

that is within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

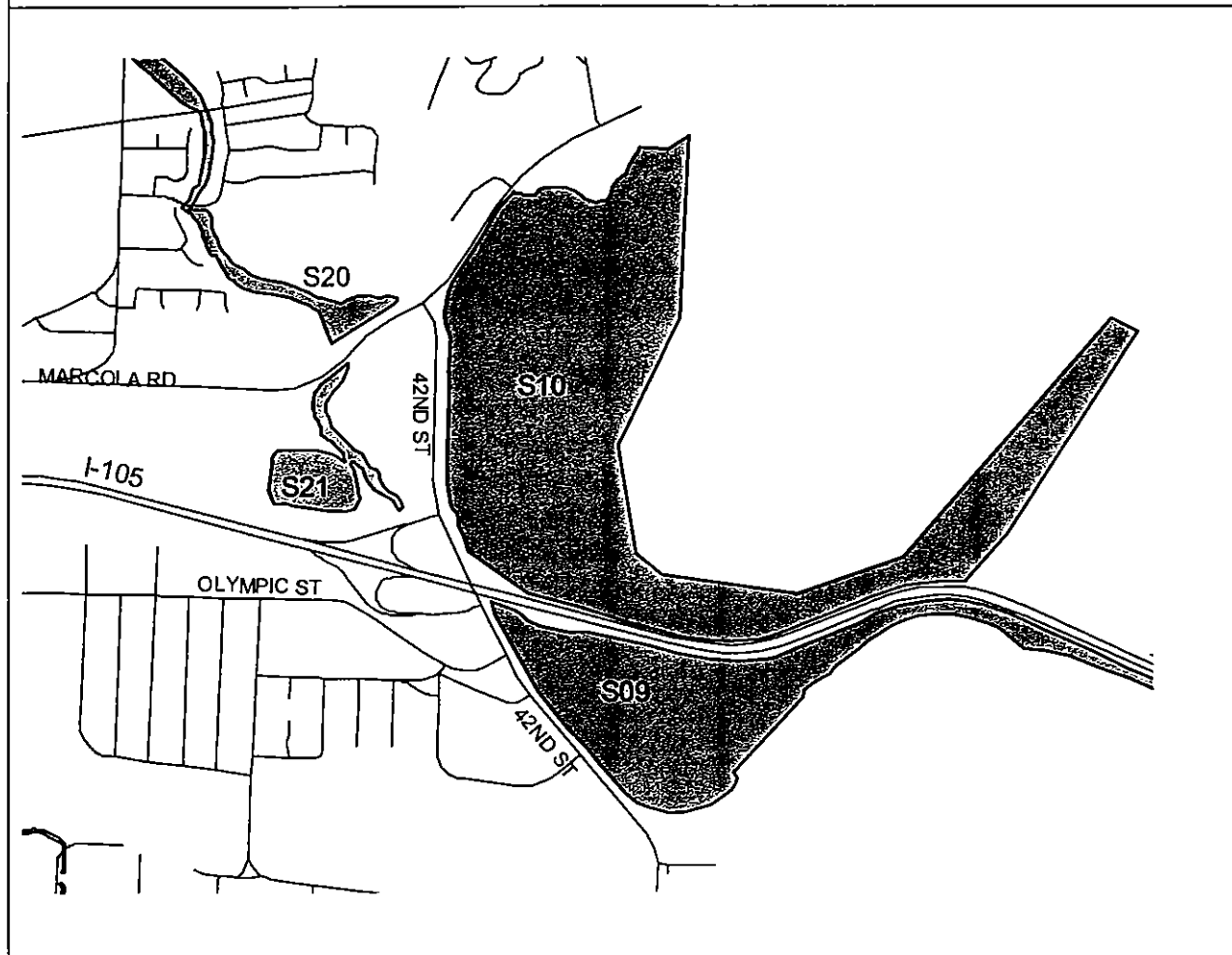
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

S-07 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. As mentioned above, the 25-foot development setback may affect about 2.05 acres, however this area can be incorporated into the overall development without a significant loss of buildable area.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S09 Weyerhaeuser B	Locally Significant Wetlands (M33a) High Quality Wetlands	62.11	50 High Quality Resource Site	Not Assessed

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the watercourse. The Keizer Slough is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.



Description

This site owned by Weyerhaeuser Company and is located south of Highway 126 near the Weyerhaeuser industrial site at 42nd Street and Hwy 126. It is connected to the McKenzie River via slough channels that pass beneath Highway 126. Two ponds on the site are former borrow pits. Vegetation includes overstory of bigleaf maple and black cottonwood and an understory of willow, red alder, and snowberry.

The site includes portions of Keizer Slough which is listed as a significant wetland (M33a) on the local wetland inventory. The site scores high on diversity and quality of the water features on the site.

Resource and Impact Area Summary

Resource Acreage:	62.11
Impact Area Acreage:	21.27
Combined Resource and Impact Area:	83.38
Vacant Acres within the Combined Area:	68.07
Number of Parcels Affected:	4.00
Combined Parcel Acreage:	118.32

Conflicting Uses by Acre and Zoning District

SITE ID	HI	TOTAL ACRES
S-09	62.11	62.11
S-09 Impact Area	21.25	21.25
Total	83.36	83.36

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	HI	TOTAL ACRES
S-09	56.15	56.15
S-09 Impact Area	11.9	11.9
Total	68.05	68.05

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes.**

S-09 is associated with the Keizer Slough. The Slough is a tributary to a water quality limited watercourse (McKenzie River) and is protected by a 50-foot setback and a site plan review requirement.

Site Specific ESEE Analysis for S-09

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

Water and adjacent riparian vegetation provide food, cover and nesting areas for waterfowl, shore birds, amphibians and fish species. Riparian shrub/forest provides habitat for passerine (perching) and raptor bird species. The hydrologic control function of the slough and ponds is intact. Fully allowing conflicting uses would mean the loss of these habitat and riparian functions.

Social Consequences

There is a multi-use path adjacent to S09 that provides public viewing of the resource site, but no access. Fully allowing conflicting uses of the site would mean the loss of the site as a public amenity that provides passive recreation and educational values.

Economic Consequences

The ponds and slough serve hydrologic control and conveyance functions. These functions could be mimicked by engineered facilities for a cost. Fully protecting the site would mean the loss of 68.05 acres of vacant industrial land. Limiting conflicting uses would allow some continued industrial use (e.g. water cooling) without the loss of S09’s habitat and hydrologic functions.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses and employ low impact development practices when developing within 150 feet of the watercourse and ponds. The Keizer Slough is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	HI	TOTAL ACRES
S-09	56.15	56.15
S-09 50-ft. Setback	5.14	5.14
Total	61.29	61.29

About 56.15 acres of S-09 is classified as vacant by the Lane County Assessor’s Office. The vacant acreage includes portions of 2 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the wetland could be preserved or enhanced. A 50-foot development setback is already required for the resource area under Article 31. No additional setback is proposed.

A 50-foot setback would affect 5.14 acres of vacant industrial land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space are within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

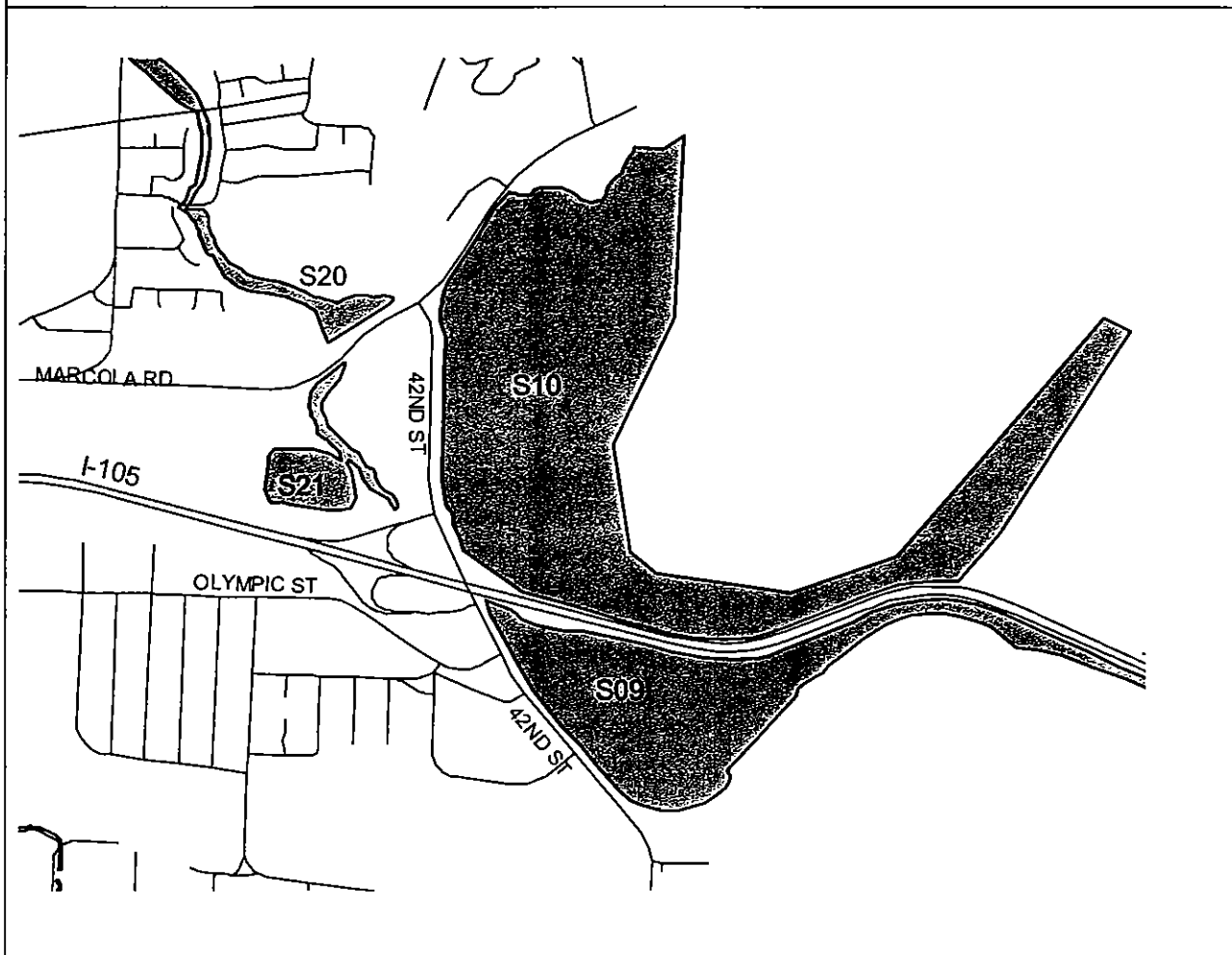
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

S-09 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. A 50-foot development setback is required under stormwater provisions of the Springfield Development Code, and thus the 5.14 acre impact of the setback is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S10 Weyerhaeuser A McKenzie Oxbow	No	1.11 within the UGB	70 High Quality Resource Site	Not Assessed

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. Implement the provisions of the McKenzie Oxbow Natural Area Master Plan. The Marcola Oxbow is part of S10 and is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.



Description:

The site is north of Highway 126 near Weyerhaeuser. The site has a large forested area with excellent structural diversity, abundant sources of food, water and cover, and strong connections with other wildlife habitat sites. Vegetation includes black cottonwood, willow, snowberry,

sedge, rush, and cattail. The site is a major wildlife corridor and provides vital components of fish habitat for fish.

Resource and Impact Area Summary

Resource Acreage:	1.11*
Impact Area Acreage:	8.3*
Combined Resource and Impact Area:	9.41
Vacant Acres within the Combined Area:	1.14
Number of Parcels Affected:	12
Combined Parcel Acreage:	159.93

*The small acreage shown reflects the small amount of S10 that is within the Springfield UGB. The majority of S10 is outside the Urban Growth Boundary, and as such, is outside of the planning jurisdiction of the City. Virtually the entire site was donated to the City of Springfield by Weyerhaeuser Company.

Conflicting Uses by Acre and Zoning District

SITE ID	HI	LDR	PLO	TOTAL ACRES
S-10	.9	0	.21	1.11
S-10 Impact Area	4.76	.77	2.77	8.3
Total	5.66	.77	2.98	9.41

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	HI	LDR	PLO	TOTAL ACRES
S-10	.02	0	.04	.06
S-10 Impact Area	.02	0	1.06	1.08
Total	.04	0	1.1	1.14

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes.**

S-10 includes the McKenzie River, a water-quality limited water course with a flow rate of more than 1000 cubic feet per minute. As such, the McKenzie is protected by a 75-foot setback and a site plan review requirement. S-10 also includes the Marcola Oxbow Ditch. The ditch is a tributary to a water quality limited watercourse (McKenzie River) and is protected by a 50-foot setback and a site plan review requirement. Much of the site is outside of the Urban Growth Boundary and thus outside of the jurisdiction of the City of Springfield.

Site Specific ESEE Analysis for S-10

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

S10 is rated by the WHA as one of the highest quality resource sites in the Eugene-Springfield area. Large portions of S10 are owned by the City of Springfield. In 2001, the McKenzie Oxbow Natural Area Master Plan was prepared and adopted to future development of the site for passive recreational and educational uses and supported its continuing role as a well field and wetland mitigation site. Fully allowing conflicting uses mean the loss of one of Springfield's most highly rated natural resource site. Fully protecting the site could mean the loss of public access and perhaps the loss of an important public well field.

Social Consequences

The Willamalane Parks and Recreation Comprehensive Plan shows this area to be a proposed natural area park. The McKenzie Oxbow Master Plan has designated the area for public recreational and educational uses.

Economic Consequences

The site is a productive well field, provides storm water management and has been used as a site for wetland mitigation in the past. Allowing conflicting uses to degrade or displace these functions would be costly.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses. Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. Implement the provisions of the McKenzie Oxbow natural Area Master Plan. Allow for the development of recreational and educational facilities. The well field and storm water facilities should be maintained and allowed to expand as needed. The Marcola Oxbow part of S-10 and is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	HI	PLO	TOTAL ACRES
S-10	.02	.04	.06
S-10 50-ft. Setback (Marcola Oxbow Ditch)		.33	.33
Total	.02	.37	.39
S-10	0	0	0
S-10 75-ft. Setback (McKenzie River)	0	0	0
Total	0	0	0
Grand Total	.02	.37	.39

Site S-10 includes the McKenzie River. About 1.14 acres of S-10 is classified as vacant by the Lane County Assessor's Office. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the wetland could be preserved or enhanced. A 50-foot development setback is already required for the wetland under Article 31.240. No additional setback is proposed.

A 50-foot setback would affect .39 acres of vacant industrial and public land. The affect of the setback on buildable land could be reduced by aligning development such that required stormwater detention facilities are within the setback.

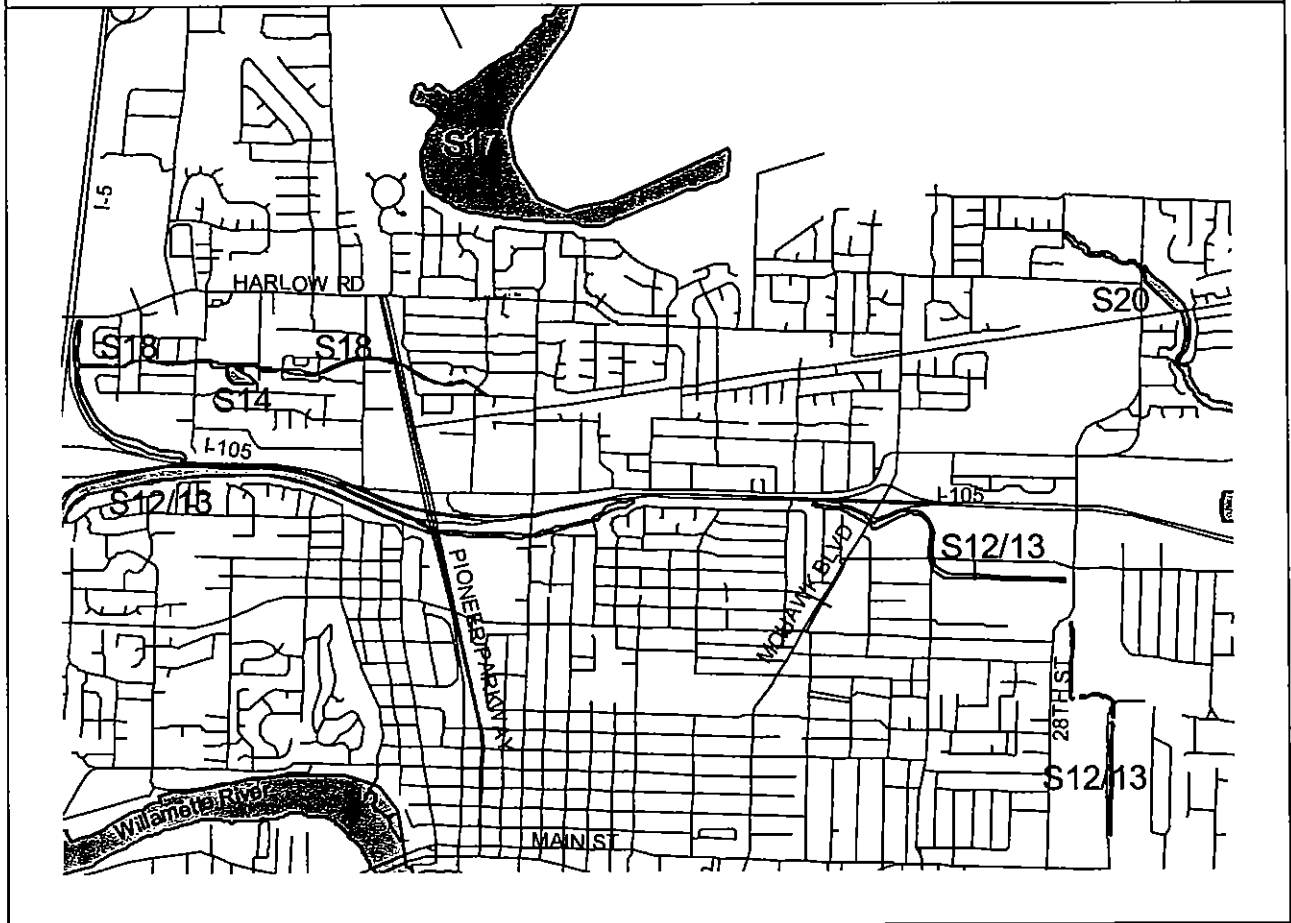
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The wetland, S-10 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. A 50-foot development setback is required under stormwater provisions of the Springfield Development Code, and thus the 5.30 acre impact of the setback is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S12/13 Q Street Ditch	Yes: (M25)	13.64	45 (Trees) High Quality Resource Site 36 (Treeless) Moderate Quality	Q Street Floodway 5.8 (Poor)

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the watercourse. The Q Street Ditch is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.



Description:

The Q Street ditch flows from 28th and Main in Springfield northward to I-105 and then flows westerly, parallel to I-105, under I-5, across to Alton Baker Park, where it joins the Canoe Canal. Much of the Q Street Ditch follows an historic drainage pattern that ultimately drained into the Willamette River, near Goodpasture Island. Portions of the ditch are ripped and culverted (Site S13). Portions within this site have a thin riparian strip. The vegetation along the water's edge and the bank provides some food, cover, and escape for some songbird, waterfowl, reptile, and small mammal species.

Additional information from the *Inventory and Channel Assessment for Springfield Waterways*

Q Street Floodway

Riparian Profile Details

- Plant community of mostly grass/field then mixed and hardwood. One each that is conifer, dominated by invasive specie and brush/shrub/scrub.
- Dominant invasive plant species: *Phalaris arundinacea* (Reed Canary-grass) and *Rubus armeniacus* (Armenian Blackberry).
- Co-dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry) and *Dipsacus fullonum* (Teasel).
- Invasive plant species listed as present: *Dipsacus fullonum* (Teasel), *Solanum dulcamara* (Nightshade), *Phalaris arundinacea* (Reed Canary-grass), *Festuca arundinacea* (Tall Fescue), *Rubus armeniacus* (Armenian Blackberry), *Cytisus scoparius* (Scotch Broom), *Mentha pulegium* (Pennyroyal), and *Holcus lanatus* (Velvet Grass).
- Others invasive plant species observed in the system: *Convolvulus sp.* (Morning Glory/Bindweed), *Phalaris aquatica* (Harding grass), *Hedera helix* (English Ivy), and *Rubus laciniatus* (Evergreen Blackberry).
- Nutria and bullfrogs were recorded as invasive animals/amphibian observed.
- Excessive tunneling, undercutting of banks, eating of vegetation to the point of bare banks were recorded as damage by invasive animals/amphibian.
- Great blue heron, ducks, Belted Kingfisher, small minnows, Common Yellow Throat, Raccoons, Mallards and Lazuli Bunting were recorded as wildlife observed.
- Nutria scat and nutria burrows were recorded as wildlife evidence observed.
- *Epilobium densiflorum* (Dense spike-primrose), *Juncus effuses* (Common rush), and *Myosotis laxa* (Small-flowered forget-me-not) were recorded for seed collection.
- Riparian buffer enhancement, neighborhood education, and culvert retrofit/replacement were recorded for project opportunities.

Channel Assessment Scoring and Overall Health Rating Details

Averages for the system are listed below. Criteria averages were derived by adding each criteria score together and dividing it by the number of reaches. Overall health rating averages were derived by adding each health rating for each reach together then dividing it by the number of reaches.

Scored Criteria	Criteria Averages on a Scale of 1 to 10
Channel Condition	1.7
Water Appearance	7.5
Nutrient Enrichment	5.8
Bank Stability	7.7
Canopy Density/Cover	2.6
Invasive Damage – P	3.8

Invasive Damage – A/A	7.3
Waste Presence	8.6
Barriers to Fish (SBW)	8.2
Insect/Invert Habitat (SBW)	7.3
In-stream Fish Cover (SBW)	3.3
Average Overall Health Rating	5.8 = Poor

Resource and Impact Area Summary

Resource Acreage:	13.64
Impact Area Acreage:	87.16
Combined Resource and Impact Area:	100.8
Vacant Acres within the Combined Area:	20.69
Number of Parcels Affected:	202
Combined Parcel Acreage:	271.29

Conflicting Uses by Acre and Zoning District

SITE ID	CC	HDR	HI	LDR	LMI	MDR	MRC	PL	TOTAL ACRES
S-12/13	0	1.18	0	.74	.87	1.77	5.6	3.48	13.64
S-12/13 Impact Area	.29	5.64	2.28	16.81	13.83	13.28	22.58	12.45	87.16
Total	.29	6.82	2.28	17.55	14.7	15.05	28.18	15.93	100.8

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	CC	HDR	HI	LDR	LMI	MDR	MRC	PL	TOTAL ACRES
S-12/13	0	0	0	0	.19	1.2	0	.08	1.47
S-12/13 Impact Area	0	0	0	1.3	7.37	8.24	1.91	.4	19.22
Total	0	0	0	13	7.56	9.44	1.91	.48	20.69

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes.**

S12/13 is associated with the Q Street Floodway. The Floodway is a tributary to a water quality limited water course (Willamette River) and is protected by a 50-foot setback and a site plan review requirement.

Site Specific ESEE Analysis for S-12/13

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

The portions of S12/13 that are lined by trees are rated as high quality resource areas by the WHA. Those sections of the watercourse that are without trees score are of moderate value. The most significant habitat function of the sparsely vegetated ditch is as a wildlife travel corridor linking some upland and wetland sites.

S12/13's water quality and hydrologic control functions are intact. The fish habitat function is degraded.

Although S12/13 provides limited wildlife habitat value compared to high scoring resource sites, it has significant potential for enhancement. The site also has potential to provide recreational and educational uses.

Fully allowing conflicting uses would mean the loss of the water quality and hydrologic control functions provided by the resource. These could be mimicked by engineered facilities, but at a significant cost. The loss of the wildlife travel corridor would be lost.

Social Consequences

Large segments of S12/13 are in public ownership. The segments allow public access to the resource for recreational and educational uses. Multi-use paths along the resource could provide both a recreational and alternative transportation opportunity. Fully allowing conflicting uses would mean the loss of current resource functions and would negate future recreational opportunities. Limiting conflicting uses could allow development in the vicinity of the resource while preserving the majority of the resource function.

Economic Consequences

S12/13 is a very important storm water management facility. Fully allowing conflicting uses would require the construction of a replacement facility at a significant cost. Fully protecting the resource would mean the loss of 20.69 vacant acres within the combined resource and impact area that are zoned for residential, commercial and industrial uses.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses and employ low impact development practices when developing within 150 feet of the watercourse. The Springfield Millrace is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	LDR	LMI	MDR	MRC	PLO	TOTAL ACRES
S-12/13	0	.19	1.2	0	.08	1.47
S-12/13 50-ft. Setback	.17	1.88	2.73	.24	.13	5.15
Total	.17	2.07	3.93	.24	.21	6.62

About 1.47 acres of S-12/13 is classified as vacant by the Lane County Assessor's Office. The vacant acreage includes portions of 25 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the riparian corridor could be preserved or enhanced. A 50-foot development setback is already required for the riparian area under Article. No additional setback is proposed.

A 50-foot setback would affect 5.15 acres of vacant residential, industrial and public land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space are within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

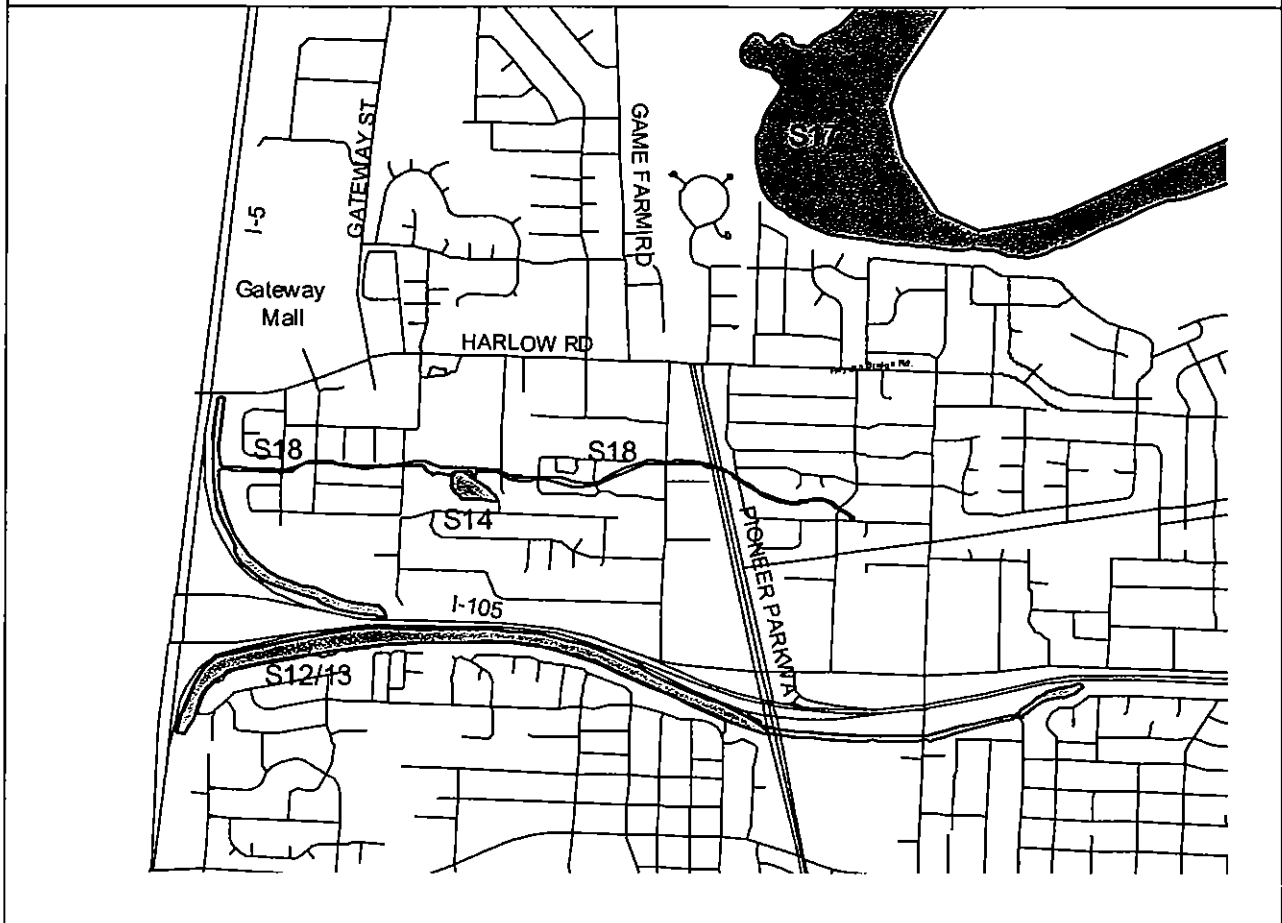
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

S-12/13 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. A 50-foot development setback is required under stormwater provisions of the Springfield Development Code, and thus the 5.15 acre impact of the setback is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S14	Locally Significant Wetlands (M26)	2.14	35	Not Assessed
Guy Lee	Moderate Quality Wetlands		Moderate Quality Resource Site	

Goal 5 Recommendation: Limit conflicting uses that may impact the resource. Maintain a 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics.



Description:

Guy Lee is a small Springfield park adjacent to Guy Lee School. It is surrounded on three sides by residential development and the school to the north.

The site is primarily a disturbed open grassland and has a small remnant riparian strip within a lower swale area. The site is adjacent to a drainage channel (S18) and is surrounded by a grass lawn. Water is present during portions of the growing season. Oregon ash and willow are the dominant overstory vegetation with an understory of snowberry and Himalayan blackberry. This

small remnant forested area provides habitat for some songbird and small mammal species; however, low interspersed value may limit wildlife use. Wildlife use of the area is greatly limited by the surrounding development.

Resource and Impact Area Summary

Resource Acreage:	2.14
Impact Area Acreage:	5.39
Combined Resource and Impact Area:	7.53
Vacant Acres within the Combined Area:	4.81
Number of Parcels Affected:	15
Combined Parcel Acreage:	14.69

Conflicting Uses by Acre and Zoning District

SITE ID	LDR	PLO	TOTAL ACRES
S-14	.76	1.38	2.14
S-14 Impact Area	3.05	2.34	5.39
Total	3.81	3.72	7.53

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	LDR	PLO	TOTAL ACRES
S-14	.76	1.38	2.14
S-14 Impact Area	1.29	1.38	2.67
Total	2.05	2.76	4.81

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? No

Site Specific ESEE Analysis for S-14

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

While the site is a moderate quality resource site and wetlands, the site provides diverse wildlife habitat. Fully allowing conflicting uses would mean the loss of this habitat function. Limiting conflicting uses could preserve the habitat while allowing continued public use and access.

Social Consequences

The location of the site near the school provides both recreational and educational opportunities. The site is shown on the Willamalane Parks and Recreation District Comprehensive Plan as a proposed School/Park project. The site is aesthetically pleasing. Fully allowing conflicting uses would mean the loss of these resource values.

Economic Consequences

Fully protecting S-14 would affect 4.81 vacant acres of combined resource and impact area acreage that is zoned for residential and public use. About 2.76 acres of the vacant land is in public ownership by School District 19. About 2.05 acres of vacant residential acreage falls within the combined resource and impact area acreage.

Limiting conflicting uses could preserve the public uses of the site while allowing private development to occur.

Energy Consequences

None of note.

Recommended Program for Protection

The educational and aesthetic value of the site warrants some protection. The site has enhancement and restoration potential. The channel could be widened to allow a wetland marsh to develop. Human intrusion into the ash grove should be managed to limit the damage that foot traffic and litter has caused to plant and animal life. Construction of a boardwalk and educational and interpretive signs could help address these problems.

Limit conflicting uses that may impact the wetland. Maintain an average 25-foot development setback from the wetland. Allow development within the 150-foot impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage and Zoning District

SITE ID	LDR	PLO	TOTAL ACRES
S-14	.76	1.38	2.14
S-14 25-ft. Setback	.23	.33	.56
Total	.99	1.71	2.70

About 2.14 acres of S-14 is classified as vacant by the Lane County Assessor's Office. The vacant acreage includes a portion of 2 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the

essential functions of the resource area could be preserved or enhanced. A 25-foot development setback is recommended.

A 25-foot setback would affect .23 acres of vacant residential land. An additional .33 acres of public land and open space are also listed as vacant. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space is within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

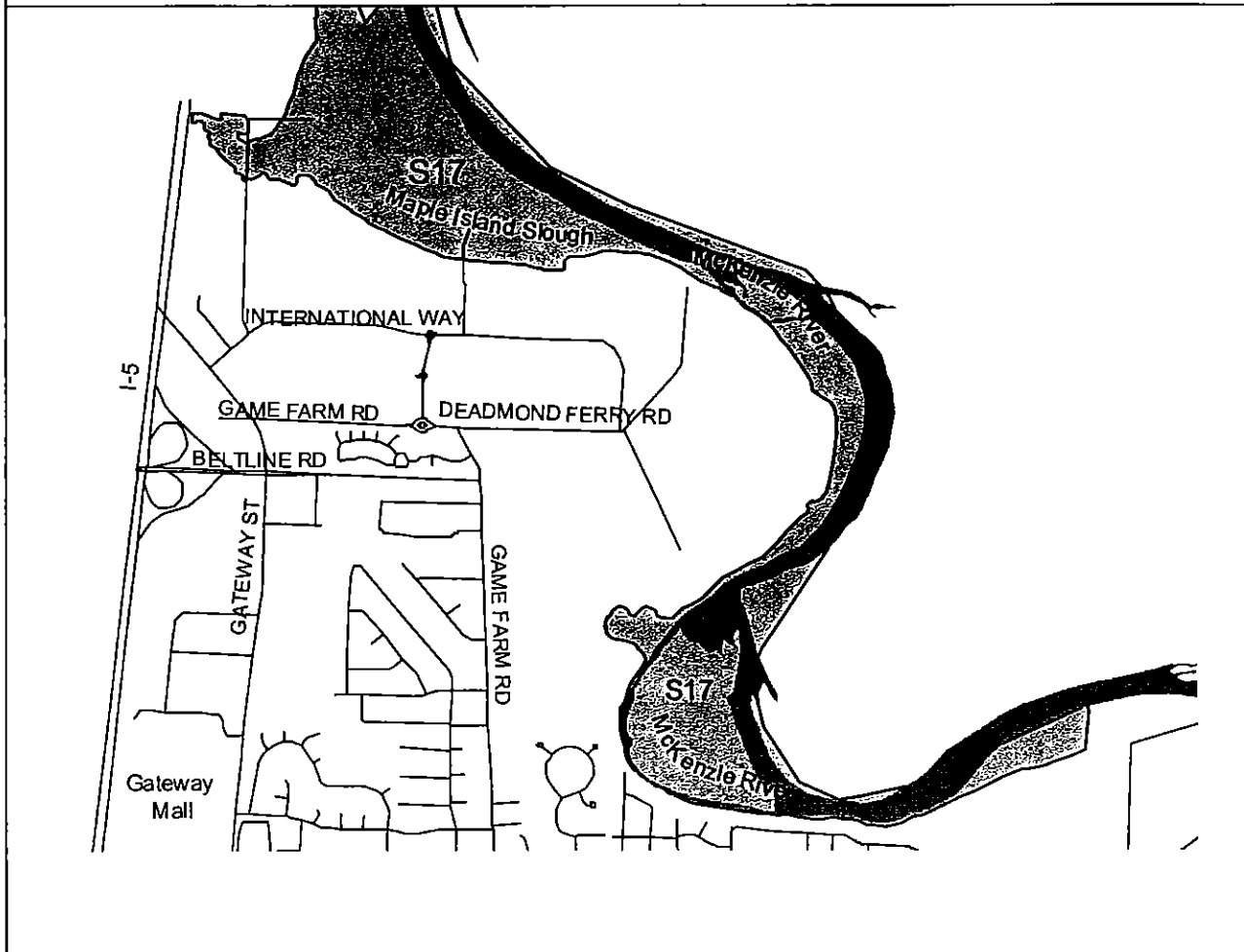
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The wetland, S-14 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. As mentioned above, the 25-foot development setback may affect about .23 acres, however this area can be incorporated into the overall development without a significant loss of buildable area.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S17 Maple Island Slough/McKenzie River	Locally Significant Wetlands (M20) High Quality Wetlands	31.92 Within the UGB	67 High Quality Resource Site	Not Assessed

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. Implement the provisions of the Riverbend Master Plan as it pertains to resource protection. The McKenzie River is a water-quality limited watercourse and is protected by a 75-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. As a tributary to the McKenzie River, Maple Island Slough is protected by a 50-foot development setback and site plan review standards when developing within 150 feet of the resource site. No additional setbacks are necessary.



Description:

This 31.92 acre site is an oxbow slough of the McKenzie River north of the Sony Campus Industrial area. The site also includes the riparian corridor along the McKenzie River east and south of the Riverbend hospital site. Although most of the resource site is outside the urban growth boundary, the wildlife habitat rating of 67 warrants its inclusion in the inventory.

The slough is part of Springfield's storm water management system that receives drainage from north Springfield. Portions of the slough are within the FEMA 100-yr floodway boundary. The Maple Island Slough site is currently designated for agricultural use, with a small area on the southern edge designated for campus industrial uses.

Site S17 is a good representation of a Willamette Valley riparian corridor vegetated with mostly native plant species. Structural diversity, and quantity and density of vegetation are high. Oregon ash, red alder, and bigleaf maple are the dominant tree species. Red osier dogwood, snowberry, rose and Oregon hazel are the dominant shrub species. The site provides feeding, roosting, and nesting habitat for a variety of bird, mammal, and herptile species. Connection to the McKenzie River on both ends of the site enhance the interspersed value and wildlife use of this site.

Resource and Impact Area Summary

Resource Acreage:	31.92
Impact Area Acreage:	46.95
Combined Resource and Impact Area:	78.87
Vacant Acres within the Combined Area:	39.51
Number of Parcels Affected:	43
Combined Parcel Acreage:	281.88

Conflicting Uses by Acre and Zoning District

Site ID	CI	LDR	MDR	PL	Total Acres
S-17	13.84	.15	6.92	11.01	31.92
S-17 Impact Area	25.7	1.81	14.3	5.14	46.95
Total	39.54	1.96	21.22	16.15	78.87

Conflicting Uses by Vacant Acre and Zoning District

Site ID	CI	LDR	MDR	PL	Total Acres
S-17	3.22	0	5.13	10.77	19.12
S-17 Impact Area	8.53	0	8.71	3.15	20.39
Total	11.75	0	13.84	13.92	39.51

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes.**

S17 includes area adjacent to the McKenzie River, a water quality limited water course. Lands along the McKenzie are protected by a 75-foot development setback and a site plan review requirement. S17 also includes the Maple Island Slough, a tributary to the McKenzie River. Land adjacent to the Slough is protected by a 50-foot setback and a site plan review requirement.

Site Specific ESEE Analysis for S-17

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

S-17 is one of the most highly rated riparian resource sites in Springfield. The wetland portion of the slough is rated as a high quality wetland. It provides diverse wildlife habitat and the water quality control function of the riparian site is intact. Fully allowing conflicting uses would mean the loss of these functions.

Social Consequences

The Willamalane Parks and Recreation District Comprehensive Plan proposes a special use park in the Riverbend area for a riverfront park that would provide public access to the resource. Fully protecting the resource may mean the loss of this area for public recreational purposes. Limiting conflicting uses could allow for limited public recreational access.

Economic Consequences

That portion of S-17 that is outside of the urban growth boundary is outside the jurisdiction of the City of Springfield. The area within Springfield's planning jurisdiction includes 39.51 vacant acres of industrial and residential land in the combined resource and impact area. Most of this acreage is within the FEMA 100-year flood plain and flood way increasing the cost of its development. Fully protecting this land would mean the loss of potential industrial and residential land.

The slough system provides water quality and storm water control functions that serve much of north Springfield. These functions could be replaced by engineered systems, but at a high cost.

Limiting conflicting uses could preserve the functions of the resource while allowing development to occur. The recently adopted Riverbend Master Plan allows development outside of a 100-ft setback from the McKenzie River, and imposes storm water management protections to reduce runoff velocity and to pre-treat water released from the area into to the slough and river.

Energy Consequences

None of note.

Recommended Program for Protection

The slough is a significant and important part of the McKenzie River system. Water quality and storm water runoff should receive particular attention in development plans. Removal of native vegetation or other alteration of the slough should be prohibited.

Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. Implement the provisions of the Riverbend Master Plan as it pertains to resource protection. The McKenzie River is a water-quality limited watercourse and is protected by a 75-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. As a tributary to the McKenzie River, Maple Island Slough is protected by a 50-foot development setback and site plan review standards when developing within 150 feet of the resource site. No additional setbacks are necessary.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	CI	MDR	PLO	TOTAL ACRES
S-17 (Maple Island Slough)	3.18	0	10.77	13.95
S-17 50-ft. Setback (Maple Island Slough)	2.83	0	1.95	4.78
Total	6.01	0	12.72	18.73
S-17 (McKenzie River)	.04	5.13	0	5.17
S-17 75-ft. Setback (McKenzie River)	.03	4.15	0	4.18
Total	.07	9.28	0	9.35
Grand Total	6.08	9.28	12.72	28.08

Site S-17 includes the McKenzie River (which is protected by a 75-foot setback) and the Maple Island Slough (which is protected by a 50-foot setback). The acreage figures below reflect the fact that most of S-17 is outside the Springfield Urban Growth Boundary. The figures include only the acreage within the UGB.

About 13.95 acres of the Maple Island Slough segment of S-17 is classified as vacant by the Lane County Assessor's Office. About 5.17 acres of the McKenzie River is classified as vacant. The vacant acreage includes portions of 8 lots. Limiting conflicting uses would allow some

development to occur within the riparian resource area where the developer could show how the essential functions of the resource area could be preserved or enhanced. A 50-foot development setback is already required for Maple Island Slough under Article 31. A 75-foot setback is required for the McKenzie River. No additional setback is proposed.

A 50-foot setback on the Maple Island Slough would affect 4.78 acres of vacant industrial and public land. A 75-foot setback on the McKenzie River would affect 4.18 acres of vacant industrial and residential land. The affect of the setbacks on buildable land could be reduced by aligning development such that yards and other open space are within the setbacks. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

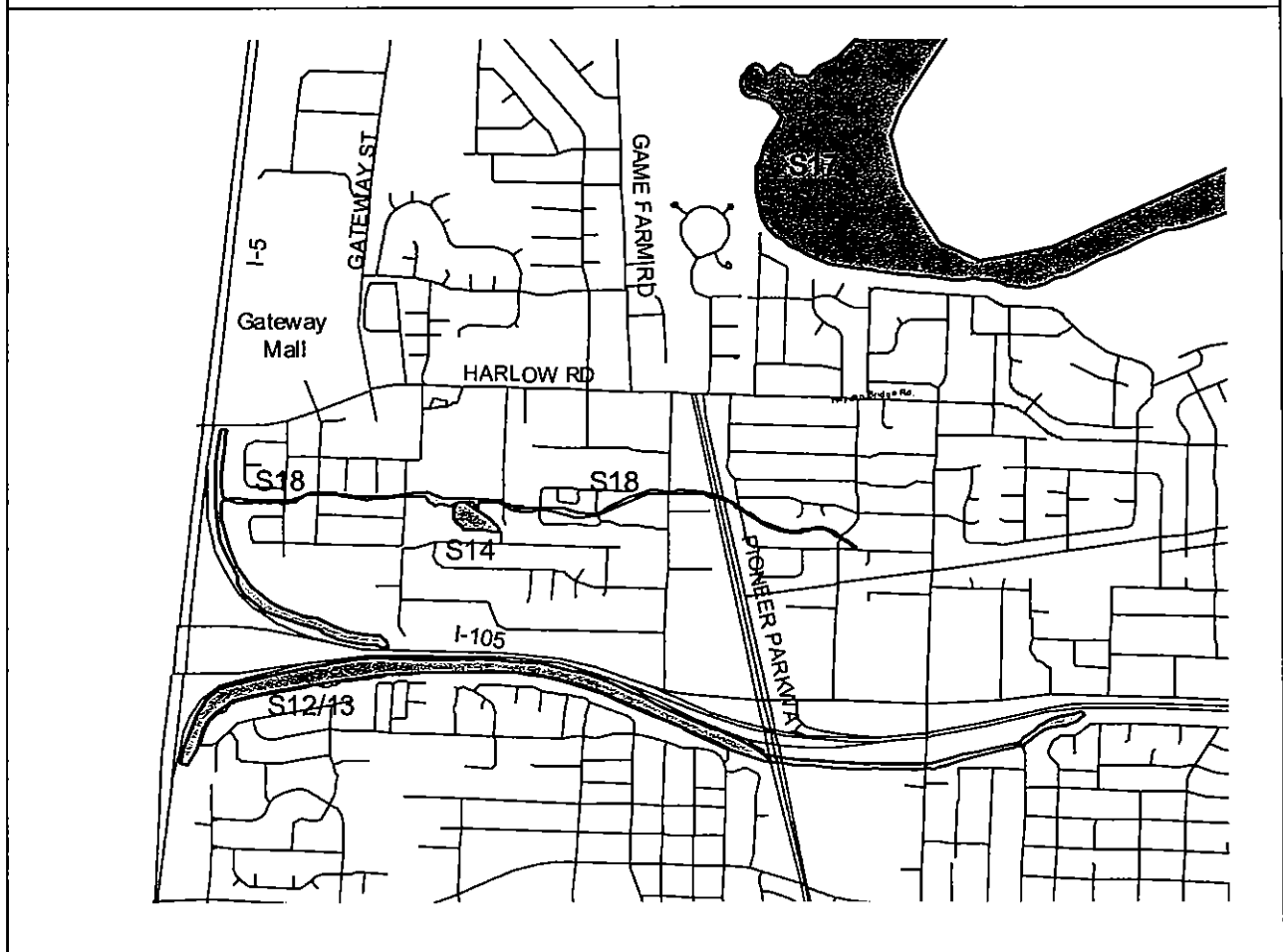
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The resource, S-17 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. The 50 and 75-foot development setbacks on S-17 are required under stormwater provisions of the Springfield Development Code, and thus the 9.35 acre impact of the combined setbacks is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S18 SCS Channel #6	Yes (M27)	7.51	22-23 Moderate Quality Resource Site	Channel 6 5.8 (Poor) Channel 6- Lockhaven 6.4 (Fair)

Goal 5 Recommendation: Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics.



Description:

This two mile long waterway is located in western Springfield between I-105 and Harlow Rd. Historically it flowed from the Irving Slough across Springfield and eastern Eugene into the Willamette River. It now occupies about 7.51 acres within Springfield and flows through an area designated for low density residential development. This waterway is associated with S-14 (Guy Lee) and flows through Guy Lee Park and School.

The channel serves storm water and open space functions. It is listed on the local wetland inventory and flows almost entirely on hydric soils. It is connected to other waterways in Eugene's Willakenzie neighborhood, although it is interrupted by a piped system for a short distance. It has a relatively low WHA score (22-23), although the field biologist notes the site has restoration potential, especially in that area near Guy Lee School.

This site is similar to the many small, riparian remnants and longer, intermittent channels that are scattered throughout the metropolitan area. The steep banked ditches are generally four to eight feet wide. Reed canarygrass, rush, spikerush, and soft stem bulrush are common emergent plants within the waterways. Young willow and black cottonwood have begun to establish along the top of the banks. This and other metropolitan channels remain connected to the greater hydrological system, although the channels themselves may have become intermittent due to piping under streets and through portions of some neighborhoods.

Additional information from the *Inventory and Channel Assessment for Springfield Waterways*

Channel 6

Riparian Profile Details

- Plant communities of grass/field, then brush/shrub/scrub and dominated by invasive species were recorded most often. One each of hardwood, conifer, and non-vegetated were also recorded.
- Dominant invasive plant species: *Phalaris arundinacea* (Reed Canary-grass), *Rubus armeniacus* (Armenian Blackberry), *Festuca arundinacea* (Tall Fescue), *Holcus lanatus* (Velvet Grass), and *Hypericum perforatum* (St. John's wort).
- Co-dominant invasive plant species: *Holcus lanatus* (Velvet Grass), *Phalaris arundinacea* (Reed Canary-grass), *Phalaris aquatica* (Harding grass), and *Hedera helix* (English Ivy).
- Invasive plant species listed as present: *Rubus armeniacus* (Armenian Blackberry), *Phalaris arundinacea* (Reed Canary-grass), *Holcus lanatus* (Velvet Grass), *Phalaris aquatica* (Harding grass), *Iris pseudacorus* (Yellow flag iris), *Solanum dulcamara* (Nightshade), and *Convolvulus sp.* (Morning Glory/Bindweed).
- Others invasive plant species observed in the system: *Dipsacus fullonum* (Teasel), *Buddleia davidii* (Butterfly bush), and many unidentified ornamentals.
- Bullfrogs and nutria were listed as invasive animals/amphibian observed.
- Burrowing, undercutting of banks, tunneling and eating of vegetation to the point of bare banks were recorded as damage by invasive animals/amphibian.
- A Pacific green tree-frog, small fish, ducks, and Belted Kingfishers were recorded for wildlife observed.
- Nutria scat was recorded as wildlife evidence.
- *Myosotis laxa* (small-flowered forget-me-nots), *Rorippa curisiliqua* (Curve-pod yellowcress) and *Sparganium emerum* (Simple-stem Bur-reed) were recorded for seed collection.
- Riparian buffer enhancement and neighborhood education were recorded most often for project opportunities. Bank stability was also recorded.

Channel Assessment Scoring and Overall Health Rating Details

Averages for the system are listed below. Criteria averages were derived by adding each criteria score together and dividing it by the number of reaches. Overall health rating averages were derived by adding each health rating for each reach together then dividing it by the number of reaches.

Scored Criteria	Criteria Averages on a Scale of 1 to 10
Channel Condition	1.9
Water Appearance	5.8
Nutrient Enrichment	6.4
Bank Stability	7.5
Canopy Density/Cover	2.0
Invasive Damage – P	5.3
Invasive Damage – A/A	7.9
Waste Presence	9.8
Barriers to Fish (SBW)	0 N/A
Insect/Invert Habitat (SBW)	0 N/A
In-stream Fish Cover (SBW)	0 N/A
Average Overall Health Rating	5.8 = Poor

Resource and Impact Area Summary

Resource Acreage:	7.51
Impact Area Acreage:	52.29
Combined Resource and Impact Area:	59.80
Vacant Acres within the Combined Area:	11.52
Number of Parcels Affected:	164
Combined Parcel Acreage:	100.91

Conflicting Uses by Acre and Zoning District

SITE ID	HDR	LDR	LMI	MDR	PLO	TOTAL ACRES
S-18	0	3.31	2.94	.13	1.13	7.51
S-18 Impact Area	.34	38.24	6.63	.98	5.94	52.29
Total	.34	41.71	9.57	1.11	7.07	59.8

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	HDR	LDR	LMI	MDR	PLO	TOTAL ACRES
S-18	0	1.84	0	.13	.28	2.25
S-18 Impact Area	0	6.65	0	.98	1.64	9.27
Total	0	8.49	0	1.11	1.92	11.52

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **No**

Site Specific ESEE Analysis for S-18

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

The channel serves an important storm water management and conveyance function for much of northwest Springfield. Its hydrologic control function is intact. It is highly disturbed and largely surrounded by development but provides habitat for some wildlife species. Fully allowing conflicting uses would mean the loss of the open system for storm water management and for what habitat functions that it provides.

Social Consequences

S-18 is not aesthetically pleasing, but it has high potential for restoration and has potential for educational use. It provides some recreational opportunities. The Guy Lee School portion of S-18 is proposed for a school/park project by Willamalane Parks and Recreation District's Comprehensive Plan.

Economic Consequences

Fully protecting S-18 would mean the loss of about 11.52 vacant acres of combined resource and impact area land. About 5.38 acres of this vacant land is owned by the school district and Willamalane Parks and Recreation District.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	LDR	MDR	PLO	TOTAL ACRES
S-18	1.84	.13	.28	2.25
S-18 25-ft. Setback	1.46	.22	.28	1.96
Total	3.3	.35	.56	4.21

About 2.25 acres of S-18 is classified as vacant by the Lane County Assessor’s Office. The vacant acreage includes portions of 10 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the resource area could be preserved or enhanced. A 25-foot development setback is recommended.

A 25-foot setback would affect 1.96 acres of vacant residential and public land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space that is within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

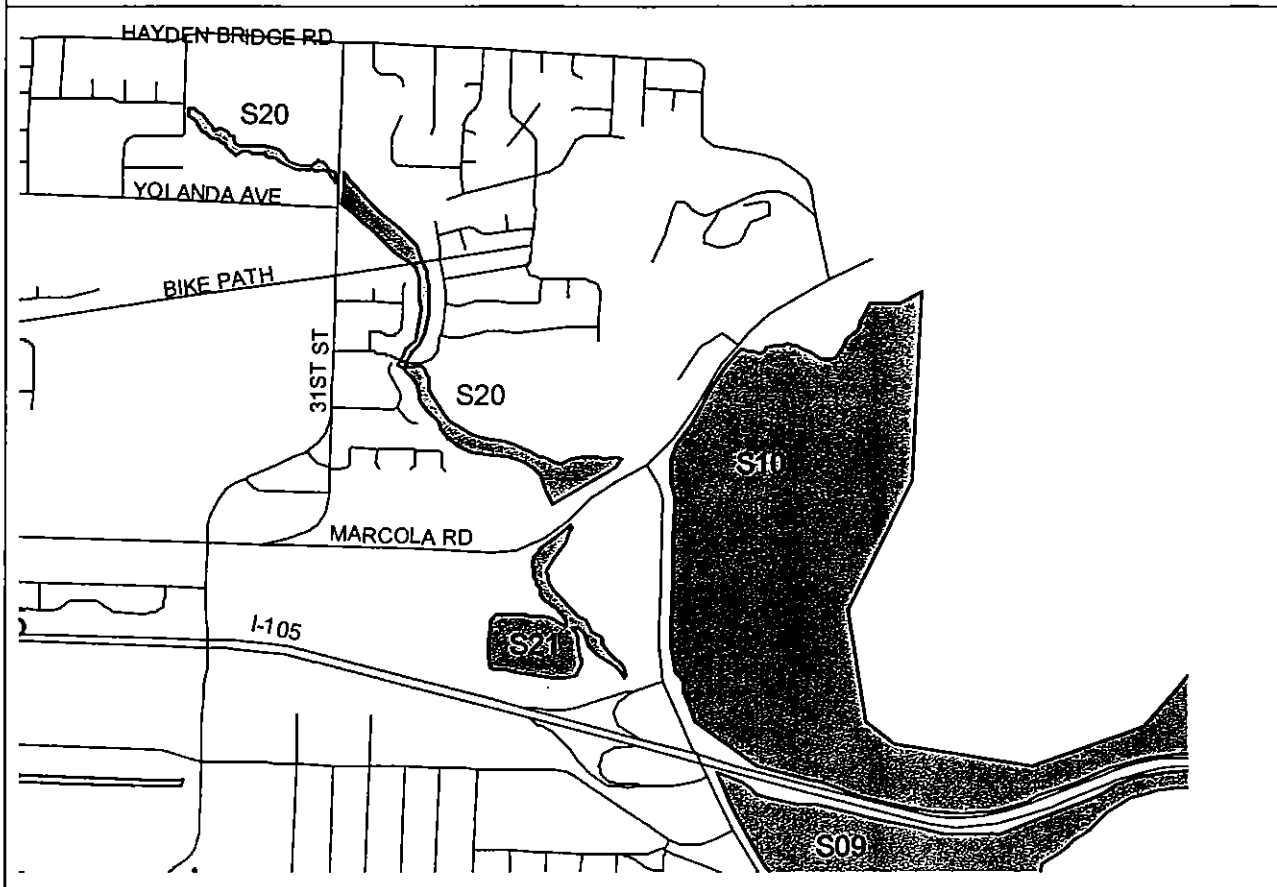
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The wetland, S-18 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. As mentioned above, the 25-foot development setback may affect about 1.96 acres, however this area can be incorporated into the overall development without a significant loss of buildable area.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S20 Irving Slough North	Locally Significant Wetlands (M16a-c) M16a-High Quality M16b Moderate Quality M16c Moderate Quality	14.71	67 High Quality Resource Site	Irving Slough 5.9 (Poor)

Goal 5 Recommendation: Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics.



Description:

This 14.71 acre site includes a riparian slough and wetland area (M16a-c) on the south side of Moe Mt. The site is an important source of water and food for wildlife. Structural diversity, quantity, and density of vegetation is high, with some interspersed snags. Black cottonwood, Oregon ash, red alder, and bigleaf maple are the dominant tree species with some western red

cedar. The site provides feeding, roosting, and nesting habitat for a variety of bird, mammal, and herptile species.

The slough is part of Springfield’s storm water management system as described in the West Springfield Drainage Master Plan. Proximity to the McKenzie River and other upland sites (e.g., Vitus Butte, and Moe Mt.) enhance the interspersed value and wildlife use of this site.

Additional information from the *Inventory and Channel Assessment Report for Springfield Waterways*

Irving Slough (North and South)

Riparian Profile Details

- Plant community of mostly hardwoods, then dominated by invasive species and grass/field.
- Dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry) and *Solanum dulcamara* (Nightshade).
- Co-dominant invasive plant species: *Phalaris arundinacea* (Reed Canary-grass), *Rubus armeniacus* (Armenian Blackberry), *Solanum dulcamara* (Nightshade), and *Hedera helix* (English Ivy).
- Invasive plant species listed as present: *Holcus lanatus* (Velvet Grass), *Dipsacus fullonum* (Teasel), *Solanum dulcamara* (Nightshade), *Hedera helix* (English Ivy), and *Phalaris arundinacea* (Reed Canary-grass).
- Others invasive plant species observed in the system: *Mentha pulegium* (Penny Royal), *Phalaris aquatica* (Harding grass), *Convolvulus sp.* (Morning Glory/Bindweed), and *Buddleia davidii* (Butterfly Bush).
- Nutria and bullfrogs were recorded as invasive animals/amphibian.
- Tunneling, undercutting of banks and stripping of vegetation were recorded as damage by invasive animals/amphibian.
- Minnows, carp, ducks, geese, Blue Heron and Bluegill were recorded as other wildlife observed.
- Deer scat was recorded for wildlife evidence.
- No plant species were identified for seed collection.
- Riparian buffer enhancement, neighborhood education and bank stabilization were recorded for project opportunities.

Channel Assessment Scoring and Overall Health Rating Details

Averages for the system are listed below. Criteria averages were derived by adding each criteria score together and dividing it by the number of reaches. Overall health rating averages were derived by adding the health ratings for all reaches together then dividing by the number of reaches.

Scored Criteria	Criteria Averages on a Scale of 1 to 10
Channel Condition	3.4
Water Appearance	7.6

Nutrient Enrichment	7.5
Bank Stability	6.0
Canopy Density/Cover	4.0
Invasive Damage – P	2.9
Invasive Damage – A/A	8.8
Waste Presence	9.2
Barriers to Fish (SBW)	7.4
Insect/Invert Habitat (SBW)	5.6
In-stream Fish Cover (SBW)	3.5
Average Overall Health Rating	5.9 = Poor

Resource and Impact Area Summary

Resource Acreage:	14.71
Impact Area Acreage:	37.22
Combined Resource and Impact Area:	51.93
Vacant Acres within the Combined Area:	14.14
Number of Parcels Affected:	76
Combined Parcel Acreage:	143.15

Conflicting Uses by Acre and Zoning District

SITE ID	HI	LDR	LMI	PLO	TOTAL ACRES
S-20	0	12.28	2.43	0	14.71
S-20 Impact Area	.9	33.27	2.98	.07	37.22
Total	.9	45.55	5.41	.07	51.93

Conflicting Uses by Acre and Zoning District

SITE ID	HI	LDR	LMI	PLO	TOTAL ACRES
S-20	0	4.21	0	0	4.21
S-20 Impact Area	0	9.93	0	0	9.93
Total	0	14.14	0	0	14.14

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **No**

Site Specific ESEE Analysis for S-20

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

S-20 provides habitat for some wildlife species, although the fish habitat function has been degraded. The water-quality and hydrologic control functions are intact. The WHA score of 67 ranks this as a high quality resource site. The slough has high enhancement potential.

Recent residential development (Ambleside) has compromised some of the habitat value that was present when the WHA evaluation was first conducted. Fully allowing conflicting uses would mean the loss of the water quality and hydrologic control functions provided by the slough as well as the habitat values captured in the WHA.

Social Consequences

The slough is not generally appropriate for educational or recreational purposes and portions of the resource are not aesthetically pleasing. The slough is an amenity for many established residences along S-20. Fully allowing conflicting uses would mean the loss of a community water feature that has high potential for restoration.

Economic Consequences

Fully allowing conflicting uses would mean the loss of 14.14 acres of vacant residential acres within the combined resource and impact area. The hydrologic and water quality functions could be duplicated using engineered facilities, but at a high cost. Limiting conflicting uses could allow continued natural function while retaining the opportunity to develop additional residential neighborhoods within the existing urban growth boundary.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the 150-foot impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	LDR	TOTAL ACRES
S-20	4.21	4.21
S-20 25-ft. Setback	1.73	1.73
Total	5.94	5.94

About 4.21 acres of S-20 is classified as vacant by the Lane County Assessor’s Office. The vacant acreage includes portions of 6 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the resource area could be preserved or enhanced. A 25-foot development setback is recommended.

A 25-foot setback would affect 1.73 acres of vacant residential land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space that is within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

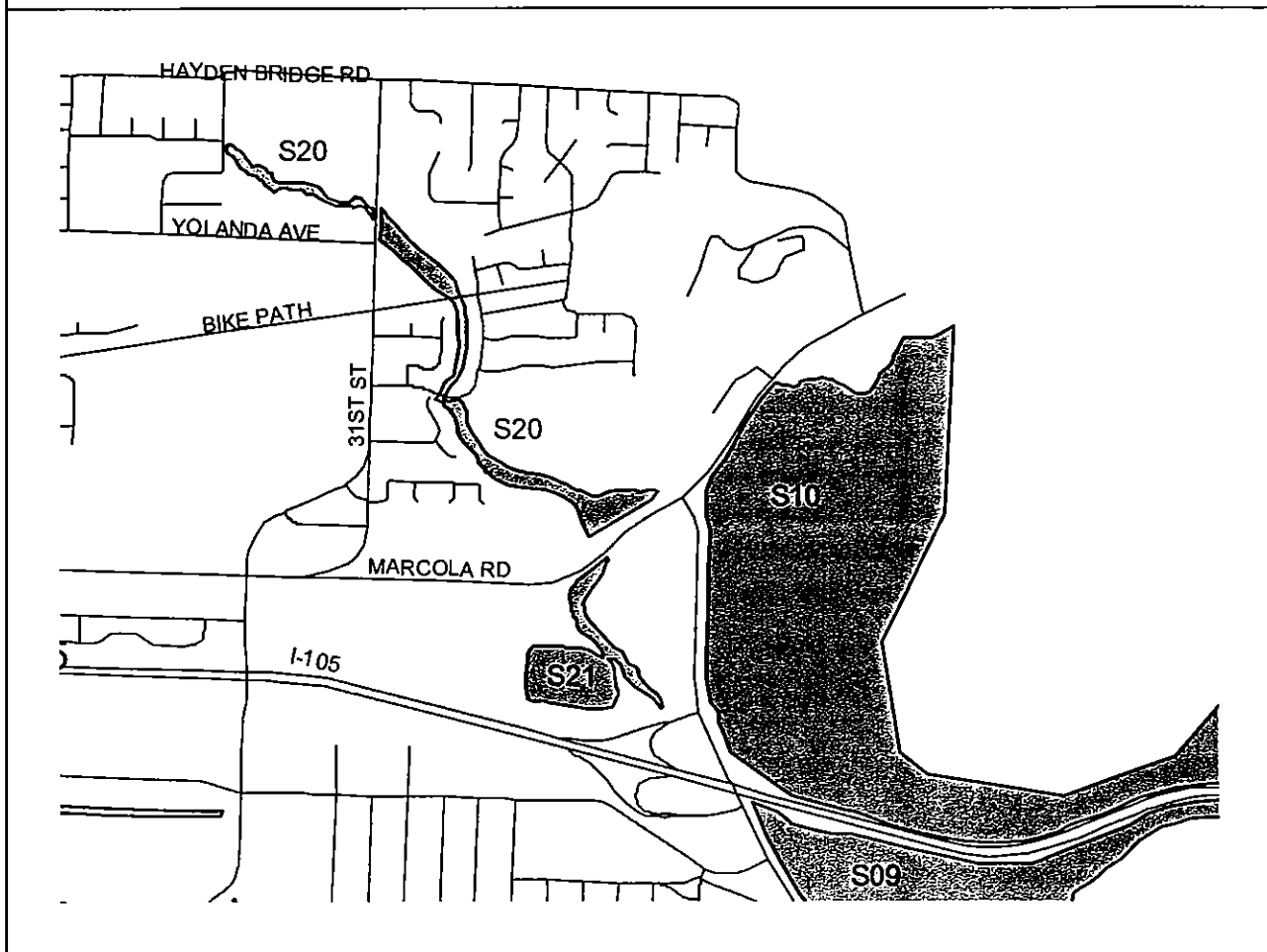
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The wetland, S-20 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. As mentioned above, the 25-foot development setback may affect about 1.73 acres, however this area can be incorporated into the overall development without a significant loss of buildable area.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S21 South Irving Slough and Pond	Yes (M16c)	11.86	47 High Quality Resource Site	Irving Slough (North and South) 5.9 (Poor)

Goal 5 Recommendation: Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics. The documented presence of a state and federally listed specie requires coordination with the Oregon Department of Fish and Wildlife to determine what (if any) additional measures may be needed.



Description:

This 11.86 acre site is the southern end of Irving Slough, between Marcola Road and I-105. The site includes a seven acre pond. This site is composed of a small pond and riparian channel with some aquatic plant growth. Vegetation around the pond is sparse in some areas with a few pockets of black cottonwood, willow, and Himalayan blackberry. The banks of the pond are

eroding. The adjacent riparian channel has steep banks and is vegetated primarily by exotic (introduced) plant species. The riparian channel connects to a high quality riparian channel and adjacent upland forest (Moe Mt.) enhancing its interspersed value.

The slough is part of Springfield’s storm drainage system as shown in the West Springfield Drainage Master Plan. The slough passes between several industrial uses, then flows into a culvert which passes under the highway.

Additional information from the *Inventory and Channel Assessment for Springfield Waterways*

See S20-Irving Slough (North and South) or M16a-c

Resource and Impact Area Summary

Resource Acreage:	11.86
Impact Area Acreage:	17.08
Combined Resource and Impact Area:	28.94
Vacant Acres within the Combined Area:	7.11
Number of Parcels Affected:	18
Combined Parcel Acreage:	58.20

Conflicting Uses by Acre and Zoning District

SITE ID	HI	TOTAL ACRES
S-21	11.86	11.86
S-21 Impact Area	17.08	17.08
Total	28.94	28.94

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	HI	TOTAL ACRES
S-21	2.81	2.81
S-21 Impact Area	4.3	4.3
Total	7.11	7.11

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **No**

Site Specific ESEE Analysis for S-21

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

The channel and pond provide habitat for some wildlife species. The site is documented as providing habitat for a state and federally listed specie. The water quality and fish habitat function is degraded. S-21's hydrologic control function is intact. Interspersion with other natural areas is high due to the proximity with the McKenzie River and other riparian corridors. Fully allowing conflicting uses would mean the loss of habitat for the listed specie, as well as the hydrologic control function that S-21 provides.

Social Consequences

S-21 is located within an established industrial area that is mostly developed. The resource is not appropriate for educational use. The Willamalane Parks and Recreation District's Comprehensive Plan shows S-21 as a location for a proposed off-street multi-use path. The pond was used for jet-ski races in the early 90's. It is considered moderately pleasing in appearance.

Economic Consequences

Fully protecting S-21 would mean the loss of 7.11 vacant acres of combined resource and impact area lands for industrial development. Additional land could be lost if steps taken to protect the listed specie require additional setbacks.

Allowing development to degrade the hydrologic control function that the slough and pond provide would be expensive to replace with engineered facilities. The pond and slough have a high potential for enhancement. Enhancement of the pond could create an amenity for future industrial development adjacent to the resource. Fully allowing conflicting uses could mean the loss of this potential amenity value.

Limiting conflicting uses could preserve the habitat and values of S-21 while allowing development of portions of the vacant industrial land.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics. Coordinate with the Oregon Department of Fish and Wildlife to determine what additional measures may be needed to protect the listed specie habitat.

Existing native vegetation, including willows and cottonwoods, should be preserved. Non-invasive plants and garbage should be removed. Precautions should be taken to protect water

quality from industrial site stormwater runoff. Current and future uses of the pond should be examined to monitor impacts on water quality and bank erosion.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage and Zoning District

SITE ID	HI	TOTAL ACRES
S-21	2.81	2.81
S-21 25-ft. Setback	1.22	1.22
Total	4.03	4.03

About 2.81 acres of S-21 is classified as vacant by the Lane County Assessor's Office. The vacant acreage includes portions of 3 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the resource area could be preserved or enhanced. A 25-foot development setback is recommended.

A 25-foot setback would affect 1.22 acres of vacant industrial land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space that is within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

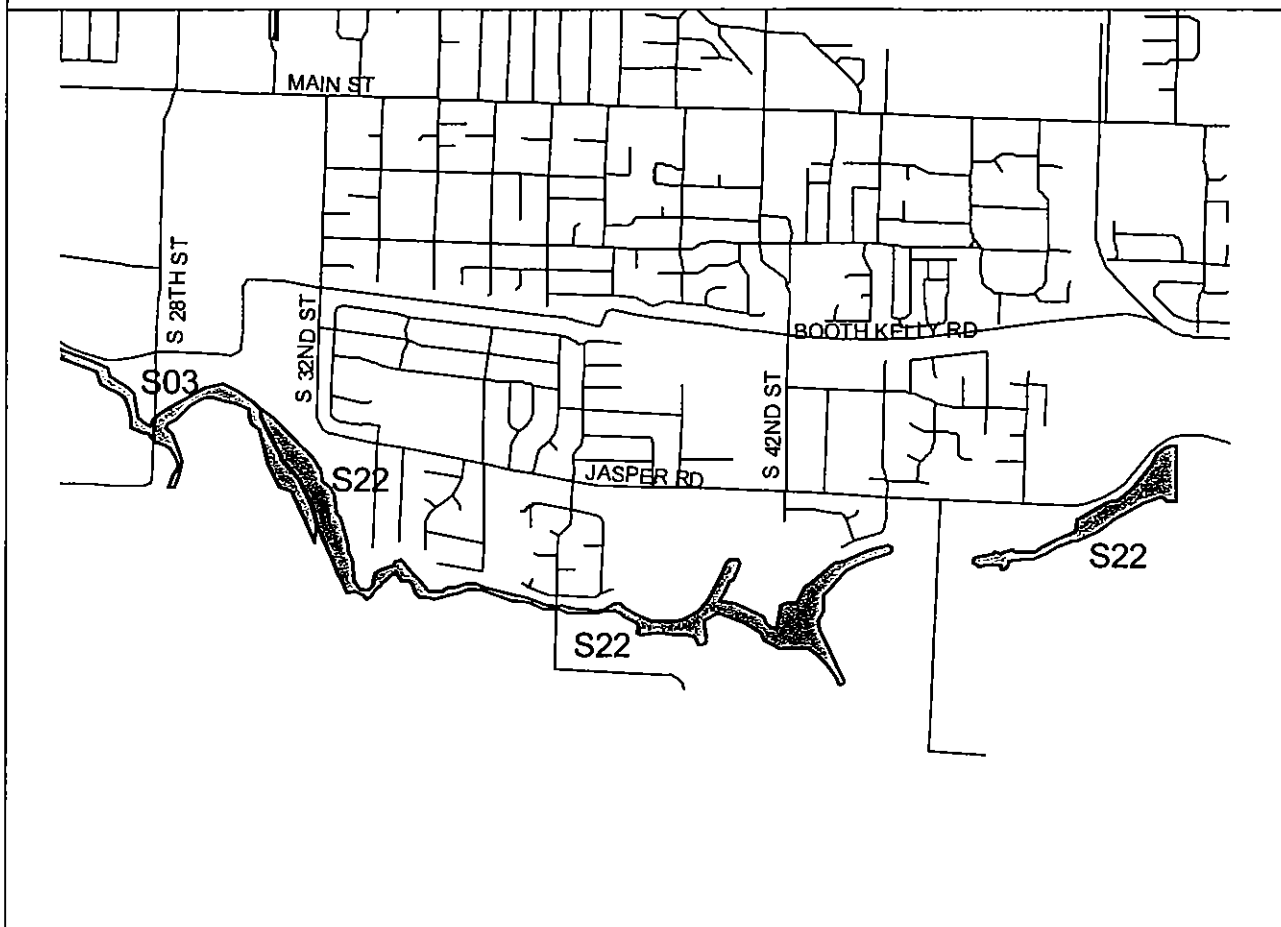
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The wetland, S-21 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. As mentioned above, the 25-foot development setback may affect about 1.22 acres, however this area can be incorporated into the overall development without a significant loss of buildable area.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S22 Jasper Road Slough	Locally Significant Wetlands (W03a) Moderate Quality Wetlands	13.28	67 High Quality Resource site	Jasper Slough 5.8 (Poor)

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. S-22 includes the Jasper Slough which is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary. The documented presence of a state and federally listed specie requires coordination with the Oregon Department of Fish and Wildlife to determine what (if any) additional measures may be needed.



Description:

Site S22 is a 27 acre resource, of which 13.28 acres lay within the Springfield’s planning jurisdiction. It is located south of Jasper Road and north of the Middle Fork Willamette River. The slough flows though agricultural land and through or adjacent to developed residential areas.

The site is a remnant of a once more widespread system of riparian corridors that existed throughout the metropolitan area. It also connects with site S03, the Springfield Mill Race, and is influenced by the Middle Fork of the Willamette River. Existing vegetation provides wildlife habitat value. Great blue heron, osprey, and kingfisher are commonly observed. The banks are generally steep and vegetated with Himalayan blackberry as an understory with black cottonwood, willow, and bigleaf maple as the dominant overstory species. The water level varies seasonally. Interspersion value is moderate, due to proximity to other riparian corridors and uplands.

Additional information from the *Inventory and Channel Assessment for Springfield Waterways*.

Jasper Slough

Riparian Profile Details

- Plant community of hardwoods and one reach that is dominated by invasive species.
- Dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry) and *Phalaris arundinacea* (Reed Canary-grass).
- Co-dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry), *Iris pseudacorus* (Yellow Flag Iris), *Phalaris arundinacea* (Reed Canary-grass), and *Convolvulus sp.* (Morning Glory/Bindweed).
- Invasive plant species listed as present: *Iris pseudacorus* (Yellow Flag Iris), *Phalaris arundinacea* (Reed Canary-grass), *Holcus lanatus* (Velvet Grass), *Rubus armeniacus* (Armenian Blackberry), *Solanum dulcamara* (Nightshade), *Phalaris aquatica* (Harding grass), *Convolvulus sp.* (Morning Glory/Bindweed), and *Dipsacus fullonum* (Teasel).
- Others invasive plant species observed in the system: *Buddleia davidii* (Butterfly bush), *Polygonum sp.* (Knotweed), and *Mentha pulegium* (Penny Royal).
- Nutria and beaver were recorded as invasive animals/amphibian observed.
- Tunneling causing undercutting, loss of vegetation and beaver cutting were recorded as damage by invasive animals/amphibian.
- Wood Duck, Green Heron, Belted Kingfisher, Mallards, minnows, deer and Great Blue Heron were recorded as other wildlife observed.
- Nutria scat and deer scat were recorded for wildlife evidence.
- *Myostis laxa* (Small-flowered forget-me-not) were recorded for seed collection.
- Riparian buffer enhancement, neighborhood education and one culvert retrofit/replacement were recorded for project opportunities.

Scoring and Overall Health Rating Details

Averages for the system are listed below. Criteria averages were derived by adding each criteria score together and dividing it by the number of reaches. Overall health rating averages were derived by adding the health ratings for all reaches together then dividing by the number of reaches.

Scored Criteria	Criteria Averages on a Scale of 1 to 10
Channel Condition	6.6
Water Appearance	6.8
Nutrient Enrichment	4.5
Bank Stability	7.0
Canopy Density/Cover	3.3
Invasive Damage – P	2.0
Invasive Damage – A/A	8.5
Waste Presence	7.5
Barriers to Fish (SBW)	7.0
Insect/Invert Habitat (SBW)	6.4
In-stream Fish Cover (SBW)	3.9
Average Overall Health Rating	5.8 = Poor

Resource and Impact Area Summary

Resource Acreage:	13.28
Impact Area Acreage:	33.71
Combined Resource and Impact Area:	46.99
Vacant Acres within the Combined Area:	13.67
Number of Parcels Affected:	68
Combined Parcel Acreage:	144.11

Conflicting Uses by Acre and Zoning District

SITE ID	LDR	MDR	TOTAL ACRES
S-22	10.4	2.88	13.28
S-22 Impact Area	30.55	3.16	33.71
Total	40.95	6.04	46.99

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	LDR	MDR	TOTAL ACRES
S-22	3.32	0	3.32
S-22 Impact Area	10.35	0	10.35
Total	13.67	0	13.67

Existing Protections:

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes.**

S22 includes the Jasper Slough. The slough is a tributary to a water quality limited watercourse (Willamette River) and is protected by a 50-foot setback and a site plan review requirement.

Site Specific ESEE Analysis for S-22

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

S-22 provides habitat for some wildlife species. The site is documented as providing habitat for a state and federally listed specie. The resource's fish habitat function is degraded, as is its water quality and hydrologic control functions. Fully allowing conflicting uses would mean the loss of habitat for the listed specie that S-22 provides.

Social Consequences

The site was judged not to be appropriate for educational uses, and is not aesthetically pleasing. S-22 has high potential for enhancement. It was also judged to have potential for providing recreational opportunities, although the Willamalane Park and Recreation District Comprehensive Plan shows no proposed uses for the site.

Fully allowing conflicting uses may negate the future use of the site for recreational purposes.

Economic Consequences

Fully protecting the resource site would mean the loss of 13.67 acres of vacant residential land within the combined resource and impact area boundaries. Additional land could be lost if steps taken to protect the listed specie require additional setbacks.

Limiting conflicting uses could reduce economic impact of lost development opportunity.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. The riparian strips along the channel are important to maintaining water quality and bank stability. Native riparian vegetation should be protected and non-native, invasive plants should be removed. Barren areas of the bank should be replanted with native plants.

S-22 includes the Jasper Slough. The western reach of Jasper Slough is listed as a tributary to a water-quality limited watercourse and as such is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary. The documented presence of a state and federally listed specie requires coordination with the Oregon Department of Fish and Wildlife to determine what (if any) additional measures may be needed.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	LDR	TOTAL ACRES
S-22	3.32	3.32
S-22 50-ft. Setback	3.13	3.13
Total	6.45	6.45

About 3.32 acres of S-22 is classified as vacant by the Lane County Assessor’s Office. The vacant acreage includes portions of 12 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the riparian corridor could be preserved or enhanced. A 50-foot development setback is already required for the riparian area under Article 31. No additional setback is proposed.

A 50-foot setback would affect 3.13 acres of vacant industrial land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space are within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

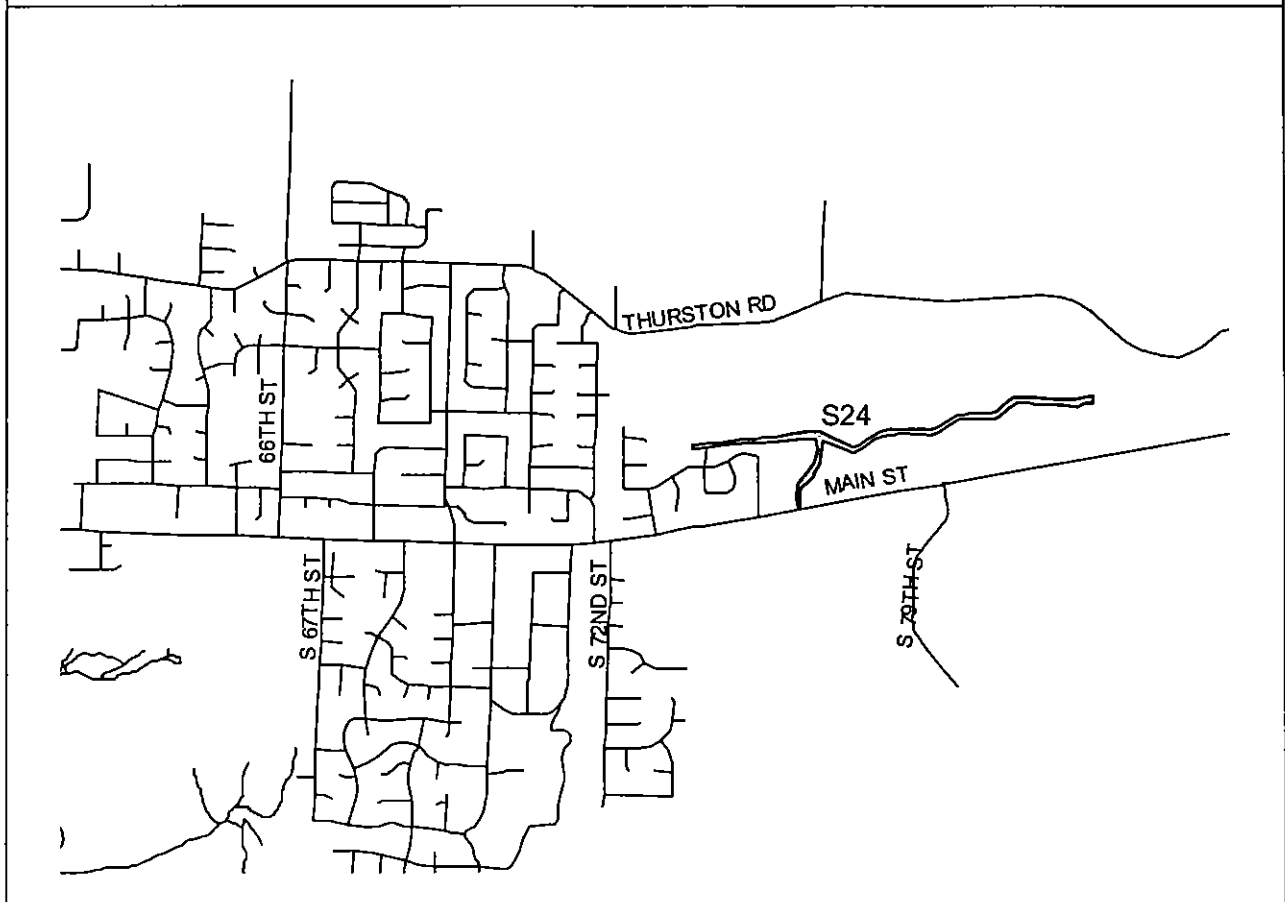
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The resource, S-22 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. A 50-foot development setback is required under stormwater provisions of the Springfield Development Code, and thus the 3.13 acre impact of the setback is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
S24 Gray Creek	Locally Significant Wetlands (M14)	6.63	55	Gray Creek 6.5 Fair
	Moderate Quality Wetlands		High Quality Resource Site	

Goal 5 Recommendation: Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics. The documented presence of a state and federally listed specie within the general vicinity requires coordination with the Oregon Department of Fish and Wildlife to determine what (if any) additional measures may be needed.



Description:

Site S24 is a 6.63 acre site in east Springfield, north of Highway 126 (Main Street) and south of the McKenzie River. Bob Artz Memorial Park and a Thurston Elementary School are adjacent to the stream. The site is the middle stretch of a stream channel (called Thurston Ditch on USGS Quad Map) which empties, via a pipe and an SCS channel into Cedar Creek. The western reach of the channel abuts residential development, while the eastern reach is outside the urban growth

boundary. It is a remnant of a once more widespread system of riparian corridors throughout the metropolitan area.

Structural and vegetative diversity are limited; however, the existing vegetation does provide some wildlife habitat value. The site is documented as providing habitat for a state and federally listed specie. The banks are generally steep and vegetated with Himalayan blackberry as an understory with black cottonwood, willow, and bigleaf maple as the dominant overstory species. Agricultural fields border both sides of the creek.

The water level varies seasonally. Interspersion value is moderate, due to proximity of other riparian corridors.

Additional information from the *Inventory and Channel Assessment Report for Springfield Waterways*

Gray Creek

Riparian Profile Details

- Plant community of mixed and one reach that is hardwood.
- Dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry).
- Co-dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry).
- Invasive plant species listed as present: *Holcus lanatus* (Velvet Grass), *Mentha pulegium* (Penny Royal), and *Lysimachia nummularia* (Moneywort).
- Others invasive plant species observed in the system: *Phalaris arundinacea* (Reed Canary-grass), *Solanum dulcamara* (Nightshade), and *Dipsacus fullonum* (Teasel).
- No invasive animals/amphibian was recorded.
- No damage by invasive animals/amphibian was recorded.
- No wildlife was observed.
- No wildlife evidence was recorded.
- No plant species were identified for seed collection.
- Riparian buffer enhancement and bank stabilization were recorded for project opportunities.

Channel Assessment Scoring and Overall Health Rating Details

Averages for the system are listed below. Criteria averages were derived by adding each criteria score together and dividing it by the number of reaches. Overall health rating averages were derived by adding the health ratings for all reaches together then dividing by the number of reaches.

Scored Criteria	Criteria Averages on a Scale of 1 to 10
Channel Condition	6.3
Water Appearance	0 dry
Nutrient Enrichment	0 dry
Bank Stability	6.0
Canopy Density/Cover	5.5
Invasive Damage – P	3.0

Invasive Damage – A/A	10.0
Waste Presence	8.8
Barriers to Fish (SBW)	9.0
Insect/Invert Habitat (SBW)	6.8
In-stream Fish Cover (SBW)	3.0
Average Overall Health Rating	6.5 = Fair

Resource and Impact Area Summary

Resource Acreage:	6.63
Impact Area Acreage:	34.67
Combined Resource and Impact Area:	41.30
Vacant Acres within the Combined Area:	9.82
Number of Parcels Affected:	28
Combined Parcel Acreage:	189.65

Conflicting Uses by Acre and Zoning District

SITE ID	LDR	PLO	TOTAL ACRES
S-24	3.52	3.11	6.63
S-24 Impact Area	19.61	15.06	34.67
Total	23.13	18.17	41.30

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	LDR	PLO	TOTAL ACRES
S-24	1.46	.01	1.47
S-24 Impact Area	1.20	.05	1.25
Total	2.66	.06	2.72

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **No**

Site Specific ESEE Analysis for S-24

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

S-24 is rated as a high quality resource site. The creek provides diverse wildlife habitat including state and federally listed specie, but it's water-quality and hydrologic control functions have been degraded. Fully allowing conflicting uses will mean the loss of the habitat function. Limiting conflicting uses could allow future development while maintaining much of the habitat function.

Social Consequences

S-24 is adjacent to or flows through large tracts of public land owned by both Willamalane Park and Recreation District and School District 19. Willamalane's Comprehensive Plan shows proposed school-park projects for the area. There are large tracts of public ownership along the creek as well. These are currently serve agricultural and residential uses. Fully allowing conflicting uses would not cause the complete loss of S-24's habitat function due to the Public Land and Open Space zoning. Development of the privately held land would mean the loss of much of the habitat function provided by those parcels. Limiting conflicting uses, especially on the privately held land that is zoned for residential development could help retain the habitat function of the site.

Economic Consequences

Fully protecting S-24 would mean the loss of 9.82 acres of vacant residential land within the combined resource and impact area boundaries. Full protection could impact the future development and use of the park and school facilities, if that protection went so far as to preclude anything more than a natural park.

Limiting conflicting uses could allow a variety of public uses as well as residential development near the resource without completely compromising it's habitat values.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses that may impact the resource. Maintain an average 25-foot development setback from the resource. Allow development within the impact area using low impact development practices that are appropriate for the soil, water table and other site characteristics. The documented presence of a state and federally listed specie requires coordination with the Oregon Department of Fish and Wildlife to determine what (if any) additional measures may be needed.

The riparian strips along the channel are important to maintaining water quality and bank stability. Native riparian vegetation should be protected and non-native, invasive plants should be removed. Barren areas of the bank should be replanted with native plants.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	LDR	PLO	TOTAL ACRES
S-24	1.46	.01	1.47
S-24 50-ft. Setback	1.20	.05	1.25
Total	2.66	2.66	2.72

About 1.47 acres of S-24 is classified as vacant by the Lane County Assessor’s Office. The vacant acreage includes portions of 4 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the riparian resource area could be preserved or enhanced. A 50-foot development setback is already required for the resource under Article 31. No additional setback is proposed.

A 50-foot setback would affect 1.25 acres of vacant residential and public land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space are within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

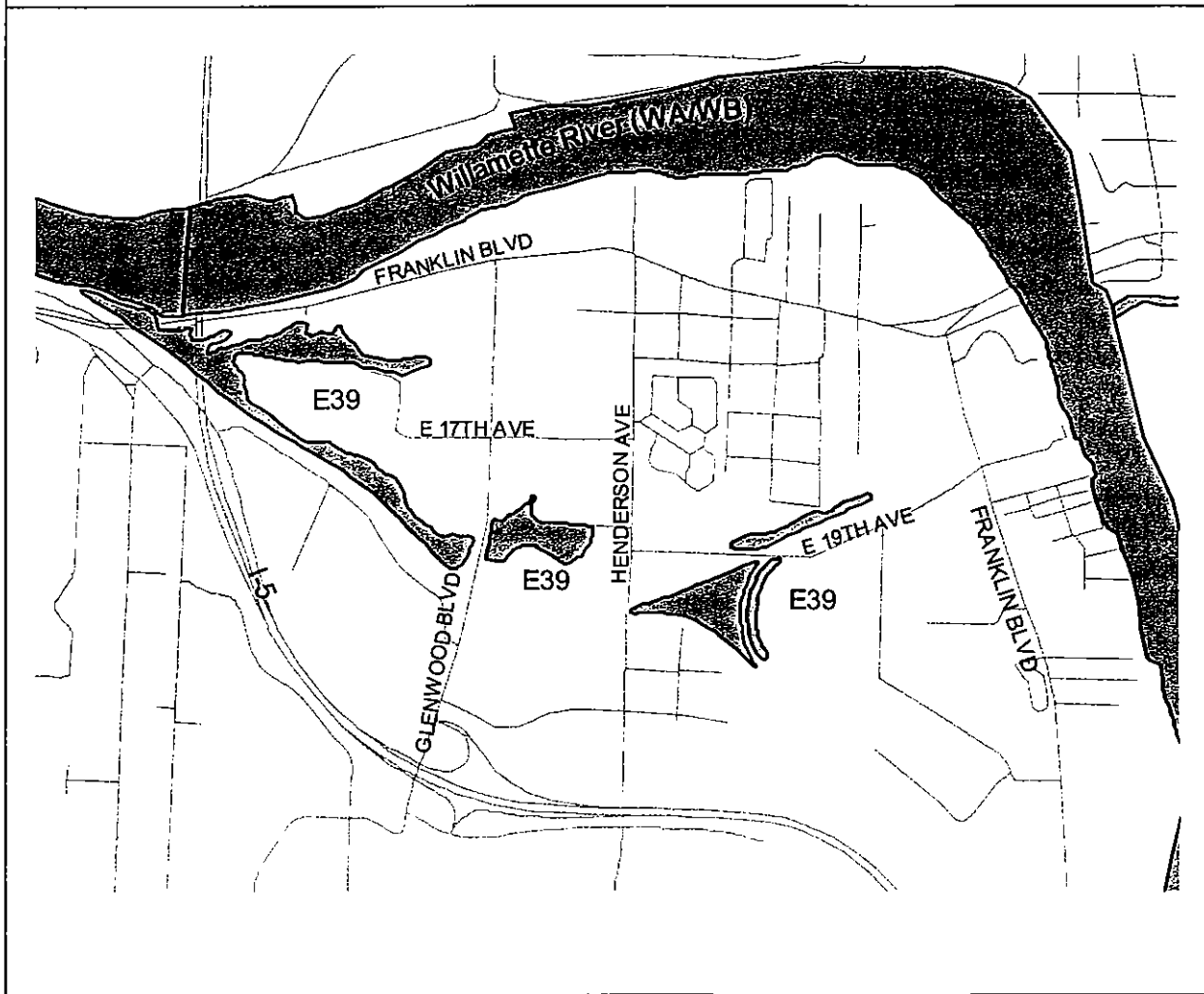
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The resource, S-24 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. A 50-foot development setback is required under stormwater provisions of the Springfield Development Code, and thus the 1.25 acre impact of the setback is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
E39 Glenwood Slough	Locally Significant Wetland (W20) High Quality Wetlands	24.51	46-47 High Quality Resource Site	Glenwood Slough 5.3 (Poor)

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the watercourse. The Glenwood Slough is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.



Description:

Site E39 consists of several sloughs, wetlands, and riparian strips near or adjacent to Interstate 5 and the Southern Pacific Railroad tracks in the Glenwood area. These sloughs are generally surrounded by industrial uses, railroad tracks and a highway. The western portion wraps around

the Glenwood solid waste transfer station. At its west end, the slough passes under the I-5 overpass. This western portion has been channelized with cement sides. The portions of the site on either side of Glenwood Boulevard are more natural and contain significant riparian vegetation including willows (*Salix* spp.), black cottonwood (*Populus trichocarpa*), sedge (*Carex* spp.), rush (*Juncus* spp.), cattails (*Typha latifolia*), and reed canarygrass (*Phalaris arundinacea*). Interspersion with other natural areas is limited by I-5 and other adjacent roads, but the site's proximity to the Willamette River may increase the number of wildlife species in the area. The Division of State Lands has determined that a portion of this site is a regulated wetland.

Additional information from the *Inventory and Channel Assessment Report for Springfield Waterways*

**Glenwood Slough
Riparian Profile Details**

- Plant community mainly consisted of hardwood and brush/shrub/scrub. There was a reach of mixed conifer/hardwood and one reach dominated by invasive species.
- Dominant invasive plant species: *Rubus armeniacus* (Armenian Blackberry) and *Phalaris arundinacea* (Reed Canary-grass).
- Co-dominant invasive plant species: *Solanum dulcamara* (Nightshade) and *Rubus armeniacus* (Armenian Blackberry).
- Invasive plant species listed as present: *Phalaris arundinacea* (Reed Canary-grass), *Phalaris aquatica* (Harding grass) and *Solanum dulcamara* (Nightshade),
- Other invasive plant species observed in the system: *Cytisus scoparius* (Scotch Broom) and *Dipsacus fullonum* (Teasel).
- Bullfrogs were recorded as invasive animals/amphibian observed.
- No damage by invasive animals/amphibian was recorded.
- No wildlife, other than the invasive bullfrogs were observed.
- No wildlife evidence was recorded.
- No seed collection was recorded for this system.
- Riparian buffer enhancement was recorded for project opportunities.

Channel Assessment Scoring and Overall Health Rating Details

Averages for the system are listed below. Criteria averages were derived by adding each criteria score together and dividing it by the number of reaches. Overall health rating averages were derived by adding the health ratings for all reaches together then dividing by the number of reaches.

Scored Criteria	Criteria Averages on a Scale of 1 to 10
Channel Condition	3.2
Water Appearance	6.0
Nutrient Enrichment	3.0
Bank Stability	5.8

Canopy Density/Cover	7.2
Invasive Damage – P	3.2
Invasive Damage – A/A	9.7
Waste Presence	5.3
Barriers to Fish (SBW)	5.7
Insect/Invert Habitat (SBW)	5.5
In-stream Fish Cover (SBW)	4.7
Average Overall Health Rating	5.3 = Poor

Resource and Impact Area Summary

Resource Acreage:	24.51
Impact Area Acreage:	56.81
Combined Resource and Impact Area:	81.32
Vacant Acres within the Combined Area:	14.29
Number of Parcels Affected:	77
Combined Parcel Acreage:	165.11

Conflicting Uses by Acre and Zoning District

SITE ID	LDR	LMI	PLO	Right-of-Way	TOTAL ACRES
E-39	.12	15.29	0	9.1	24.51
E-39 Impact Area	3.96	32.76	.23	19.86	56.81
Total	4.08	48.05	.23	28.96	81.32

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	LDR	LMI	PLO	Right-of-Way	TOTAL ACRES
E-39		4.54			4.54
E-39 Impact Area	.03	9.4	.23	.09	9.75
Total	.03	13.94	.23	.09	14.29

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes.**

E39 includes the Glenwood Slough and 19th Street Channel. The Slough and channel are tributaries to a water quality limited watercourse (Willamette River) and is protected by a 50-foot setback and a site plan review requirement.

The Glenwood Refinement Plan includes policies that give direction for environmental design affecting E-39. The Refinement Plan states, "Significant wetland areas in Glenwood shall be protected from encroachment and degradation in order to retain their important functions and values related to fish and wildlife habitat, flood control, sediment, and erosion control, water quality control, and ground water pollution control," (Policy 1, pg. 92, Environmental Element).

Site Specific ESEE Analysis for E-39

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

With a WHA score of 46-47, E-39 is rated as a high quality resource site. Much of E-39 includes an inventoried locally significant wetland (W20). The water quality and hydrologic control functions of the site are intact. The resource provides habitat for some wildlife species, although the fish habitat is degraded. Fully allowing conflicting uses would mean the loss of the functions and habitat that E-39 provides.

Social Consequences

The Glenwood Slough is not aesthetically pleasing, nor is it appropriate for educational or recreational uses. The Willamalane Park and Recreation District Comprehensive Plan shows no anticipated park facilities or natural areas near the resource site. The site has moderate potential for enhancement which may make it more of a community amenity.

Economic Consequences

Fully allowing conflicting uses would mean the loss of the water quality and hydrologic control functions of the resource. These functions could be mimicked using engineered facilities at a significant cost. Fully protecting the resource site would mean the loss of 14.29 acres of vacant industrial land within the combined resource and impact area boundaries.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses and employ low impact development practices when developing within 150 feet of the watercourse. The Glenwood Slough is protected by a 50-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	LMI	TOTAL ACRES
E-39	4.54	4.54
E-39 50-ft. Setback	2.68	2.68
Total	7.22	7.22

About 4.54 acres of E-39 is classified as vacant by the Lane County Assessor’s Office. The vacant acreage includes portions of 8 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the riparian corridor could be preserved or enhanced. A 50-foot development setback is already required for the riparian area under Article 31. No additional setback is proposed.

A 50-foot setback would affect 2.68 acres of vacant industrial land. The affect of the setback on buildable land could be reduced by aligning development such that yards and other open space are within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

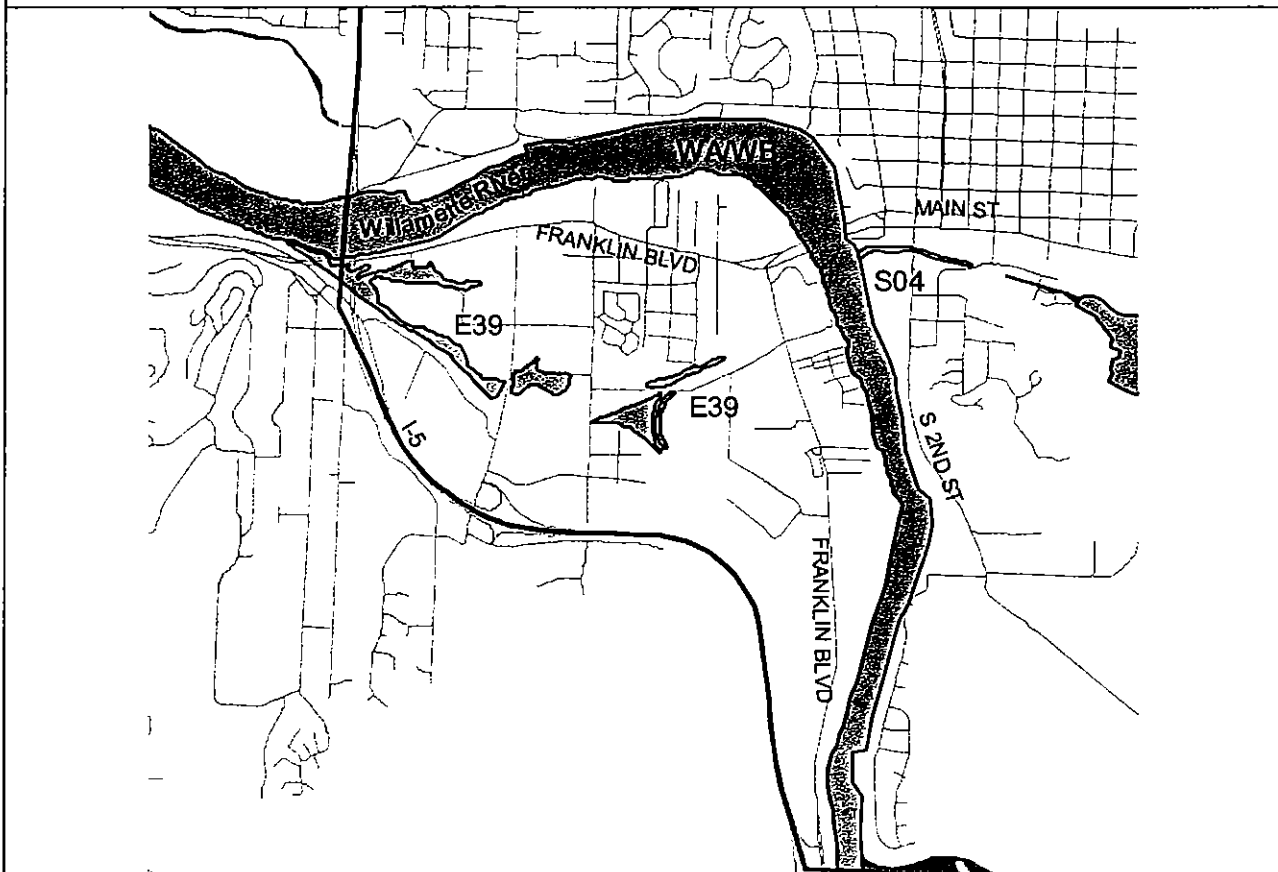
Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The resource, E-39 was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. A 50-foot development setback is required under stormwater provisions of the Springfield Development Code, and thus the 2.68 acre impact of the setback is not attributed to this report.

Site	Listed LWI	Acres	WHA Score	Springfield Waterways Channel Assessment:
WA/WB Willamette River	Locally Significant Wetlands (W04a) High Quality Wetlands	22.13 Within the UGB	Natural: 72-74, Urban: 64-66 High Quality Resource Site	Not Assessed

Goal 5 Recommendation: Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. The Willamette River (WA/WB) is a water quality limited watercourse and is protected by a 75-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary. The documented presence of a state and federally listed specie requires coordination with the Oregon Department of Fish and Wildlife and appropriate federal agencies to determine what (if any) additional measures may be needed.



Description:

The Willamette River WA (Natural) is one of the most important environmental aesthetic and cultural features of the Eugene-Springfield metropolitan area. This site includes all of the natural riparian areas along the banks of the Willamette River within the urban growth boundary. The riparian areas included within WA are wider, healthier and have a greater structural diversity

than other areas along the river. The area near the Alton Baker Park-Eastgate Woodlands is an example of this type of riparian area.

The Willamette is a major river system and it is habitat for spring Chinook salmon, which is listed as threatened under the federal ESA. The riparian vegetation along the Willamette includes black cottonwood, Oregon ash, Pacific willow (*Salix lasiandra*), willow (*Salix* spp.), creek dogwood, red alder, white alder, and bigleaf maple. Reed canarygrass, rush species (*Juncus* spp., *Scirpus* spp.) and sedge species (*Carex* spp.) occur along the waterline. Belted kingfisher, great blue heron, green-backed heron, and osprey are commonly seen fishing and perching along the River. Swallows and warbler species frequent the riparian edge in spring and summer. Shorebirds, beaver, nutria, turtles and reptile species utilize the water's edge and downed trees. The river functions as a migration route and travel corridor for many wildlife species. The Willamette River in Eugene and Springfield harbors a diverse fish community, including: cutthroat trout, rainbow trout, mountain whitefish, spring chinook salmon, chiselmouth, mountain sucker, largescale sucker, redbreast shiner, sculpin, northern pikeminnow, peamouth, sand roller, dace, largemouth bass, smallmouth bass, and common carp (Chip Andrus, Waterworks Consulting, 2000, prepared for the City of Eugene Public Wastewater Division).

The urban segments of the Willamette River (WB) have narrow strips of riparian vegetation adjacent to commercial and residential development. In some cases, development extends to the very edge of the riverbank. These areas have the same types of vegetation and wildlife as the more natural areas, only in lesser quantities. These more urban stretches are nevertheless important as wildlife habitat because of the travel corridor function of the river's edge and their function as a buffer between urban uses and the river itself. They are also important for their aesthetic value, their role in protecting riverbanks from erosion and for their role in supporting fish populations.

The Willamette River directly or indirectly (via the McKenzie) receives nearly all of the Springfield metropolitan area stormwater runoff. Riparian areas are important in part because they filter out pollutants from stormwater before they reach the river.

Resource and Impact Area Summary

Resource Acreage:	22.13
Impact Area Acreage:	72.89
Combined Resource and Impact Area:	95.02
Vacant Acres within the Combined Area:	39.79
Number of Parcels Affected:	155
Combined Parcel Acreage:	423.16

Conflicting Uses by Acre and Zoning District

SITE ID	BK	CC	GO	HI	LDR	LMI	MDR	PLO	TOTAL ACRES
WA/WB	0	2.78	.16	1.03	7.37	2.24	.16	8.39	22.13
WA/WB Impact	.08	6.76	1.37	3.09	34.28	16.48	1.51	9.32	72.89

SITE ID	BK	CC	GO	HI	LDR	LMI	MDR	PLO	TOTAL ACRES
Area									
Total	.08	9.54	1.53	4.12	41.65	18.72	1.67	17.71	95.02

Conflicting Uses by Vacant Acre and Zoning District

SITE ID	BK	CC	GO	HI	LDR	LMI	MDR	PLO	TOTAL ACRES
WA/WB	0	2.78	0	0	2.49	.86	0	6.95	13.08
WA/WB Impact Area	0	4.95	0	0	11.1	3.4	0	7.26	26.71
Total	0	7.73	0	0	13.59	4.26	0	14.21	39.79

Existing Protections

Is the site protected by minimum development setbacks and site plan review standards described in 31.240 of the Springfield Development Code? **Yes**

WA and WB are the natural and urban segments of the Willamette River. The Willamette is a water quality limited watercourse with a rate of flow of more than 1000 cubic feet per second. The river is protected by a 75-foot development setback and a site plan review requirement.

Site Specific ESEE Analysis for WA/WB

This section discusses ESEE impacts that are specific to this particular site. For a broader discussion of the ESEE consequences of allowing, limiting or prohibiting conflicting uses on wetlands, see the General ESEE Analysis found in Section 8 of this report.

Environmental Consequences

The natural segment WA, received a WHA score of 72-74. The urban segments scored 64-66. These scores make the Willamette River one of the most highly ranked resource sites within Springfield's inventory. WA/WB provides diverse wildlife habitat. It is habitat for state and federally listed fish and herptile species within Springfield's planning jurisdiction. Fully allowing conflicting uses along the length of the River would mean the loss of large segments of habitat function in areas where zoning allows for industrial, commercial and residential development. Some sections of WA/WB are zoned as public land and open space. Some park development, especially community parks that promote lawns and open area to the river edge, can degrade the river's habitat function. Where park and public lands are planned passive recreation and natural park use, the habitat function can be preserved.

Social Consequences

The Willamette River is a focal point in Springfield for recreational and cultural uses. Alton Baker, Eastgate Woodlands, Island Park and Dorris Ranch are all park sites along the Willamette

that provide recreational opportunities for Springfield residents. Fully allowing conflicting uses would mean the degradation of the resource these purposes if the segments zoned for public land and open space were developed as highly improved parks or other public uses with large areas of impervious surfaces and manicured lawns and landscaping to the river's edge.

Economic Consequences

Just as there are large tracts of public land along the river, there are also large tracts of privately held industrial, commercial and residential lands. Fully protecting these parcels from conflicting uses would mean the loss of 39.79 acres of vacant land within the resource and impact area boundaries. Limiting conflicting uses could allow development using low impact design techniques while preserving the majority of the resource functions and habitat values.

Energy Consequences

None of note.

Recommended Program for Protection

Limit conflicting uses and employ low impact development practices when developing within 150 feet of the resource site. The Willamette River (WA/WB) is a water quality limited watercourse and is protected by a 75-foot development setback and site plan review standards described in 31.240 of the Springfield Development Code. No additional setbacks are necessary. The documented presence of a state and federally listed species requires coordination with the Oregon Department of Fish and Wildlife and appropriate federal agencies to determine what (if any) additional measures may be needed.

Impact of Protection Measures on Vacant Acreage and Buildable Land Inventory

Impact on Vacant Acreage by Zoning District

SITE ID	CC	LDR	LMI	PLO	TOTAL ACRES
WA/WB	2.78	2.49	.86	6.95	13.08
WA/WB 75-ft. Setback	2.60	4.97	1.26	3.09	11.92
Total	5.38	7.46	2.12	10.04	25.00

About 13.08 acres of WA/WB is classified as vacant by the Lane County Assessor's Office. The vacant acreage includes portions of 28 lots. Limiting conflicting uses would allow some development to occur within the riparian resource area where the developer could show how the essential functions of the resource area could be preserved or enhanced. A 75-foot development setback is recommended.

A 75-foot setback would affect 11.92 acres of vacant commercial, residential, industrial and public land. The affect of the setback on buildable land could be reduced by aligning

development such that yards and other open space that is within the setback. Stormwater management facilities required for development can be placed within the setback under Article 31.240.

Employing low impact development practices within 150 feet of the riparian area could reduce the impact of nearby development on the resource. Some low impact development practices are already incorporated into the stormwater quality protection standards found in Article 31.

Reduction in the Buildable Land Inventory:

The resource, WA/WB was not counted in the inventory of buildable lands by the Eugene-Springfield Metropolitan Area Residential Land and Housing Study. Therefore the fully protecting the riparian acreage would not reduce the inventory. As mentioned above, the 75-foot development setback may affect about 11.92 acres, however this area can be incorporated into the overall development without a significant loss of buildable area.

10.0 Program Decision and Program for Protection

OAR 660-23-010 requires the consideration of three basic options for programs to carry out the results of the ESEE analysis: (1) protect the resource site; (2) allow conflicting uses completely; or (3) allow conflicting uses on a limited basis. The City may choose to apply any one of these options to any one of the inventoried wetland and riparian sites. These options are briefly defined below.

Protect the Resource Site - Conflicting Uses Prohibited

Where the ESEE consequences of *fully* protecting have been determined to be acceptable to the governing body, there may be a decision to preserve a resource site as an undisturbed natural area. Such a resource site would be completely off limits to any conflicting land use or activity - including passive recreational use. This report does not recommend full protection for any locally significant wetland or riparian resource area.

Allow Conflicting Uses Completely - Regardless of Impacts on Resource Site

Fully allowing conflicting uses means that none of the locally significant wetlands or riparian areas would be preserved. In most cases, this extreme approach is unnecessary, because locally significant wetlands can be largely preserved while allowing conflicting uses on a given parcel.

There may be a few instances where one or more of Springfield's wetland or riparian resources must be removed in order to allow a conflicting use. Such limited protection (see below) sacrifice is justified where the ESEE consequences of preserving even a portion of the resource site are so severe as to allow conflicting uses fully, which has the effect of removing the resource from the local wetland or natural resource inventories. In such cases, there would be no local protection, although the Division of State Lands and or the US Army Corps of Engineers would retain jurisdiction.

Allow Conflicting Uses on Limited Basis - Partially Protect the Resource Site

Allowing conflicting uses on a limited basis means some development would be allowed where the ESEE analysis warrants such development to balance the consequences of fully protecting a site. The goal would be to retain a majority of the resource site and its function, while allowing some conflicting development. The "limit" option may include partial, in extreme instances, full elimination of a resource area or its development setback where such action is justified by the ESEE. This report does not recommend full elimination of any resource site.

10.1 Recommended Program Decision

This report recommends protecting Springfield's wetland and riparian resource sites by adopting a policy of allowing some conflicting land uses to impact resource sites where the loss (or partial loss) of the resource area is justified by the ESEE findings. This policy of "limiting conflicting uses" may be achieved in one of two ways: first, resource areas or their recommended setbacks areas may be reduced in size; or second, certain conflicting uses may be allowed provided that

impacts from the conflicting use are reduced. The Goal 5 protection program suggested below combines these two approaches.

10.2 Protection Program Overview

As mentioned above, the ESEE analysis must consider the consequences of full resource protection, allowing conflicting uses fully, and allowing conflicting uses on a limited basis. For the ESEE analysis to be meaningful, further definition of “allowing conflicting uses on a limited basis” is required. The following section outlines a recommended approach to implementing a protection program that limits conflicting uses. The basic features of this approach include:

1. The recommended Goal 5 limited protection program is based in part of on Springfield’s 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)).
2. Establishment of 25-foot development setbacks from wetlands and riparian resource sites that are not already protected by larger development setbacks. Setbacks of 50 and 75 feet would be retained where they are already established by Springfield’s Stormwater Quality Management Program to protect water quality limited watercourses.
3. 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 many of Springfield’s resource areas by the City’s Stormwater Quality Management Program. Construction of a single-family home within an existing subdivision would not require site plan review.
4. 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.
5. 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.

6. 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.
7. 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.

10.3 Protection Program Details

The following section provides more policy detail for how a "limiting conflicting uses." 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.

Protection Standards

I. Allowed Activities within Wetland and Riparian Resource Area Boundaries

- A. Any use, sign, or structure, and the maintenance thereof, that were lawfully existing when these protection 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 well fields and the establishment of new well fields to provide drinking water. This includes accessways to service wellheads and pipe lines for distributing water.
 - 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.

II. Allowed Activities 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, access ways, trails, picnic areas, or interpretive and educational displays and overlooks, including benches and outdoor furniture;
- F. Wetland and riparian restoration.

III. Prohibited Activities within Wetland and Riparian Resource Areas

The following activities are prohibited within a wetland protection area, except as allowed in Sections I "Allowed Activities within Wetland and Riparian Resource Areas" and Section II "Allowed Activities within Wetland and Riparian Development Setback Areas":

- A. Placement of new structures or impervious surfaces.
- B. Excavation that is not related to maintenance of a drainage way (see Section I (B)(7)), 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 I and II.

IV. 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 I through III, 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 I through III, 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 I through III, 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 could be added to this list. Such mechanisms should be consistent with the purposes and requirements of this ordinance.

IV. 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.

V. 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 III "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.

VI. 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.

VII. 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.

VIII. 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.

11.0 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 11-1, 11-2, and 11-3 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 11-1. 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
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 11-2 . 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 11-3. 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
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.

11.1 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 11-4 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 11-4, 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 11-4. Vacant Residential Land within Proposed Protection Setbacks