." It is designed to restore the healthy function of Oregon's natural aquatic systems. It represents commitments on behalf of government, interest groups and private citizens from all sectors of the State. There are four fundamental approaches used by the Plan to accomplish the goal of securing and protecting healthy fish habitat: 1) community-based action; 2) government coordination; 3) monitoring and accountability; and 4) improvements over time.

The *Willamette Restoration Initiative (WRI)*, founded in October 1998, is one of many responses to the Oregon Plan's call for action. The WRI is a broad-based effort to promote, integrate and coordinate efforts to protect and restore the health of the Willamette watershed. A major task of the Initiative is to help guide the development of the "Willamette Chapter" of the *Oregon Plan for Salmon and Watersheds*.

Oregon Wetland Regulatory Program

The Oregon Division of State Lands (DSL) administers Oregon's removal/fill law (ORS 196.800- 196.990). Using similar definitions as the federal government, DSL determines wetland boundaries and waterbodies that meet the definition of "waters of the state." A permit is required for fill equal to or exceeding 50 cubic yards or more of material in any waters of the State at one location. Likewise, a permit is required for removal of more

than 50 cubic yards of material in any waters of the state in any calendar year. Waters of the state means natural waterways including all tidal and nontidal bays, intermittent and constantly flowing streams, lakes, wetlands, and other bodies of navigable and non-navigable water.

Oregon Division of State Lands Essential Salmonid Stream Designation

In an effort to identify and protect essential habitat for salmon and trout, the Oregon Legislature in 1993 required the DSL to identify essential salmon habitat in waterways across the state and to adopt administrative rules that require a permit for all alteration activities in these areas. A major focus of designating essential habitat areas was to identify those waterways with significant biological value and the greatest risk to declining stocks. Criteria used to identify essential habitat were areas that provide habitat for multiple species, areas of concentrated spawning, "source basins," and other spawning and rearing habitat at risk. The new DSL rules require applicants to demonstrate that their proposed alterations will have no unacceptable adverse effect on listed salmon species.

Local and Regional Planning

Eugene-Springfield Metropolitan Area General Plan

The Eugene-Springfield Metropolitan Area General Plan (Metro Plan) is the official long range general plan (public policy document) of metropolitan Lane County and the cities of Eugene and Springfield. The Plan sets forth general planning and land use allocations and serves as the basis for coordinated development of programs concerning the use and conservation of physical resources, furtherance of assets, and development or redevelopment of the metropolitan area.

The Environmental Resources Element of the Metro Plan addresses the natural assets and hazards in the metropolitan area. The policies of this element emphasize reducing urban impacts on wetlands throughout the area and planning for natural assets and constraints on undeveloped lands on the urban fringe. It provides broad direction for maintaining and improving our natural urban environment. Other elements dealing in more detail with particular aspects of the natural environment include Parks and Recreation Facilities and Environmental Design (scenic). The emphasis in this element is the protection of waterways as valuable and irreplaceable component of the overall natural resource system important to the metropolitan area. Waterways are also the subject of Section D, "Willamette River Greenway, River Corridors and Waterways." While some repetition is unavoidable, that section emphasizes the intrinsic value of waterways for enjoyment and active and passive use by area residents.

The Metro Plan is a framework within which refinement plans and functional plans offer additional detail. These supplemental plans are subject to the guiding policy provided by the Metro Plan document. The Eugene-Springfield Public Facilities and Services Plan (PFSP) was adopted in 2001 as refinement plan of the Metro Plan. It recommended

changes to the Metro Plan that relate to the provision of water, stormwater and electrical services. The PFSP modified the Public Facilities and Services Element of the Metro Plan to include policies requiring a more environmentally sensitive approach to the design and construction of basic urban infrastructure.

The PFSP responded to policy directions driven the federal policies mentioned above including Title IV of the Clean Water Act, the Endangered Species Act, and the Safe Drinking Water Act. The PFSP also addresses issues embodied in Statewide Planning Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces, Goal 6: Air, Water and Land Resources and Quality and Goal 15: Willamette River Greenway.

Completion of the Goal 5 natural resources planning includes the development of an inventory if significant resource sites that is to be included in the Metro Plan. Goal 5 also requires local jurisdictions to develop program policies for protecting local resource sites that may include amendments to policies found in the Environmental Resources Element and possibly other elements of the Plan.