

S573

Development Planning and Natural Features

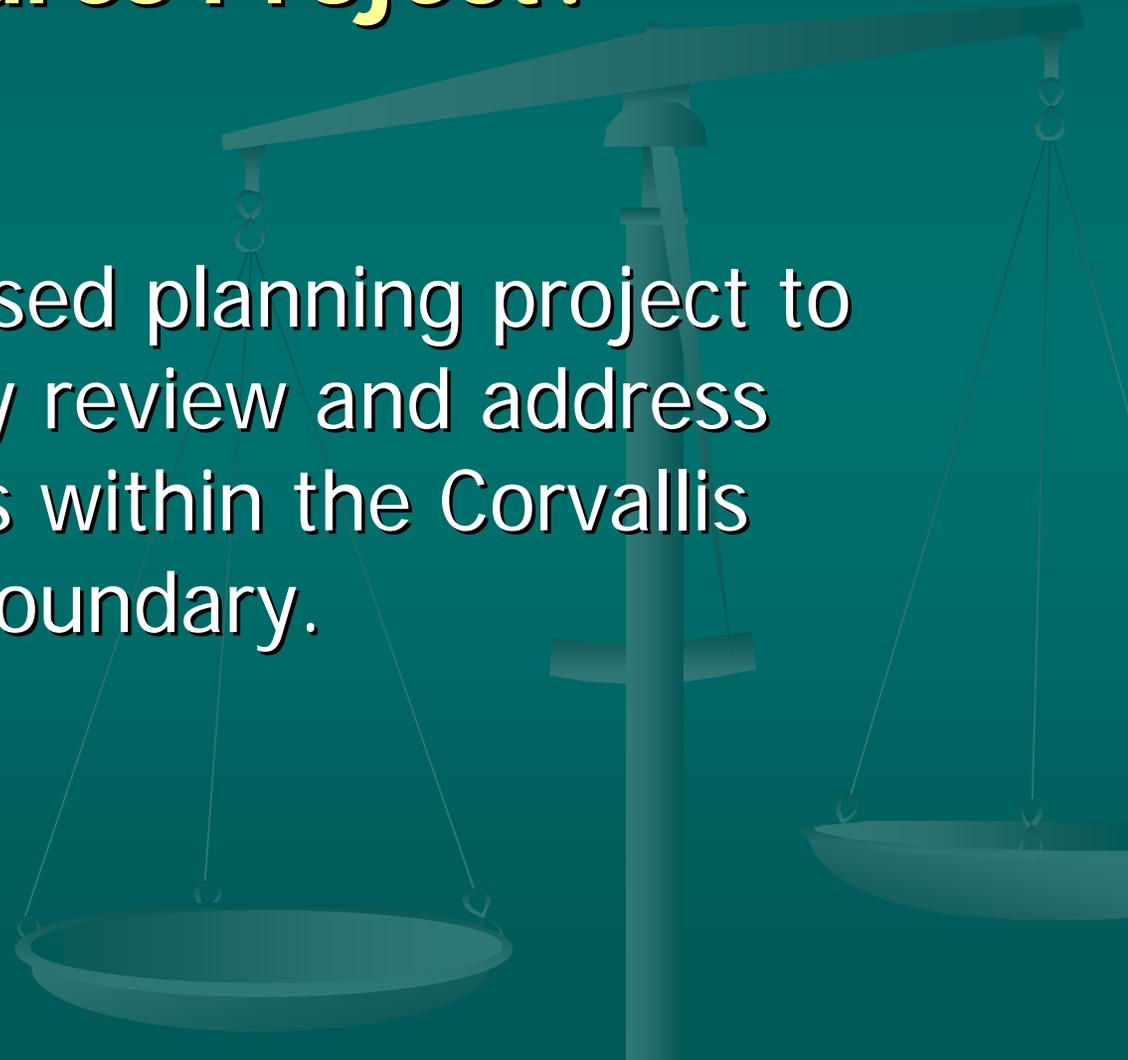
The Corvallis Natural Features Project: A Balancing Act

- Fred Towne, City of Corvallis Planning Division Manager
- Kelly Schlesener, City of Corvallis Senior Planner

APA's 2007 National Planning Conference

What was the Corvallis Natural Features Project?

- An inventory-based planning project to comprehensively review and address Natural Features within the Corvallis Urban Growth Boundary.





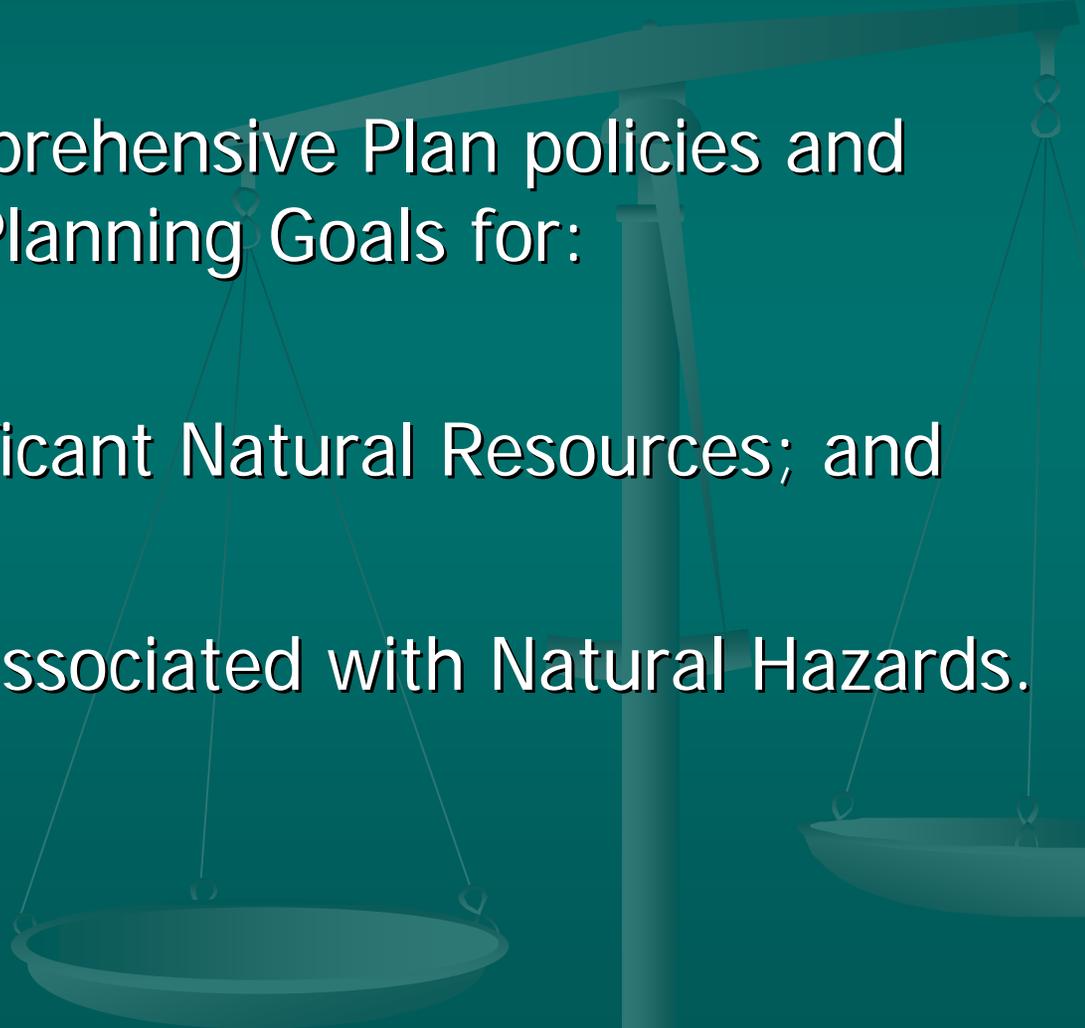




Objectives of the Natural Features Project

- Develop a scientifically-based inventory;
 - Implement adopted Comprehensive Plan policies regarding housing, economic development, Natural Features, and citizen involvement; and
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Objectives of the Natural Features Project (Cont'd)

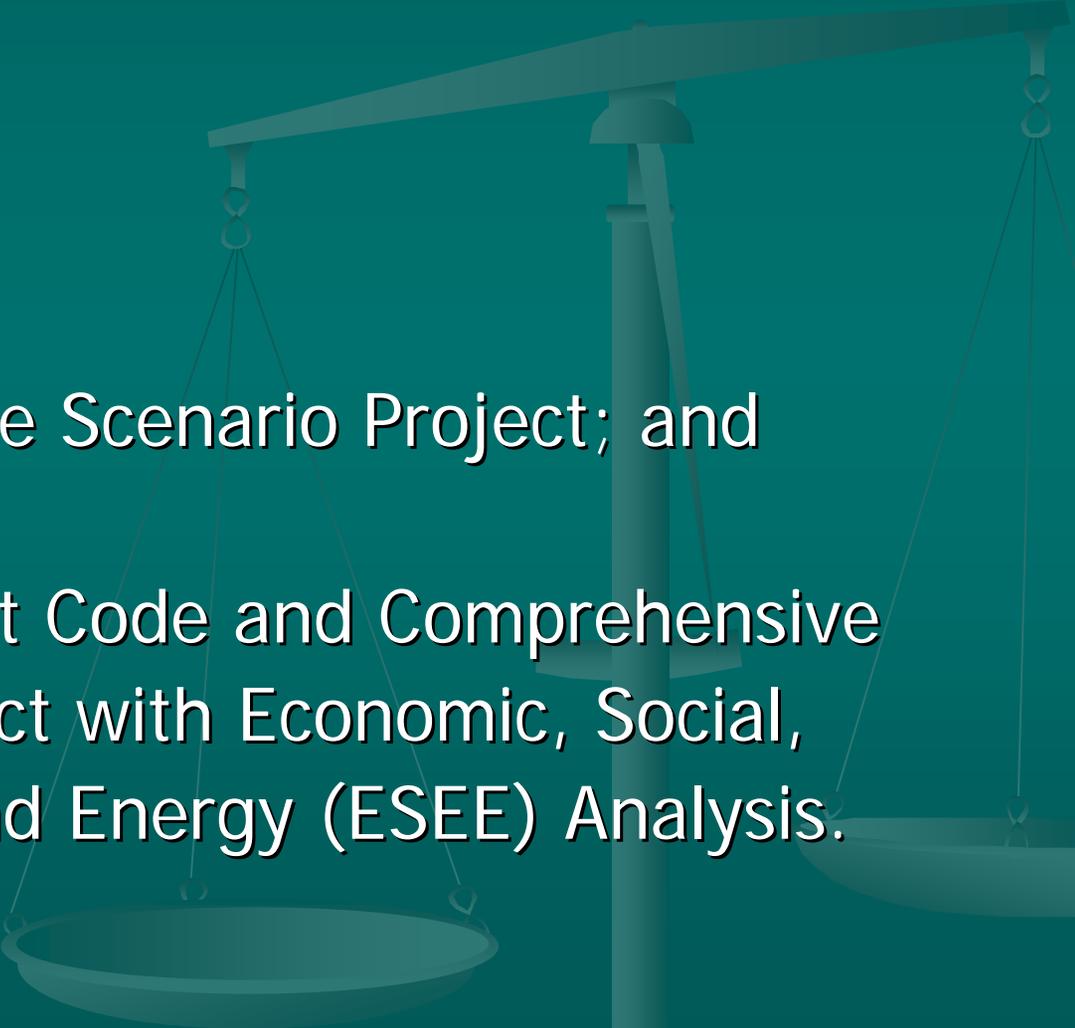
- Meet Corvallis Comprehensive Plan policies and Oregon Statewide Planning Goals for:
 1. Protecting significant Natural Resources; and
 2. Reducing risks associated with Natural Hazards.
- 







Multiple Phases (4 Years/\$1 Million)

1. Scoping Project;
 2. Inventory Project;
 3. Preferred Land Use Scenario Project; and
 4. Land Development Code and Comprehensive Plan Update Project with Economic, Social, Environmental, and Energy (ESEE) Analysis.
- 

City of Corvallis Participants

- City Council
 - Planning Commission
 - Staff
 - Consultants
 - Technical Advisory Committee (TAC)
 - Property Owners
 - Citizens
 - Peer Review Professionals
- 

Benton County Participants

- Board of Commissioners
- Planning Commission
- Staff
- Participation in TAC
- Property Owners
- Citizens



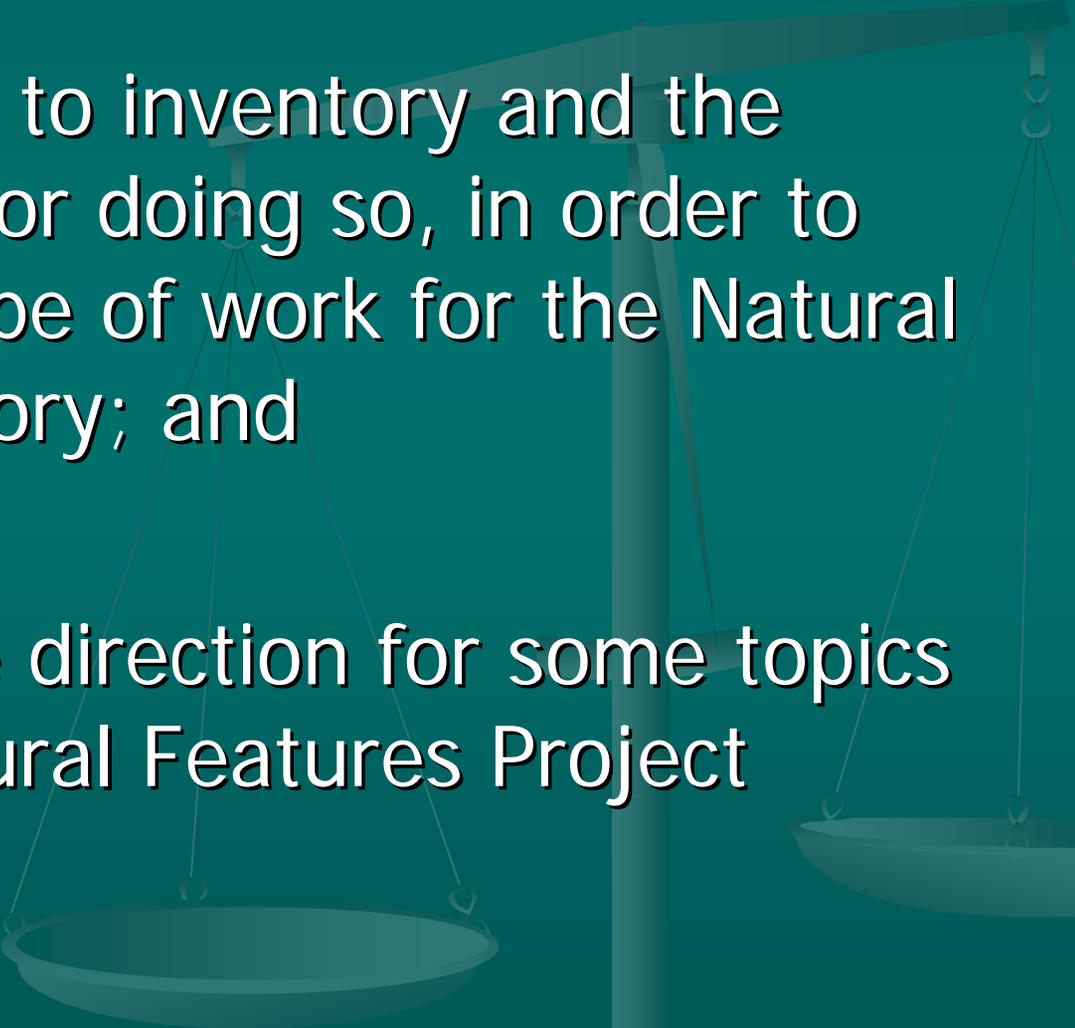
City Consolidation of Multiple Efforts, and Inclusion of on-going Interactive GIS

- **Wrapped the results of 2 other City projects into this Natural Features Project:**
 1. Storm water Master Plan; and
 2. ESA Salmon Response Plan.

Scoping Project

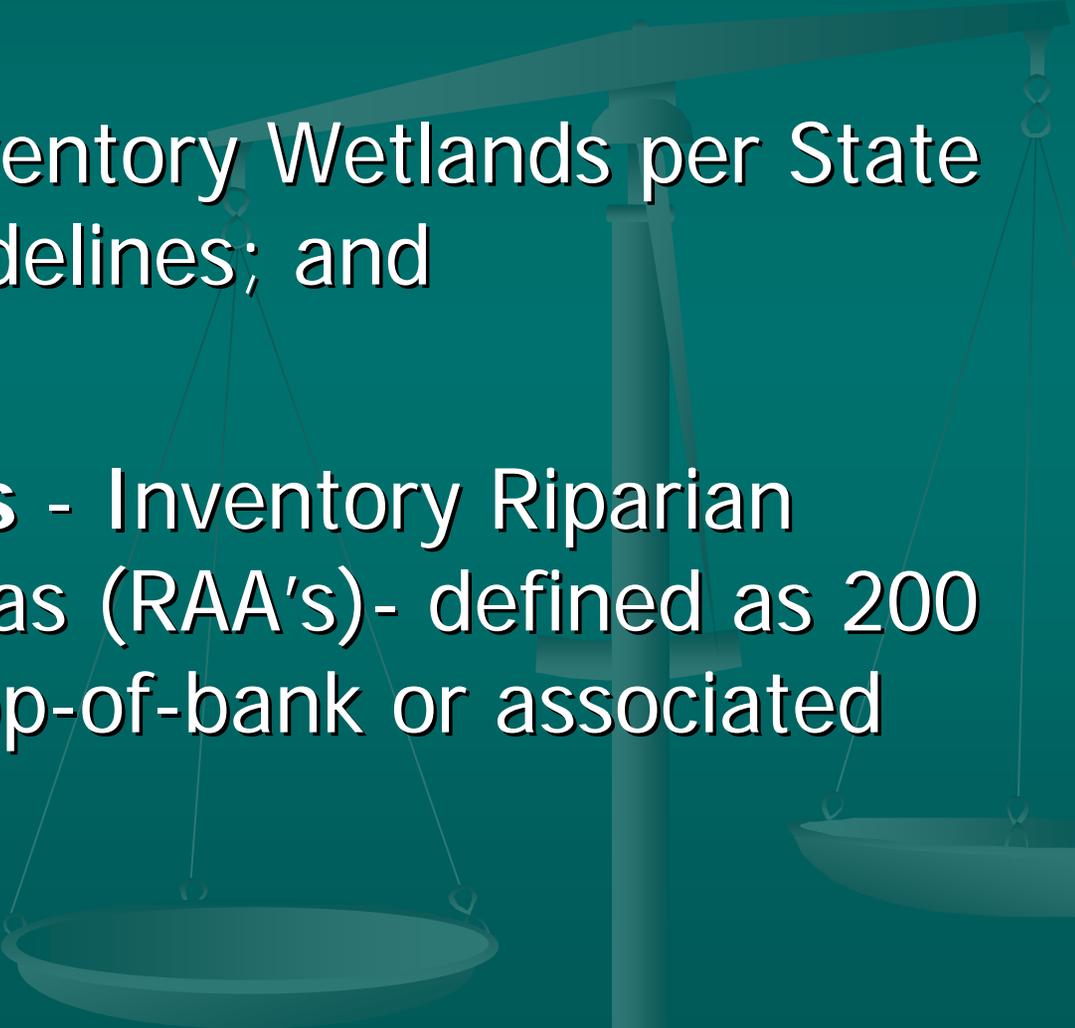


Scoping Project Purpose

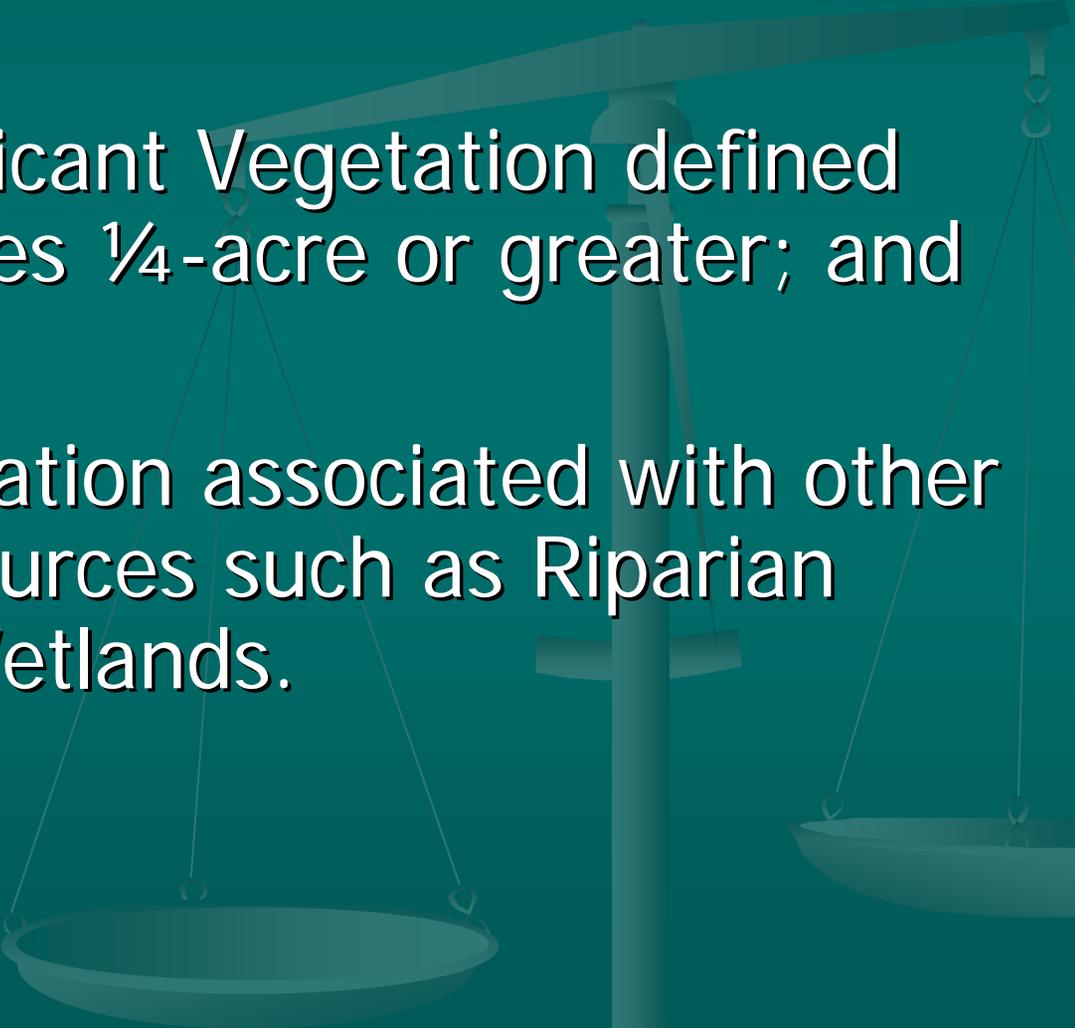
- Determine what to inventory and the methodologies for doing so, in order to develop the scope of work for the Natural Features Inventory; and
 - Provide ultimate direction for some topics early in the Natural Features Project process.
- 



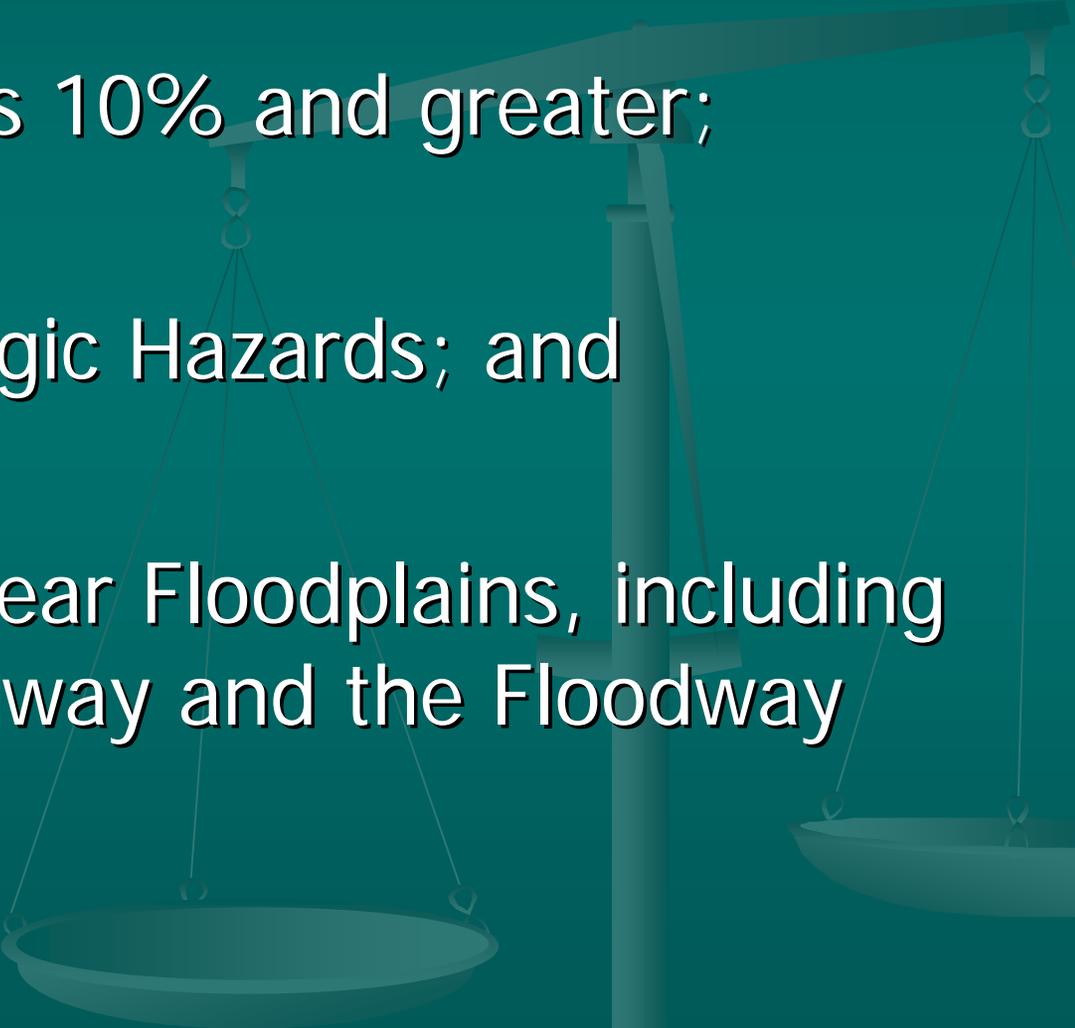
Scoping Project Determinations for Wetlands and Riparian Areas

- **Wetlands** - Inventory Wetlands per State and Federal guidelines; and
 - **Riparian Areas** - Inventory Riparian Assessment Areas (RAA's)- defined as 200 ft. from each Top-of-bank or associated Wetland edge.
- 

Scoping Project Determinations for Significant Vegetation

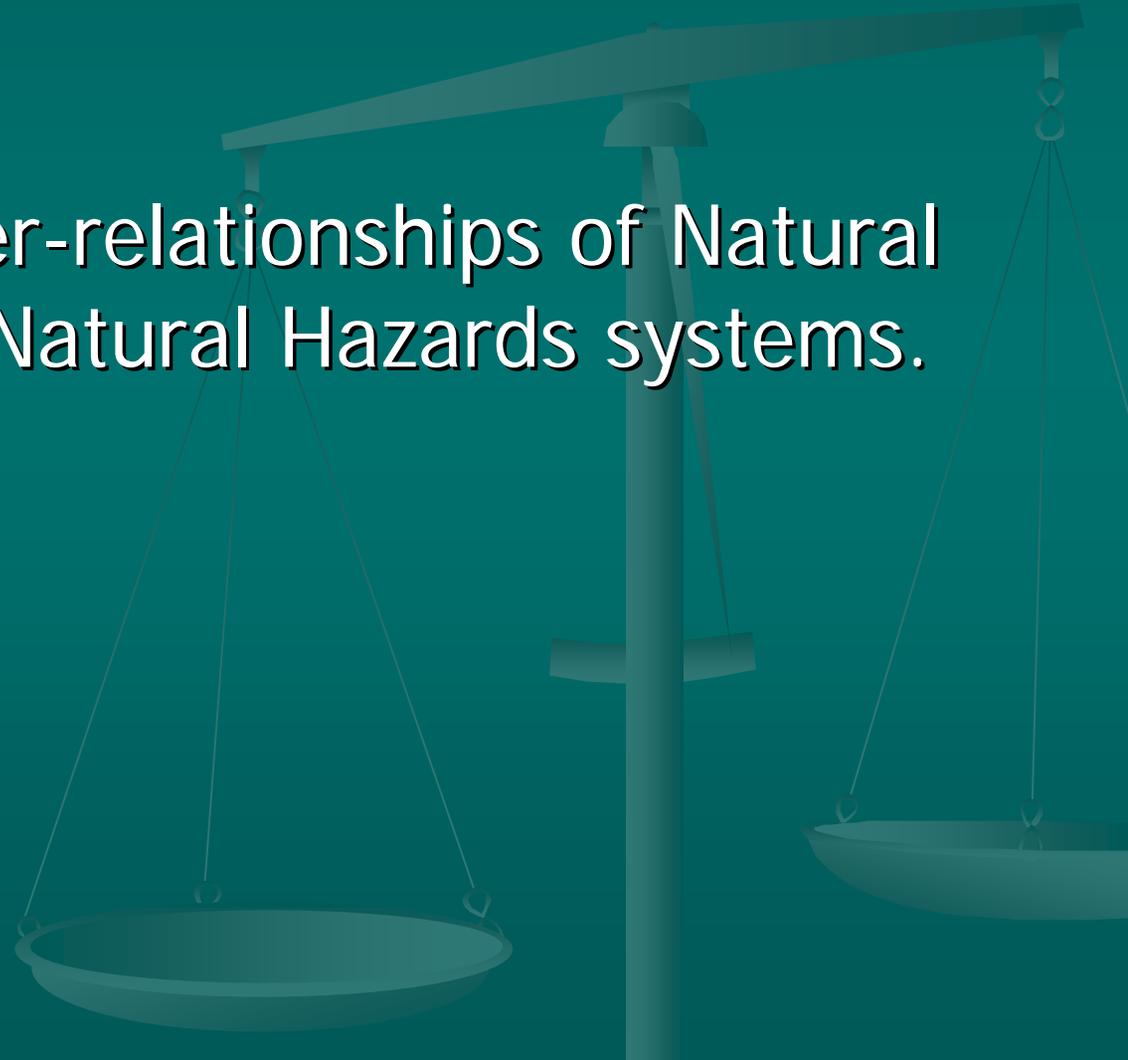
- Inventory Significant Vegetation defined as all Tree Groves $\frac{1}{4}$ -acre or greater; and
 - Inventory vegetation associated with other inventoried resources such as Riparian Corridors and Wetlands.
- 

Scoping Project Determinations for Natural Hazards

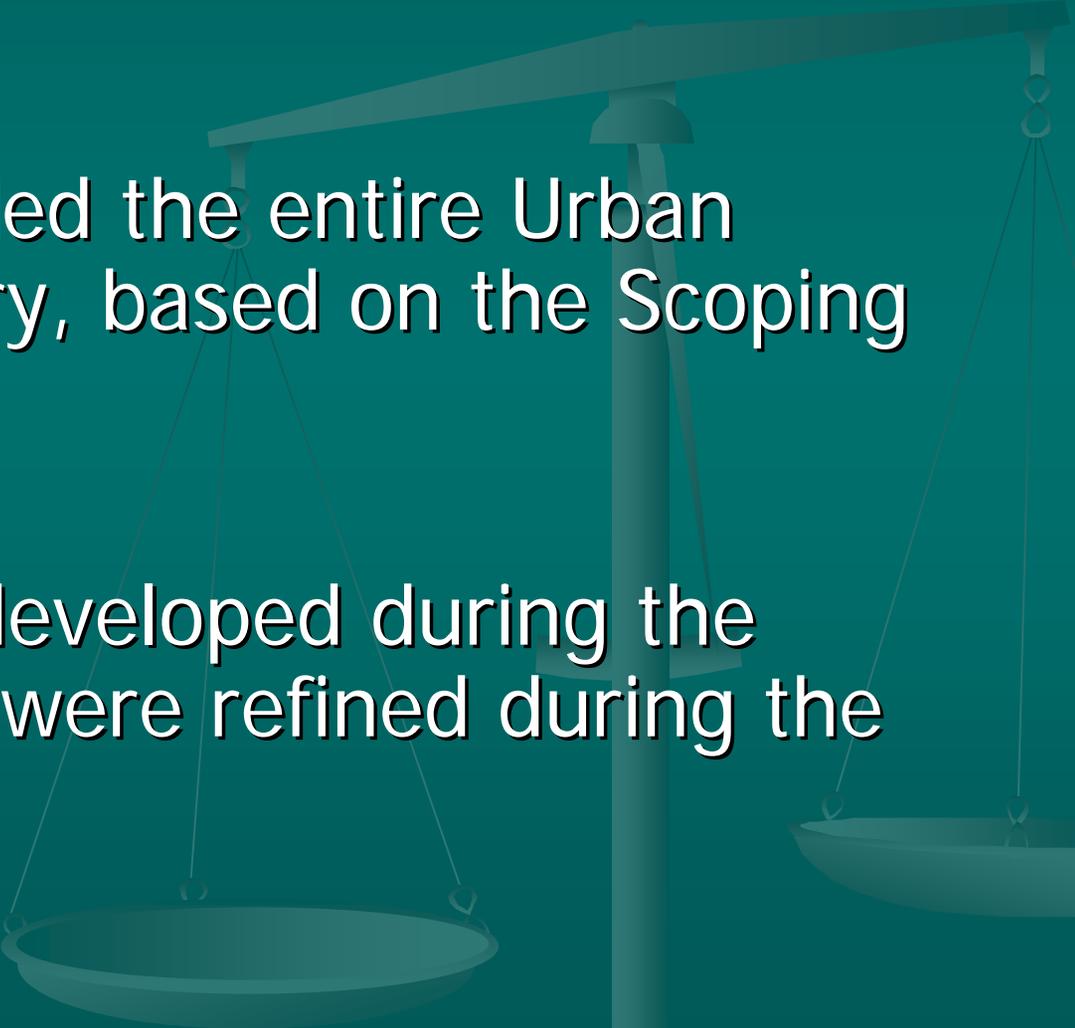
- Inventory Slopes 10% and greater;
 - Inventory Geologic Hazards; and
 - Inventory 100-year Floodplains, including the 0.2-ft. Floodway and the Floodway Fringe.
- 

Scoping Project Determinations for Systems

- Identify the inter-relationships of Natural Resources and Natural Hazards systems.



Natural Features Inventory – the Science

- Inventory included the entire Urban Growth Boundary, based on the Scoping Project; and
 - Methodologies developed during the Scoping Project were refined during the Inventory.
- 

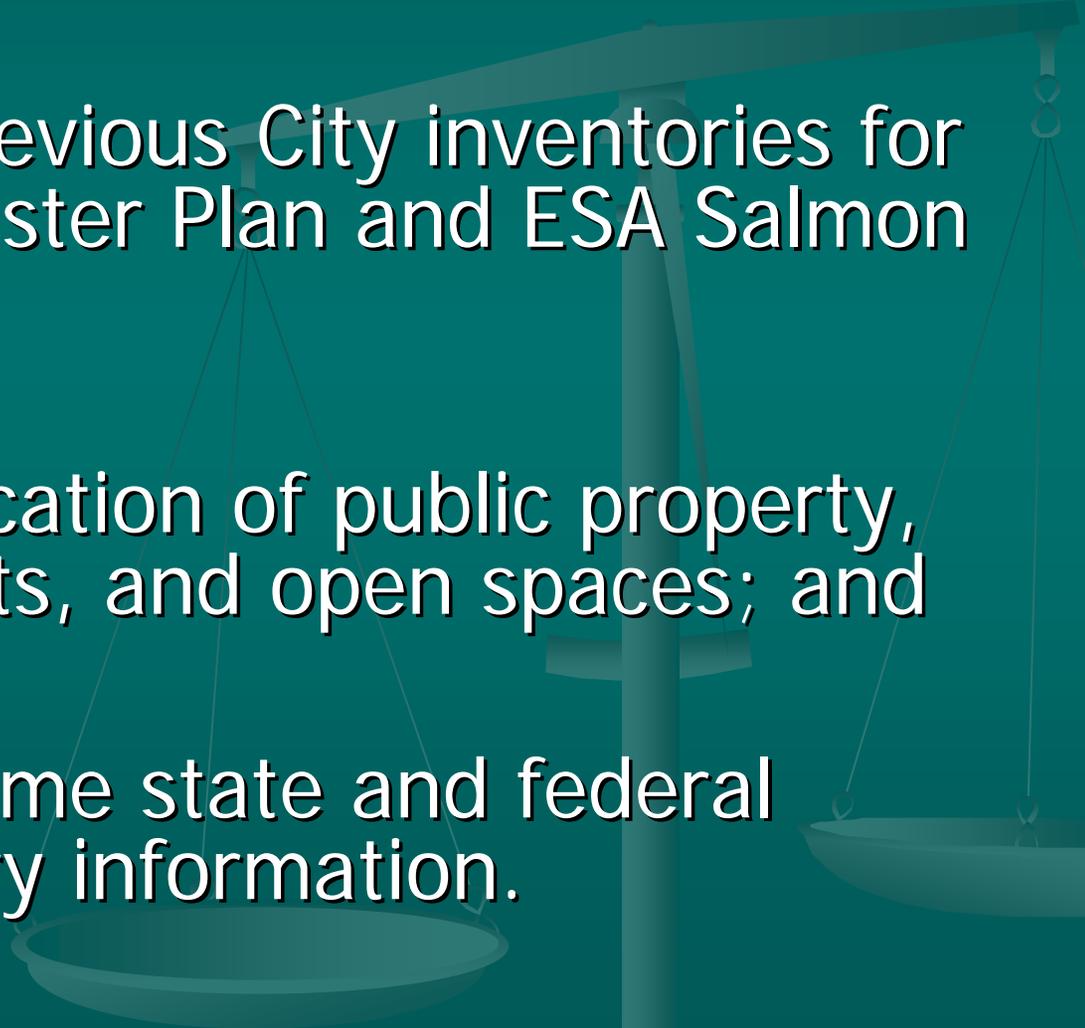
Natural Features Inventory – the Consultant Team

Consultant team led by Winterbrook Planning Inc.

- Salix Associates - Wildlife Habitat Area (WHA) and Tree Grove Inventories; and
- Pacific Habitat Services – Riparian and Wetland Inventories.



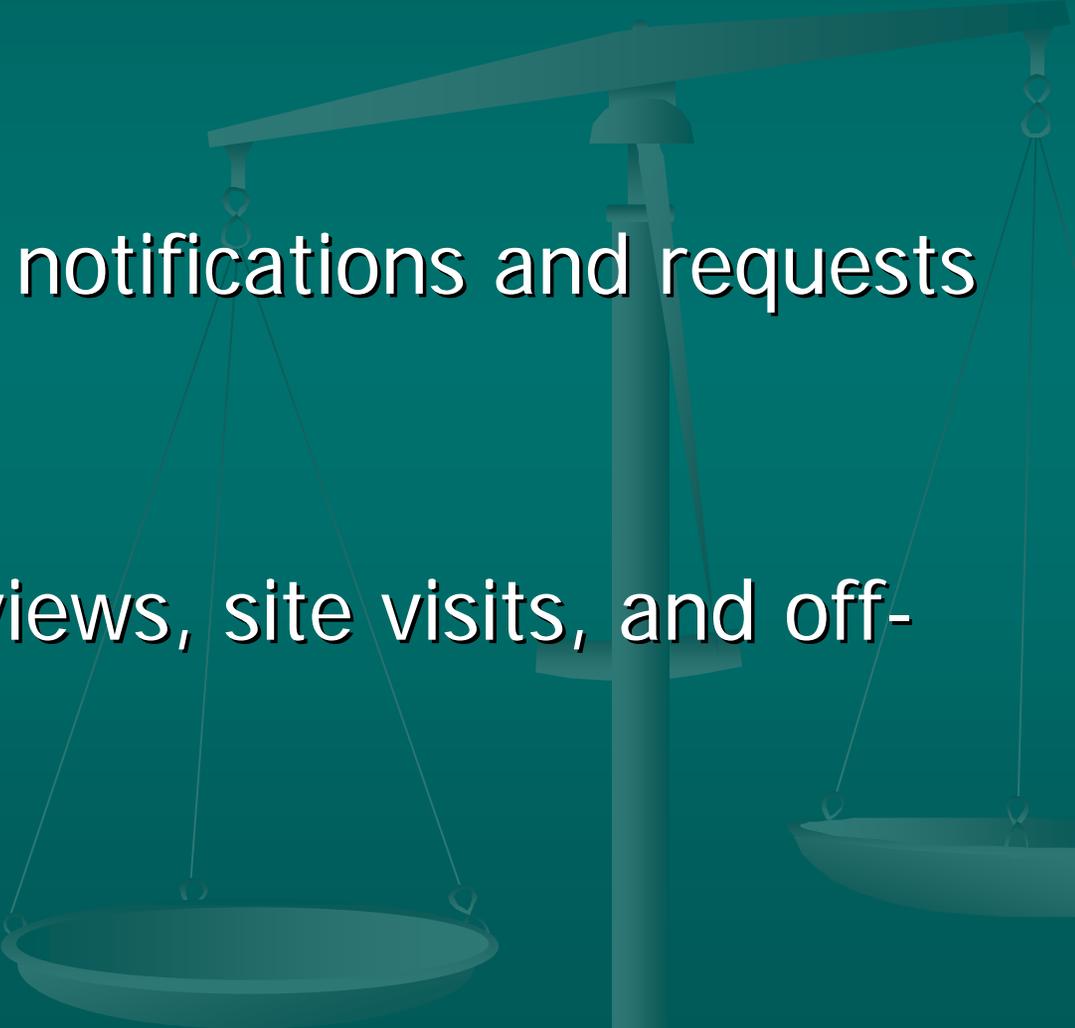
Natural Features Inventory – Incorporation of Existing Information

- Incorporated previous City inventories for Storm water Master Plan and ESA Salmon Response Plan;
 - Incorporated location of public property, public easements, and open spaces; and
 - Incorporated some state and federal agency inventory information.
- 

Natural Features Inventory – GIS Usage

- Inventory drawn directly onto aerial photos by consultants; and
 - Transferred results to ESRI GIS shape file format by consultant and verified by City GIS staff.
- 

Natural Features Inventory – Site Reviews

- Property-owner notifications and requests for access; and
 - Aerial photo reviews, site visits, and off-site reviews.
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Natural Features Inventory – Open Houses

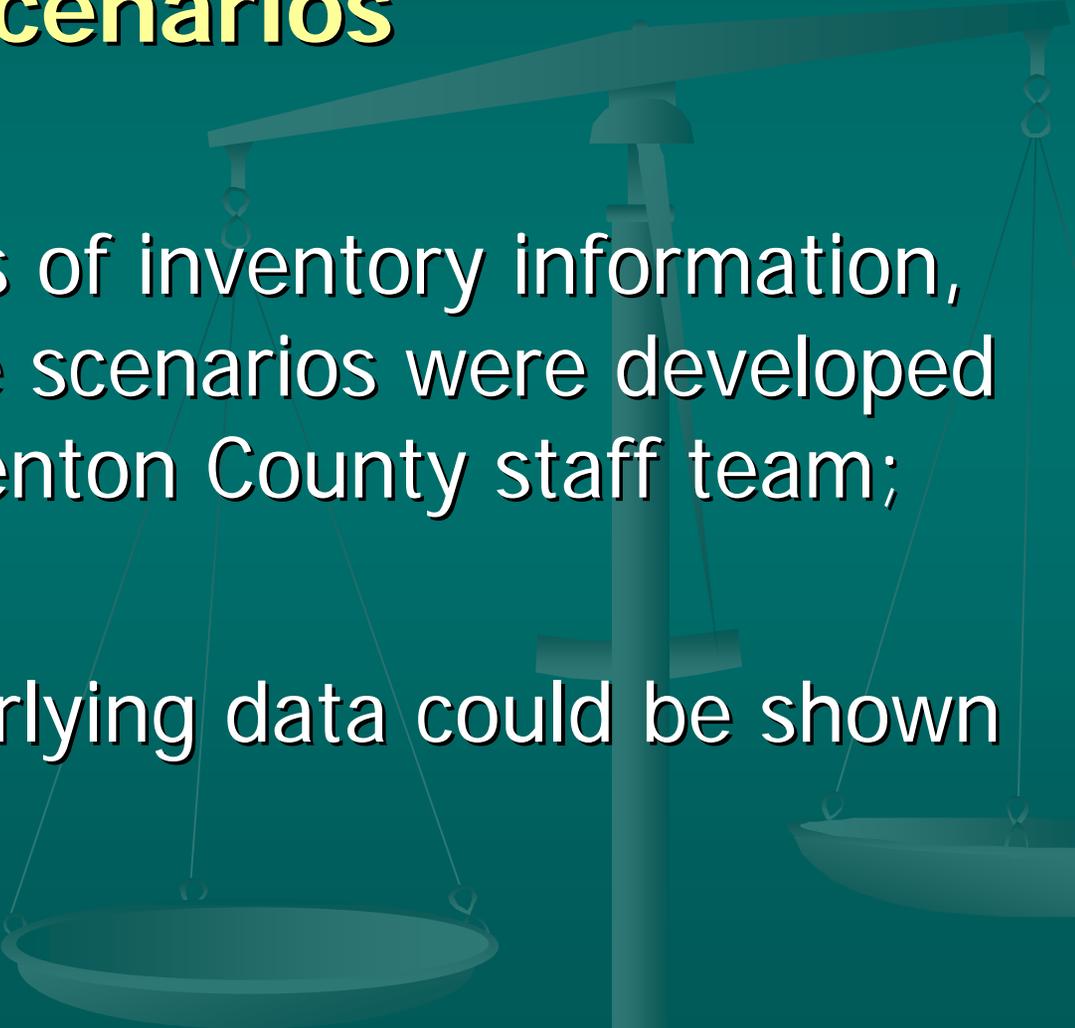
- Open houses for citizens and owners of property with inventoried resources; and
 - Corrections made based on public input where the project's consultants verified the need for the corrections.
- 

Implementing Land Use Regulations

“Land Development Code Update”

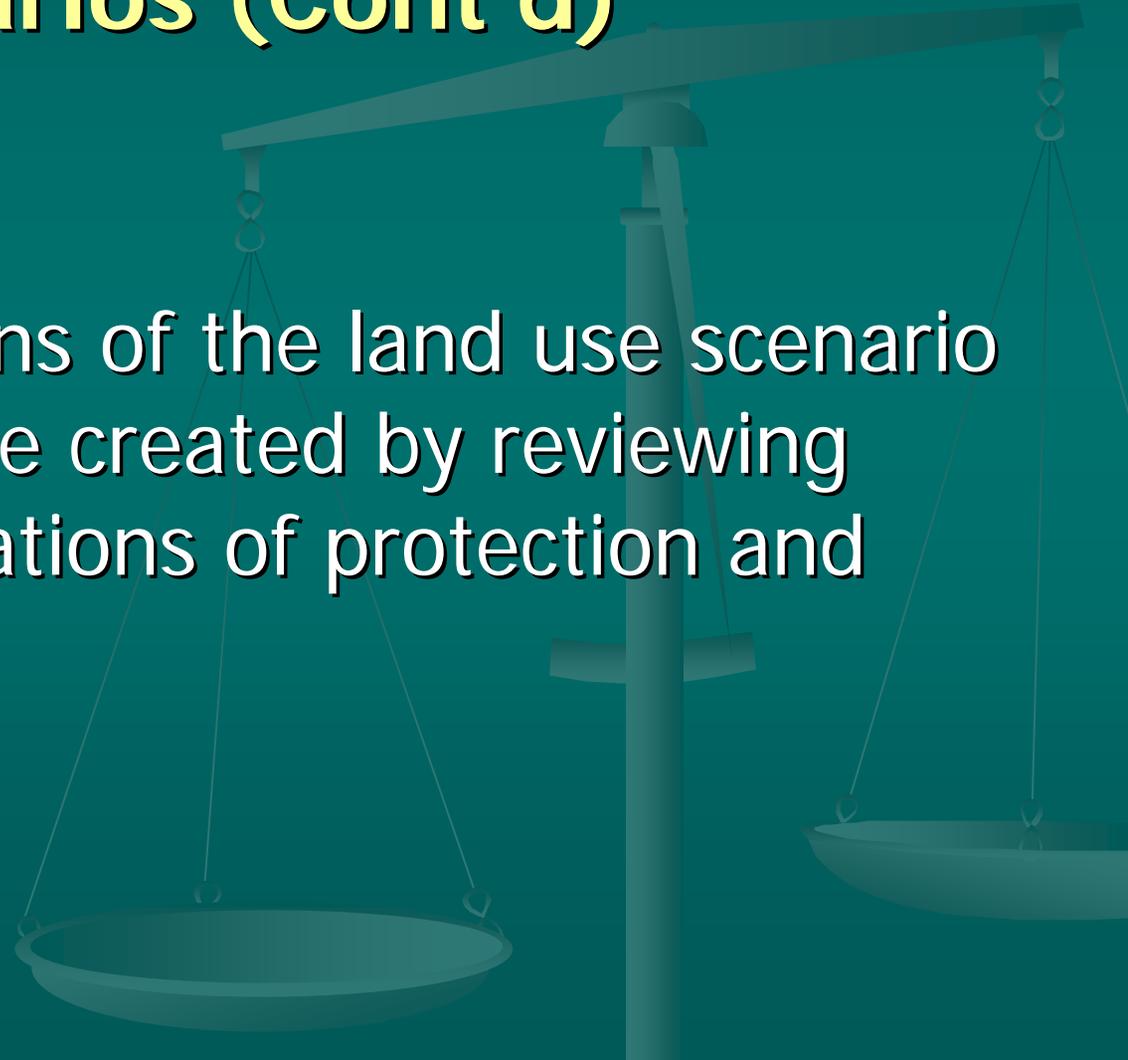


Land Development Code Update – GIS Usage & Initial Land Use Scenarios

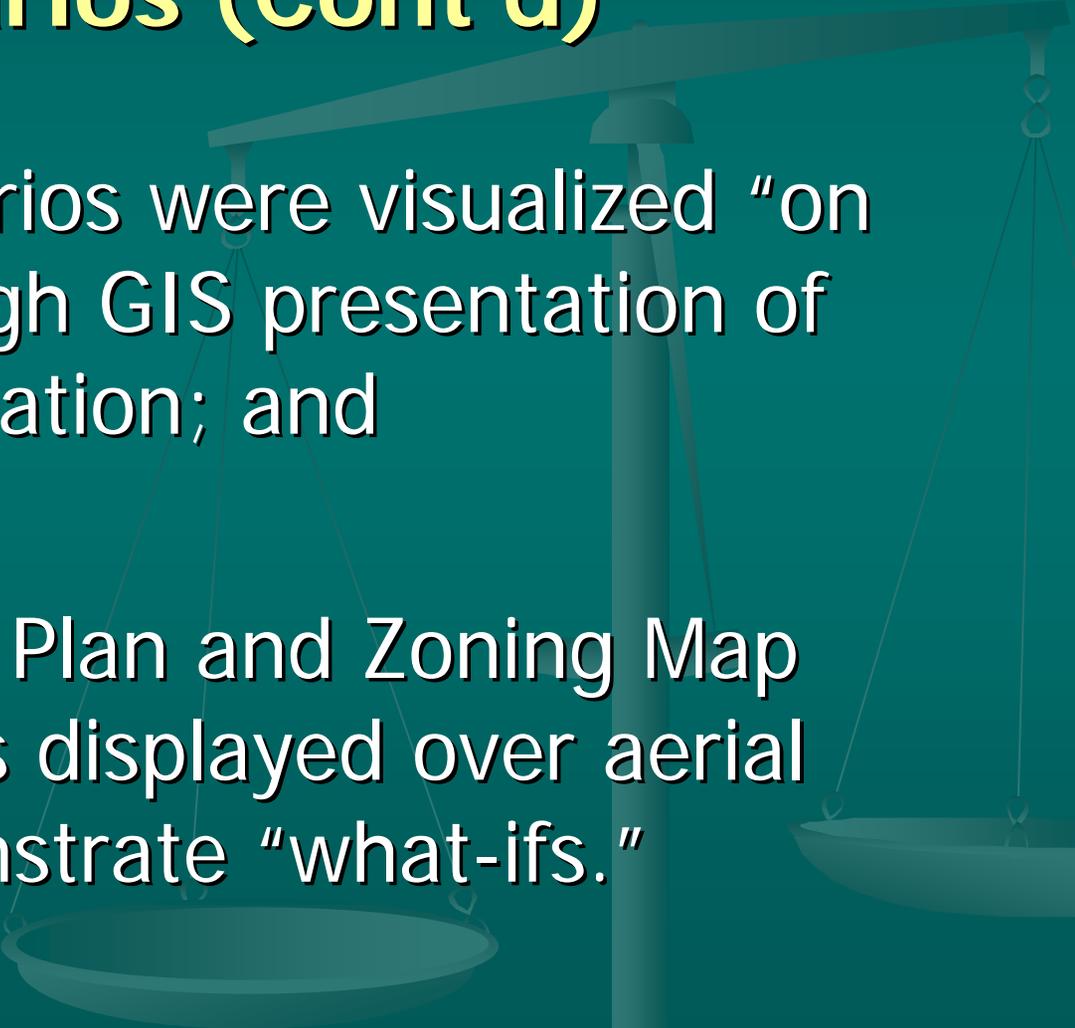
- Using GIS layers of inventory information, various land use scenarios were developed by a City and Benton County staff team;
 - Queries of underlying data could be shown visually;
- 

Land Development Code Update – GIS Usage & Initial Land Use Scenarios (Cont'd)

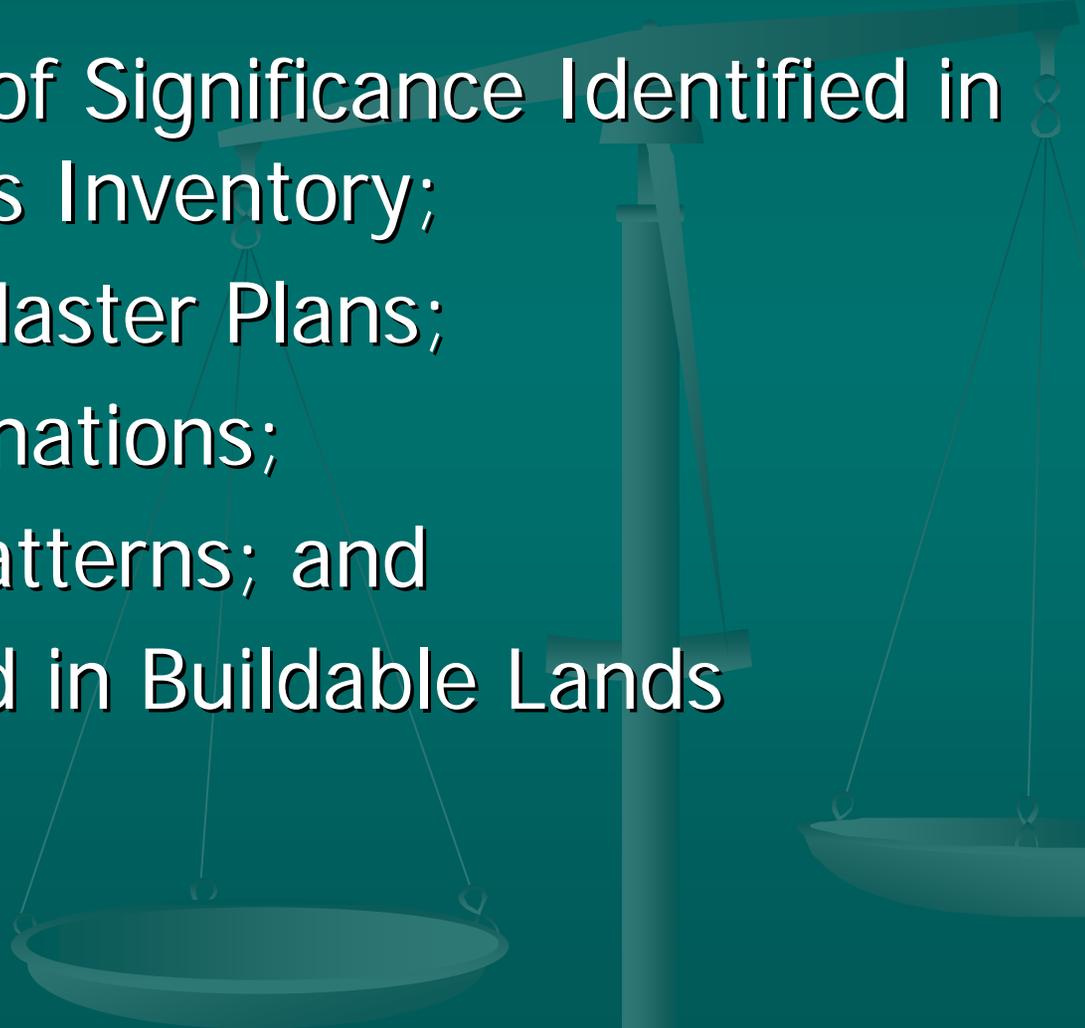
- Multiple iterations of the land use scenario possibilities were created by reviewing various combinations of protection and development;



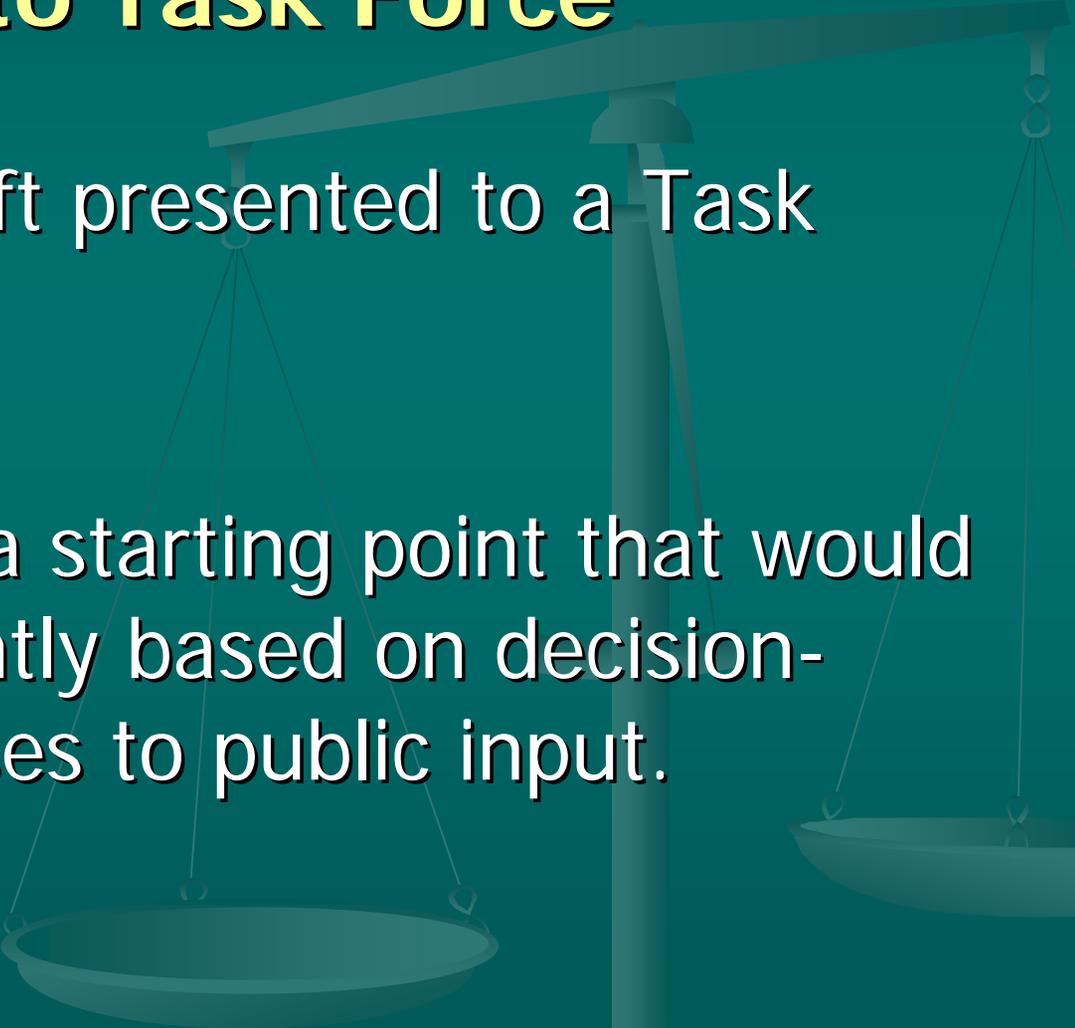
Land Development Code Update – GIS Usage & Initial Land Use Scenarios (Cont'd)

- Land use scenarios were visualized “on the spot” through GIS presentation of layers of information; and
 - Comprehensive Plan and Zoning Map information was displayed over aerial layers to demonstrate “what-ifs.”
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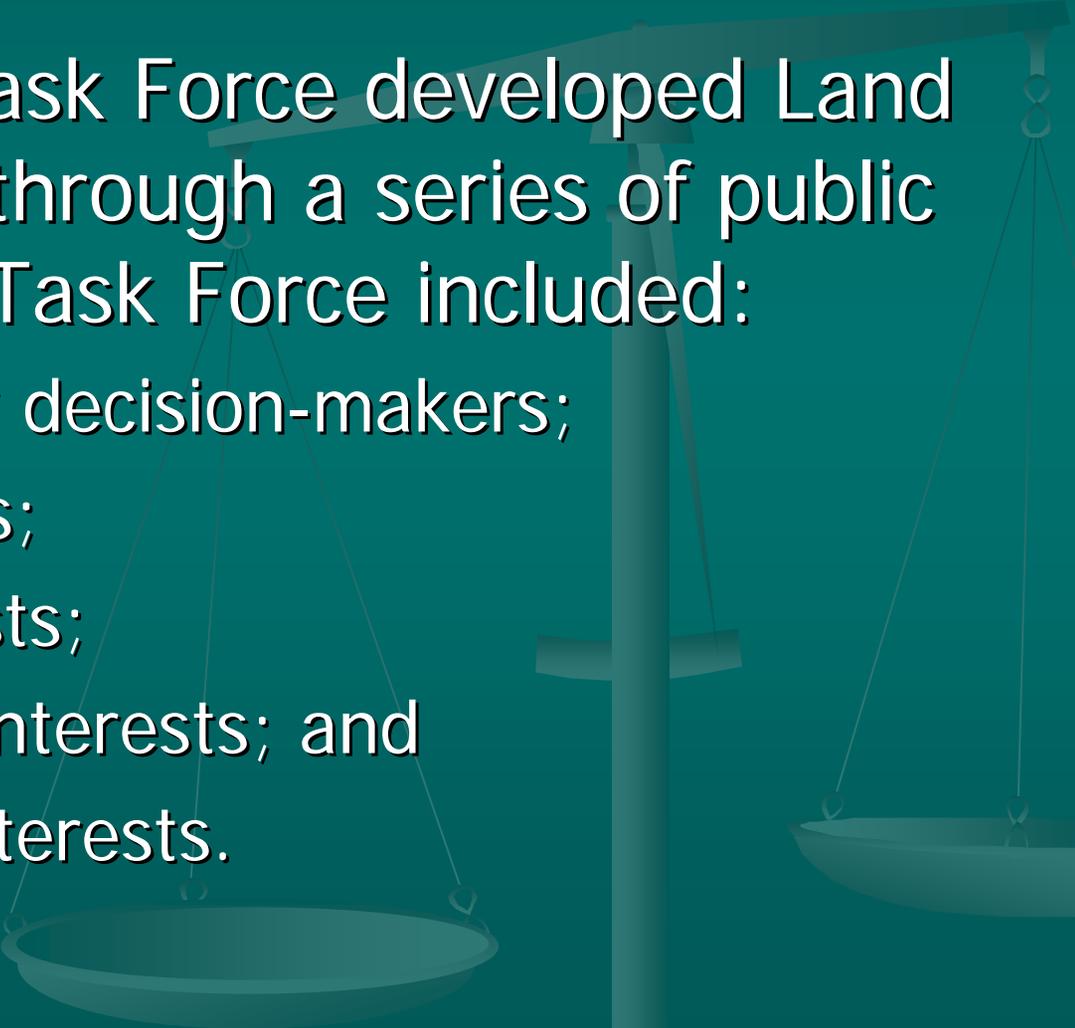
Land Development Code Update – Considerations

- Scientific Level of Significance Identified in Natural Features Inventory;
 - Infrastructure Master Plans;
 - Land Use Designations;
 - Development Patterns; and
 - Needs Identified in Buildable Lands Inventory.
- 

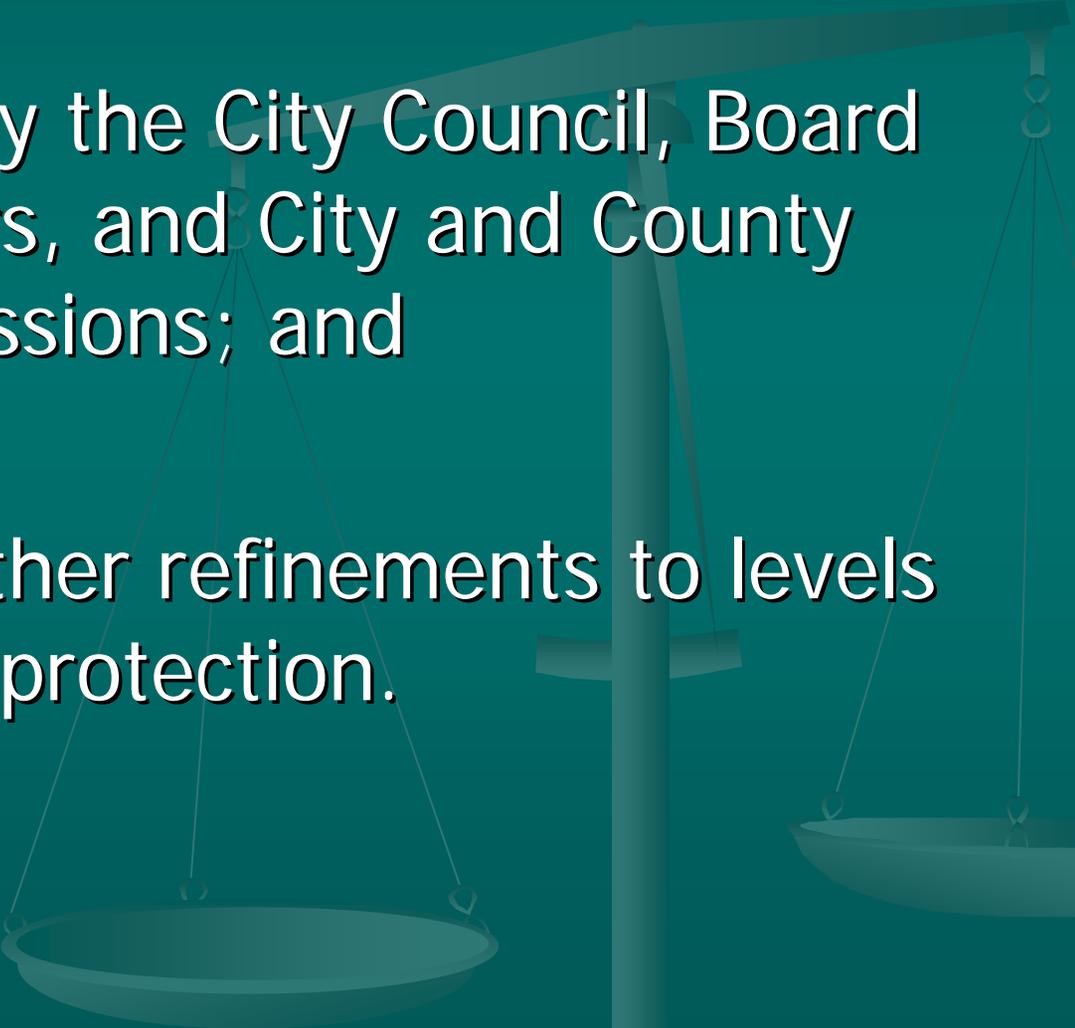
Land Development Code Update – Staff-developed Land Use Scenario Goes to Task Force

- Staff team's draft presented to a Task Force; and
 - Intended to be a starting point that would evolve significantly based on decision-makers' responses to public input.
- 

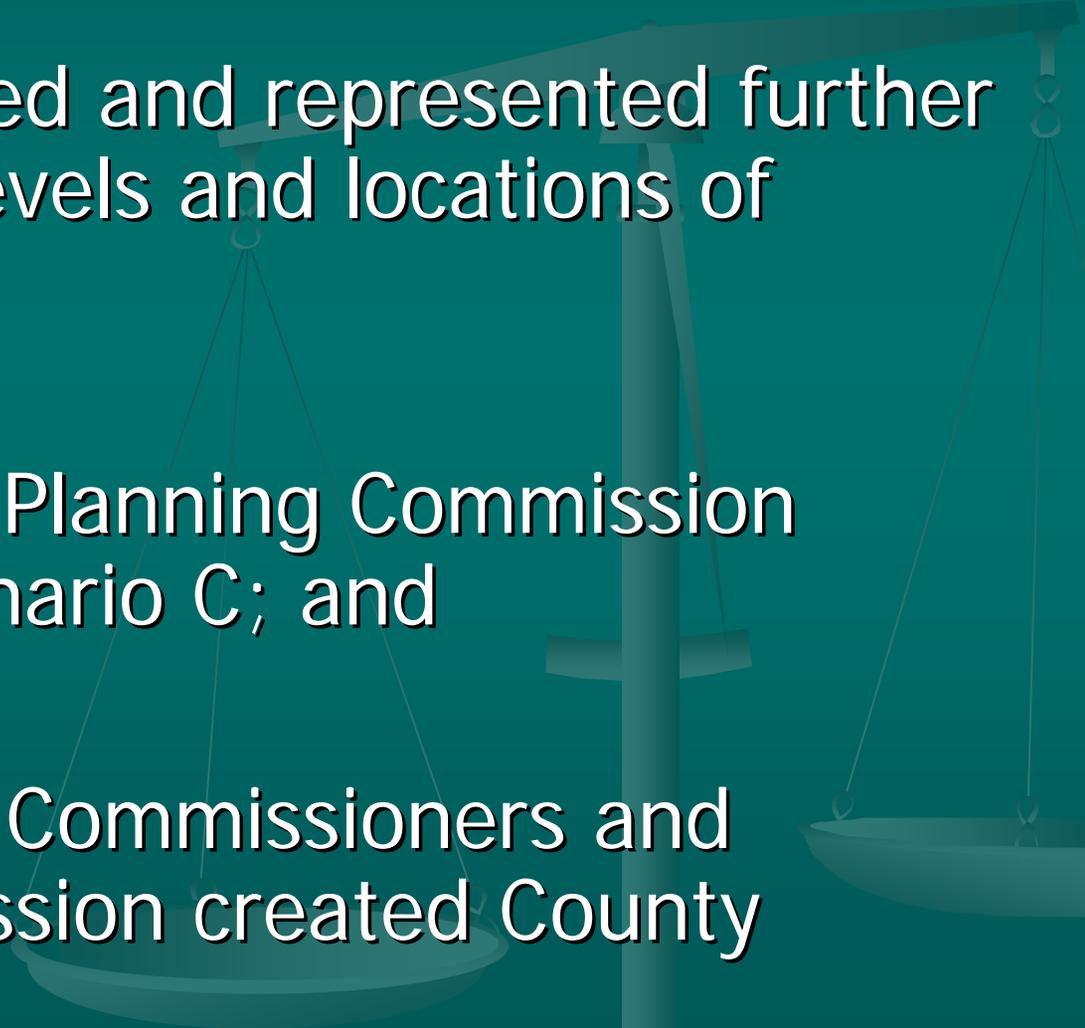
Land Development Code Update – Land Use Scenario A

- A 15-member Task Force developed Land Use Scenario A through a series of public meetings. The Task Force included:
 - City and County decision-makers;
 - Property owners;
 - Business interests;
 - Environmental interests; and
 - Development interests.
- 

Land Development Code Update – Land Use Scenario B

- Jointly created by the City Council, Board of Commissioners, and City and County Planning Commissions; and
 - Represented further refinements to levels and locations of protection.
- 

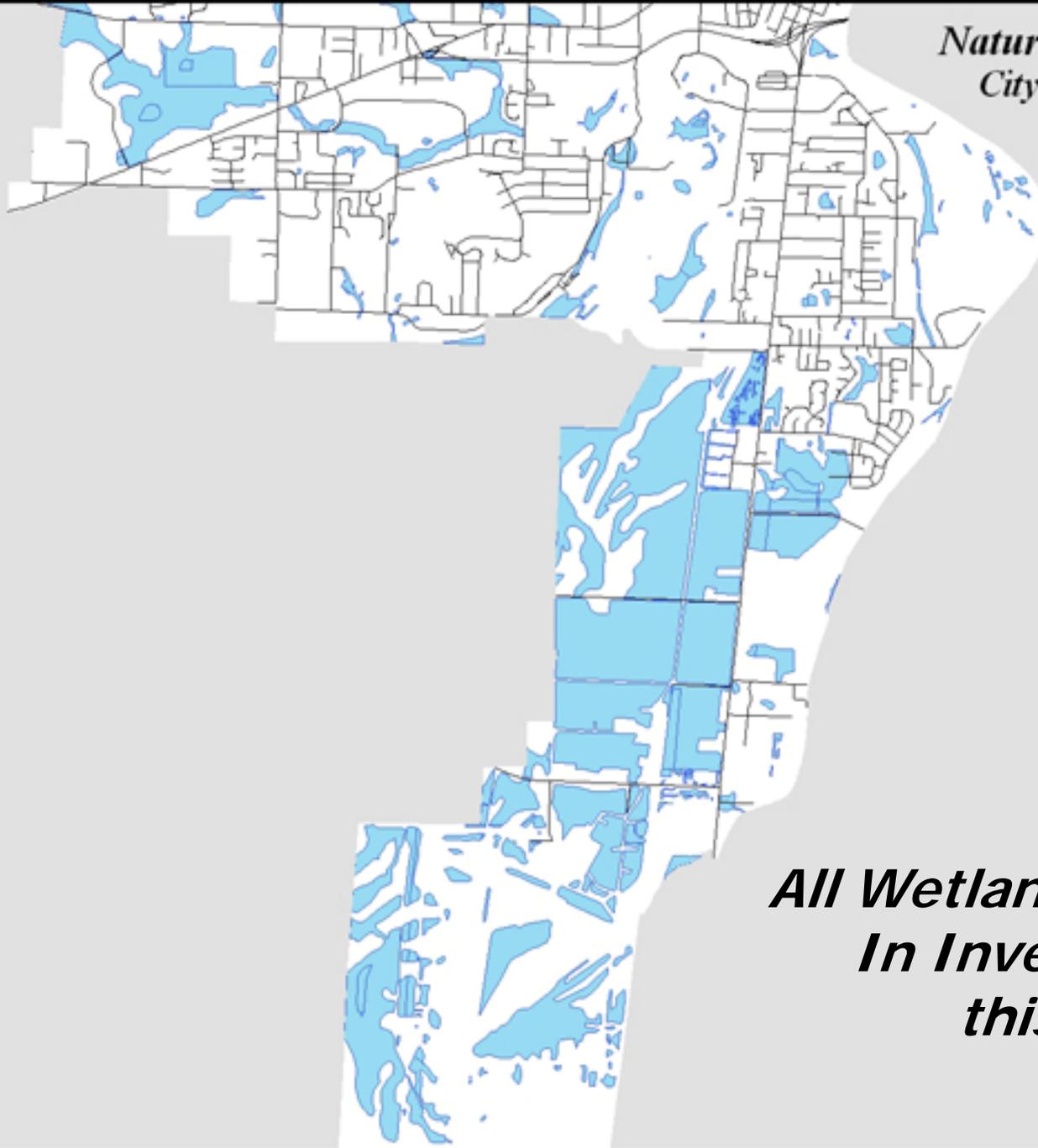
Land Development Code Update – City Land Use Scenario C & County Land Use Scenario C

- Separately created and represented further refinements to levels and locations of protection;
 - City Council and Planning Commission created City Scenario C; and
 - County Board of Commissioners and Planning Commission created County Scenario C.
- 

Sample of Balancing Wetland Protection on Industrial Lands



*Natural Features Inventory
City of Corvallis, Oregon*



*All Wetlands Identified
In Inventory for
this Area*

Excerpt of Relevant Wetland Data Sheet

Project Name:	Corvallis Natural Resource Inventory	Wetland:	S-MAR-W-16
Project Location:	Benton County	Approx. Area (acres):	154.37
Date:	N/A	Wetland Types(s):	PEMf
Exclusions : This wetland cannot be designated as significant if the answer to any of the criteria below is "Yes".			
1	Is this wetland artificially created entirely from upland and		
a.	created for the purpose of controlling, storing, or maintaining stormwater		No
b.	is used for active surface mining or as a log pond		No
c.	is a ditch without a free and open connection to natural waters of the state		No
d.	is less than 1 acre and created unintentionally from irrigation or construction		No
e.	created for the purpose of wastewater treatment, cranberry production, farm watering, sediment settling, cooling industrial water, or a golf hazard		No
2	Is the wetland or portion of the wetland contaminated by hazardous substances, materials or wastes as per the conditions of ORS 141-86-350 1(b)		No
Exclusion criteria satisfied?			No
Mandatory Locally Significant Wetland Criteria : This wetland is locally significant if "Yes" is the answer to any of the criteria below.			
1	Does the wetland provide <i>diverse wildlife habitat</i> ?		No
2	Is the wetland's <i>fish habitat function</i> intact ?		No
3	Is the wetland's <i>water quality function</i> intact ?		No
4	Is the wetland's <i>hydrologic control function</i> intact ?		No
5	Is the wetland less than 1/4 mile from a water body listed by DEQ as : water quality limited water body (303(d) list) <u>and</u> is the wetland's <i>water quality function</i> intact, or impacted or degraded ?	Yes	
6	Does the wetland contain a rare plant community?		No
7	Is the wetland inhabited by any species listed federally as threatened or endangered, or state listed as sensitive, threatened or endangered?		No
8	Does the wetland have a direct surface water connection to a stream segment mapped by ODFW as habitat for indigenous anadromous salmonids <u>and</u> is the wetland's <i>fish habitat function</i> intact, or impacted or degraded ?		No
Mandatory Locally Significant Wetland criteria satisfied ?			Yes
Optional Locally Significant Wetland Criteria : local governments may identify a wetland as significant if "Yes" is the answer to the criteria below			
1	Does the wetland represent a locally unique native plant community <u>and</u> provides <i>diverse wildlife habitat</i> or <i>habitat for some species</i> <u>or</u> has a <i>intact, or impacted or degraded fish habitat function</i> <u>or</u> has a <i>intact, or impacted or degraded water quality function</i> <u>or</u> has a <i>intact, or impacted or degraded hydrologic control function</i> .		No
2	Is the wetland publicly owned and used by a school or organization <u>and</u> does the wetland provide <i>educational uses</i> ?		No
Optional Locally Significant Wetland criteria satisfied ?			No

Natural Features Inventory City of Corvallis, Oregon

Identify

Identify from: <Top-most layer>

wetland

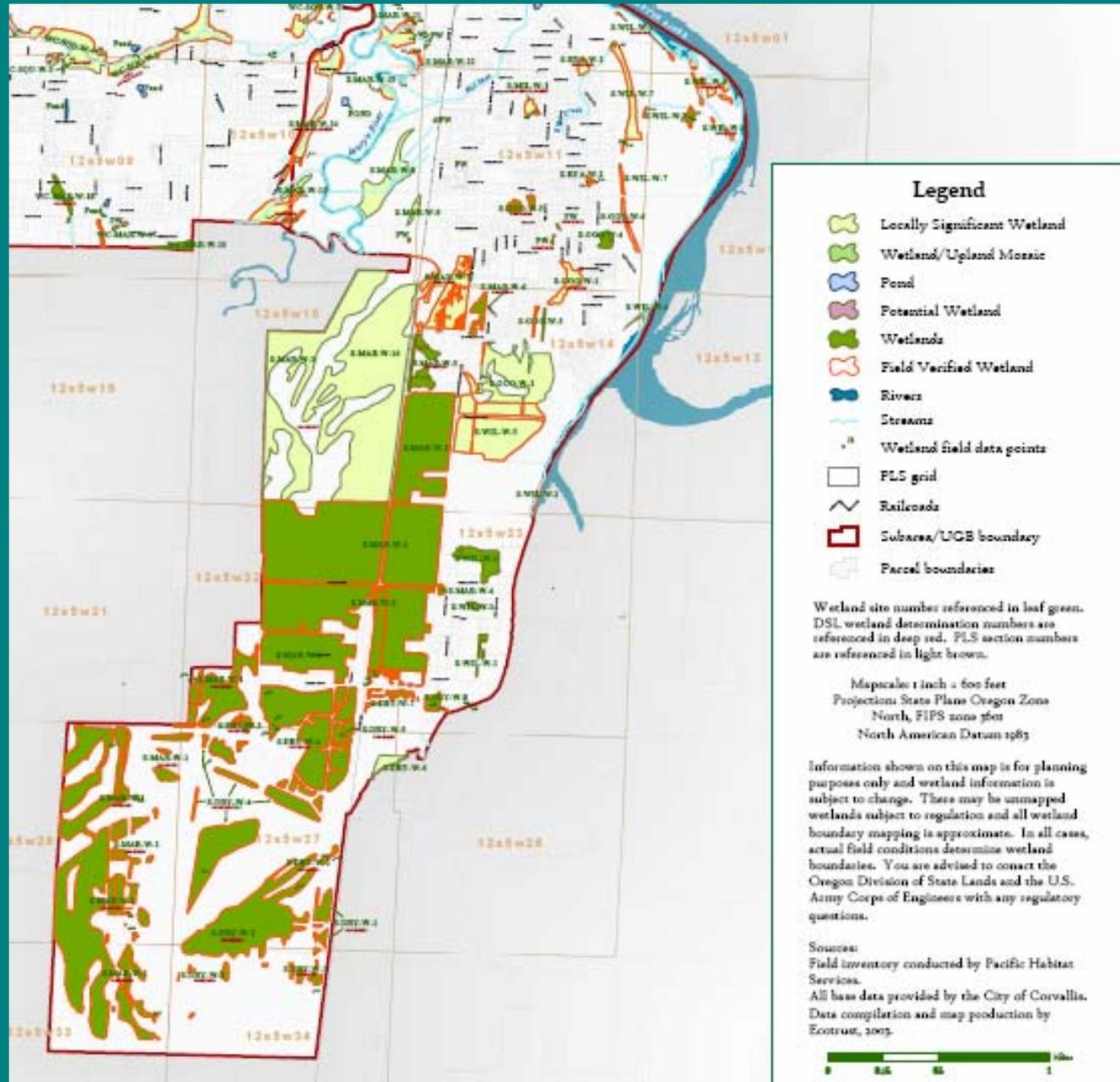
Location: 1,277,635.040 325,070.806 Feet

Field	Value
FID	382
Shape	Polygon
AREA	2881761.7
PERIMETER	8984.238
STUDY_AREA	5
L_SIG	ribw
BASIN	Mary's River
WET_ID	S-MAR-W-2
WET_TYPE	4
PV_2	YES
ACREAGE	66.154
ID	39
BASIN_ID	MARYS RIVER
MAP_SHEET	5-7
DATA_POINT	
DATE_OF_FI	9/14/2002
ONSITE_ASS	NO
FIELD_VCR	YES
INVESTGAT	OR/LW
LOCATION	WEST OF HWY 99W AND SOUTH OF ROYERGREEN AVENUE
LAT_LONG	44.5167 N 123.2735 W
WETLAND_TY	PERM
AREA_I	398.14
ASSOCIATED	WDF 03-0047
WILDLIFE_H	HABITAT FOR SOME WILDLIFE
FISH_HABIT	NOT ASSESSED
WATER_QUAL	IMPACTED/DEGRADED
HYDROLOGIC	IMPACTED/DEGRADED
SENSITIVT	POTENTIALLY SENSITIVE
ENHANCEMEN	MODERATE
EDUCATION	NOT APPROPRIATE
RECREATION	NOT APPROPRIATE/DOES NOT PROVIDE
AESTHETIC	MODERATELY PLEASNG
LSW_EXCLUS	NO
LSW_EXCL_1	NO
LSW_EXCL_2	NO
LSW_EXCL_3	NO
LSW_EXCL_4	NO
LSW_EXCL_5	NO
LSW_MANDAT	NO
LSW_MAND_1	NO
LSW_MAND_2	NO
LSW_MAND_3	NO
LSW_MAND_4	NO
LSW_MAND_5	NO
LSW_MAND_6	NO
LSW_MAND_7	NO
LSW_OPTION	NO
LSW_OPT_1	NO
LSW	0
SPECIAL_IN	0
CONWARDN_C	PERM
HGR_CLASS	F
SOIL_MAPPE	APETY SILT LOAM, DAYTON SILT LOAM, CLOQUATO SILT LOAM
HYDROLOG_1	PRECIPITATION
DOMINANT_T	N/A



*Example of How Data
Sheets Could be Pulled
Up in "Real Time" for
Decision-making*

Excerpt
from
the Locally
Significant
Wetlands
Map
– Depicts
Wetlands
that are
subject to
state and
federal
jurisdiction

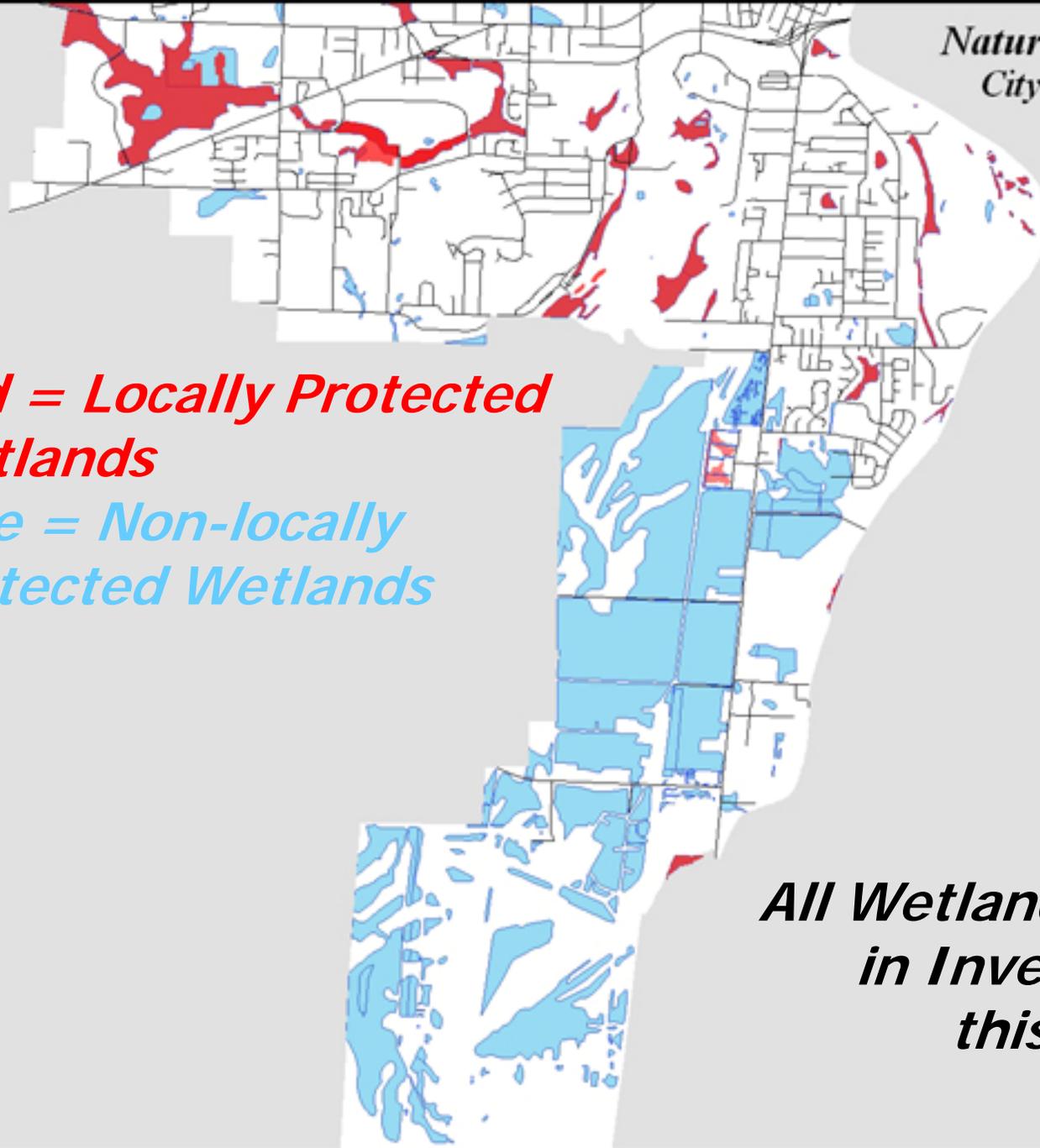


*Natural Features Inventory
City of Corvallis, Oregon*

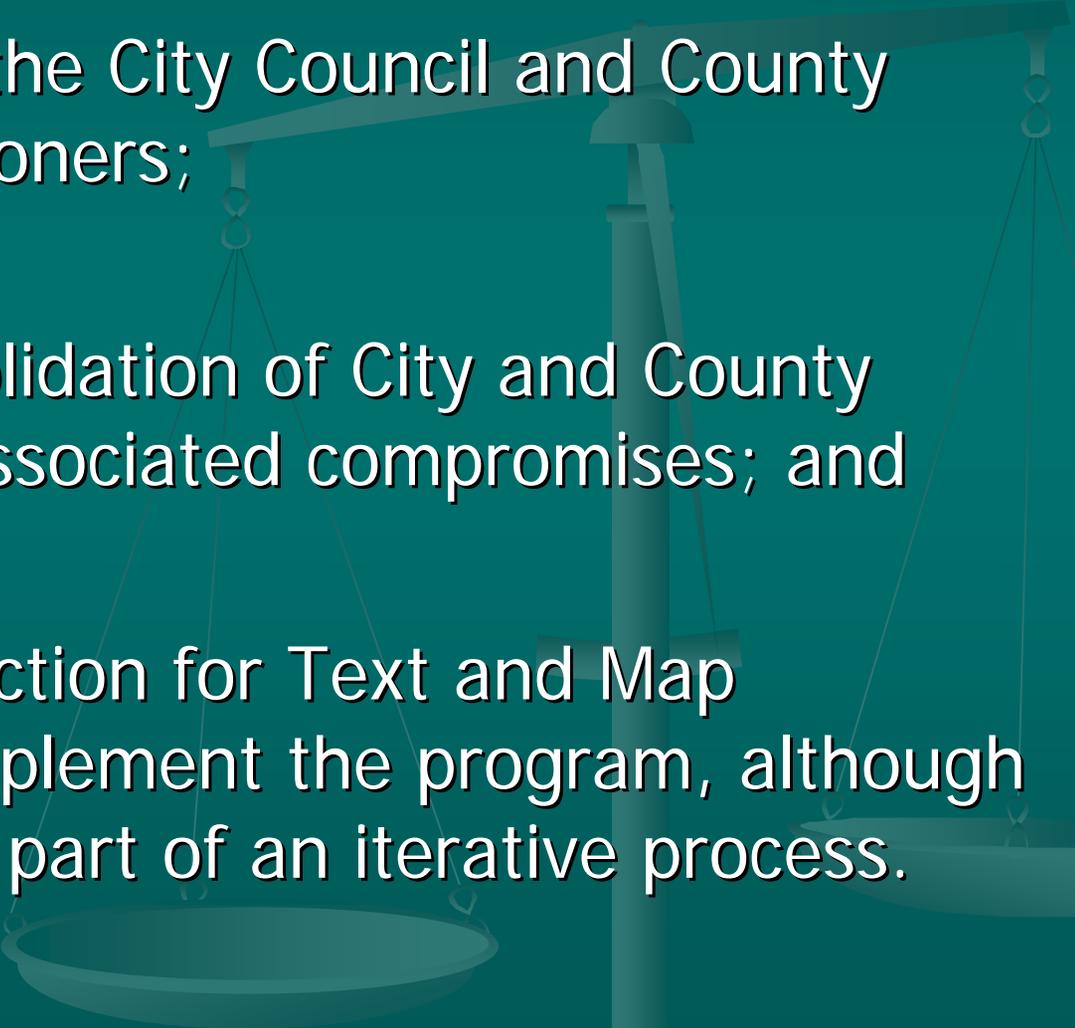
*Red = Locally Protected
Wetlands*

*Blue = Non-locally
Protected Wetlands*

*All Wetlands Identified
in Inventory for
this area*



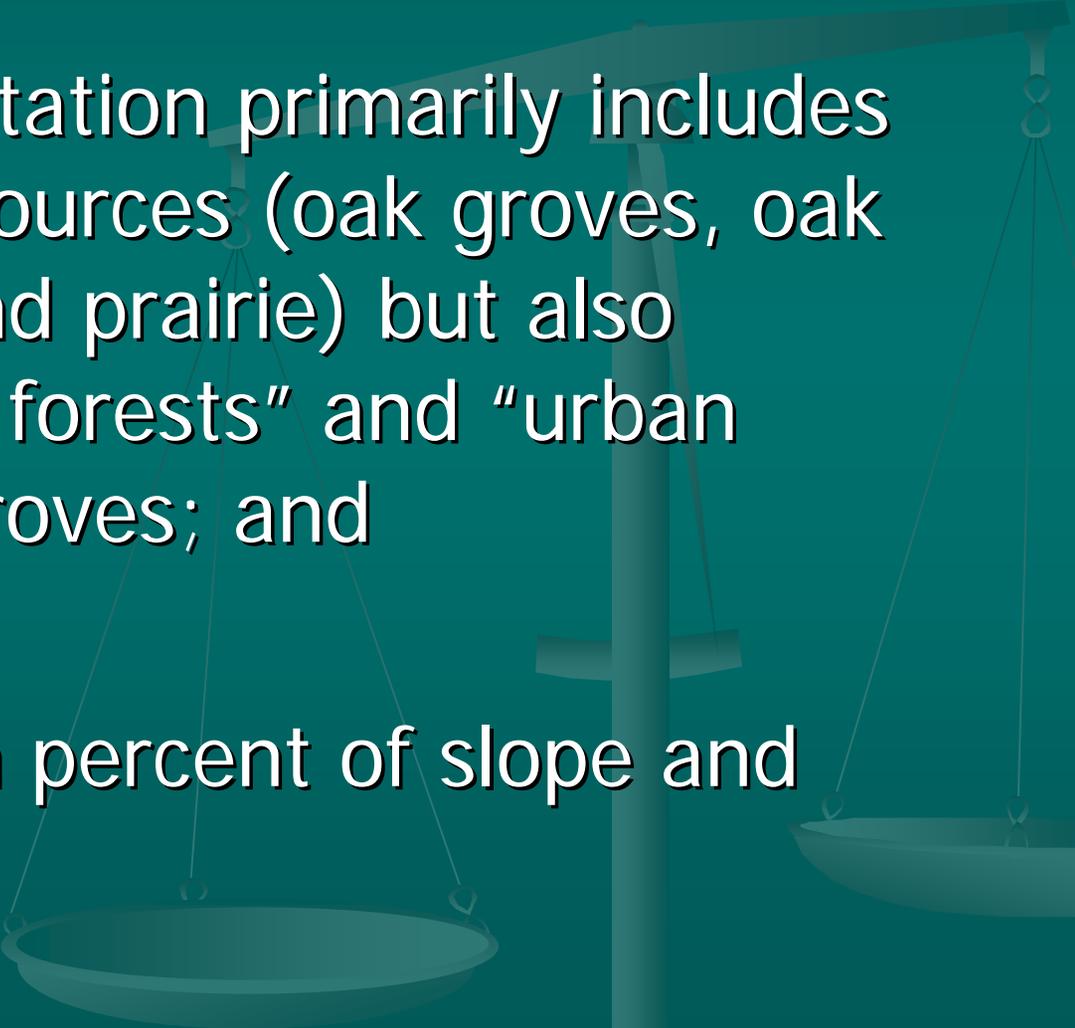
Land Development Code Update – Land Use Scenario D

- Jointly created by the City Council and County Board of Commissioners;
 - Represented consolidation of City and County Scenario C's and associated compromises; and
 - Provided early direction for Text and Map Amendments to implement the program, although such direction was part of an iterative process.
- 

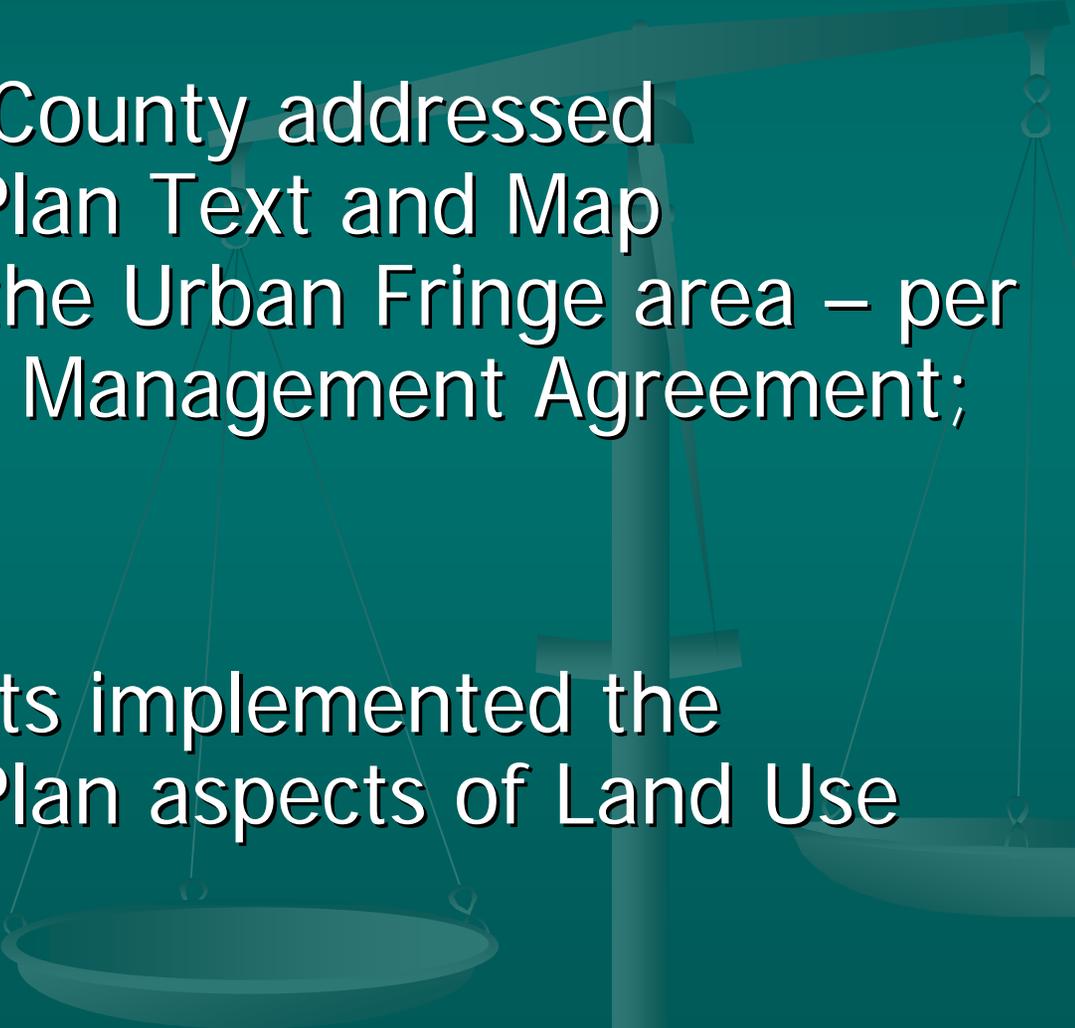
Land Development Code Update – Main Elements of Land Use Scenario D

- Riparian Corridor widths based on areas drained and existing development conditions;
- Wetlands based on 1987 COE Manual and LSW by OFWAM;

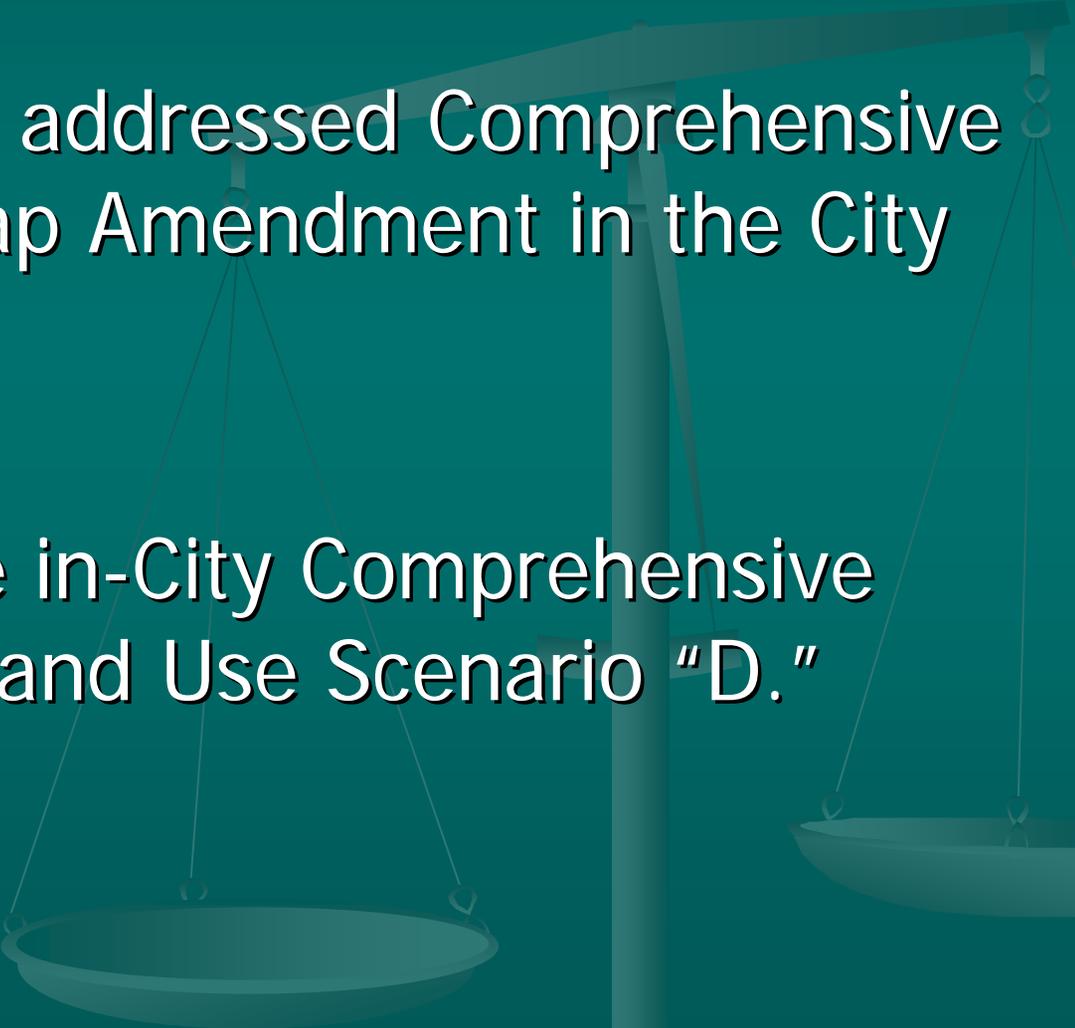
Land Development Code Update – Main Elements of Land Use Scenario D (Cont'd)

- Significant Vegetation primarily includes “oak-based” resources (oak groves, oak savannah, upland prairie) but also includes “mixed forests” and “urban amenity” tree groves; and
 - Slopes based on percent of slope and landslide risks.
- 

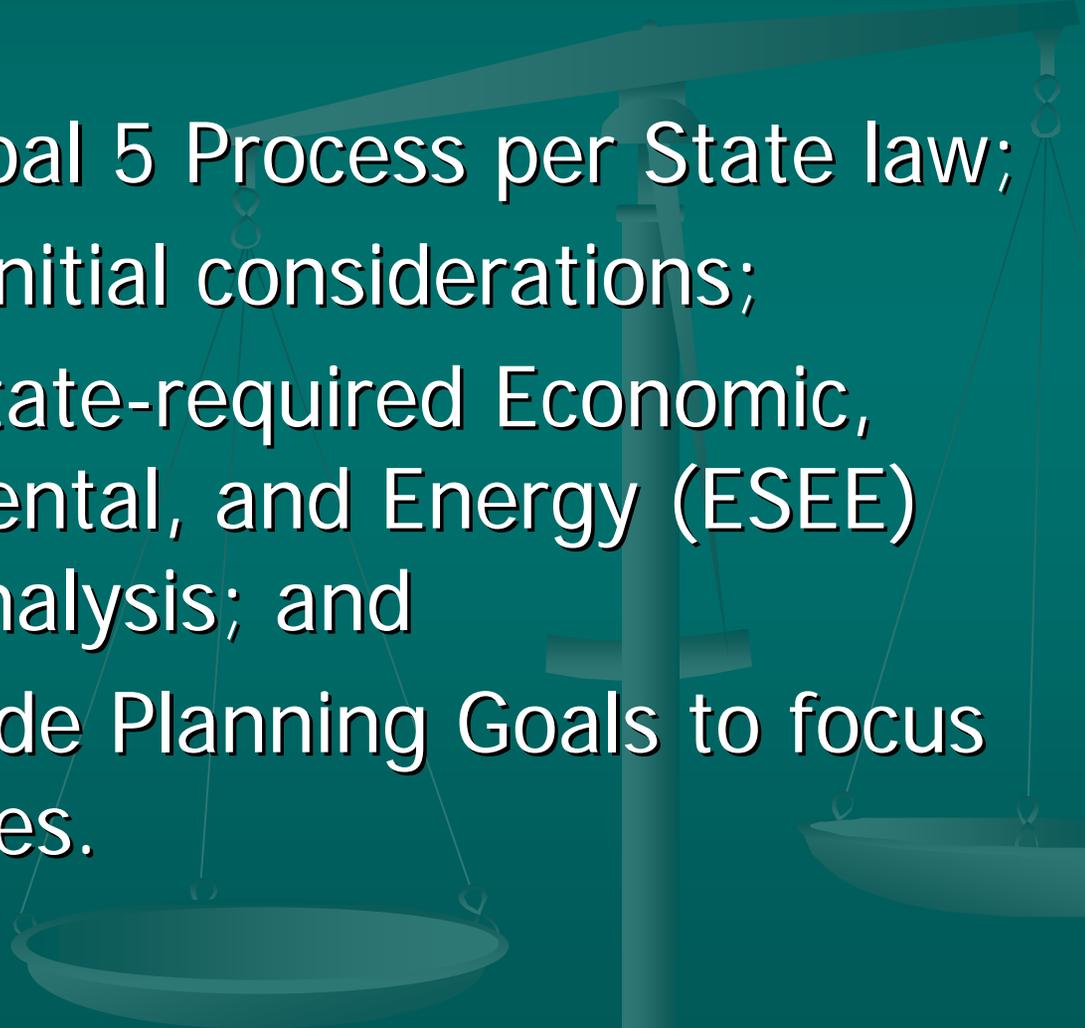
Joint City/County Comprehensive Plan Amendment Process for Urban Fringe

- City and Benton County addressed Comprehensive Plan Text and Map Amendments in the Urban Fringe area – per the Urban Fringe Management Agreement; and
 - Such Amendments implemented the Comprehensive Plan aspects of Land Use Scenario “D.”
- 

City Comprehensive Plan Amendment Process for City Limits

- City concurrently addressed Comprehensive Plan Text and Map Amendment in the City Limits; and
 - Implemented the in-City Comprehensive Plan aspects of Land Use Scenario "D."
- 

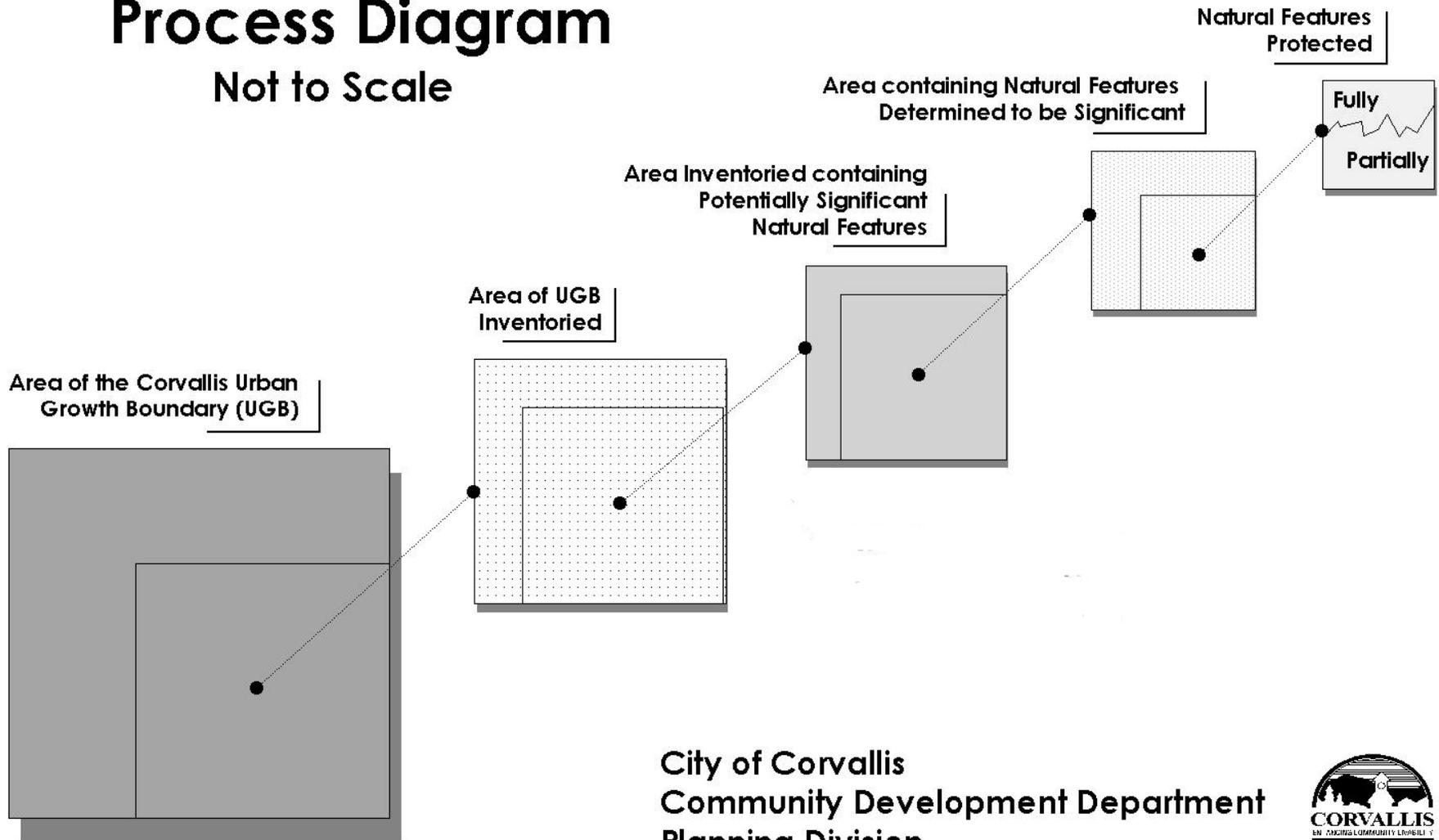
Approach to Comprehensive Plan Amendment Processes

- Included a full Goal 5 Process per State law;
 - Used context of initial considerations;
 - Completed the State-required Economic, Social, Environmental, and Energy (ESEE) Consequences Analysis; and
 - Used the Statewide Planning Goals to focus the above analyses.
- 

Natural Features Inventories

Process Diagram

Not to Scale



City of Corvallis
Community Development Department
Planning Division

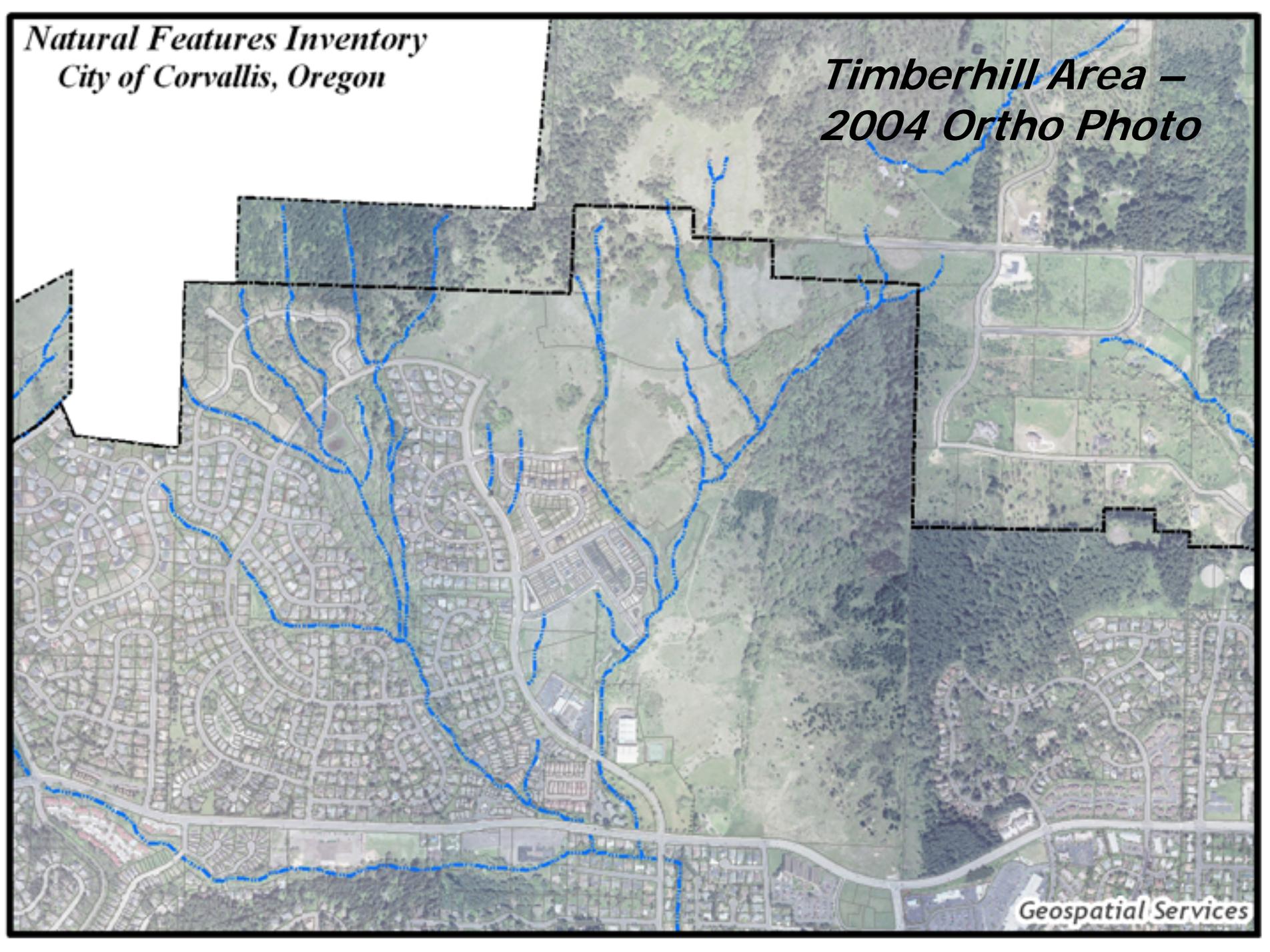


Sample of Natural Resource Balancing Efforts in the Timberhill Area



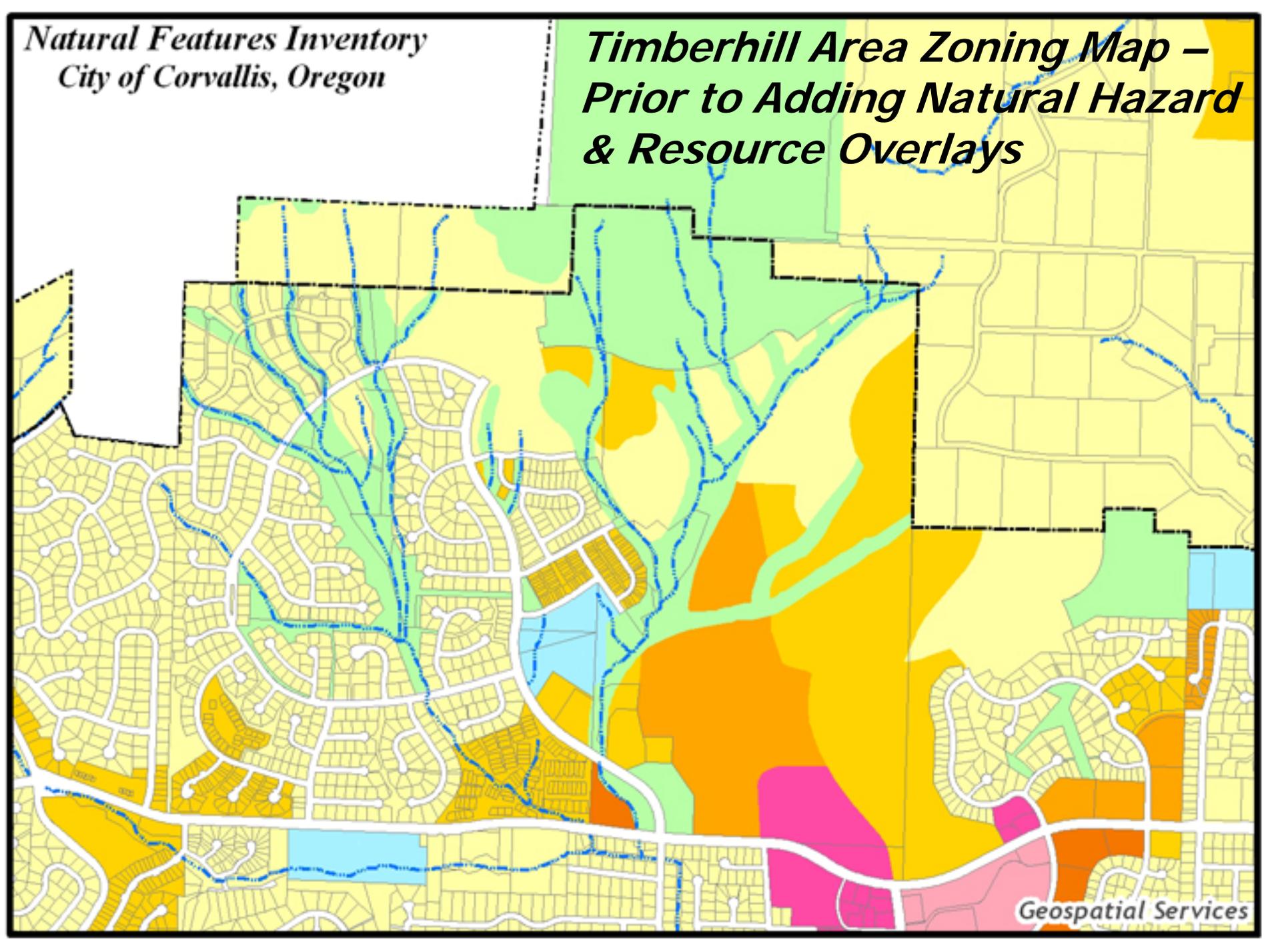
*Natural Features Inventory
City of Corvallis, Oregon*

*Timberhill Area –
2004 Ortho Photo*



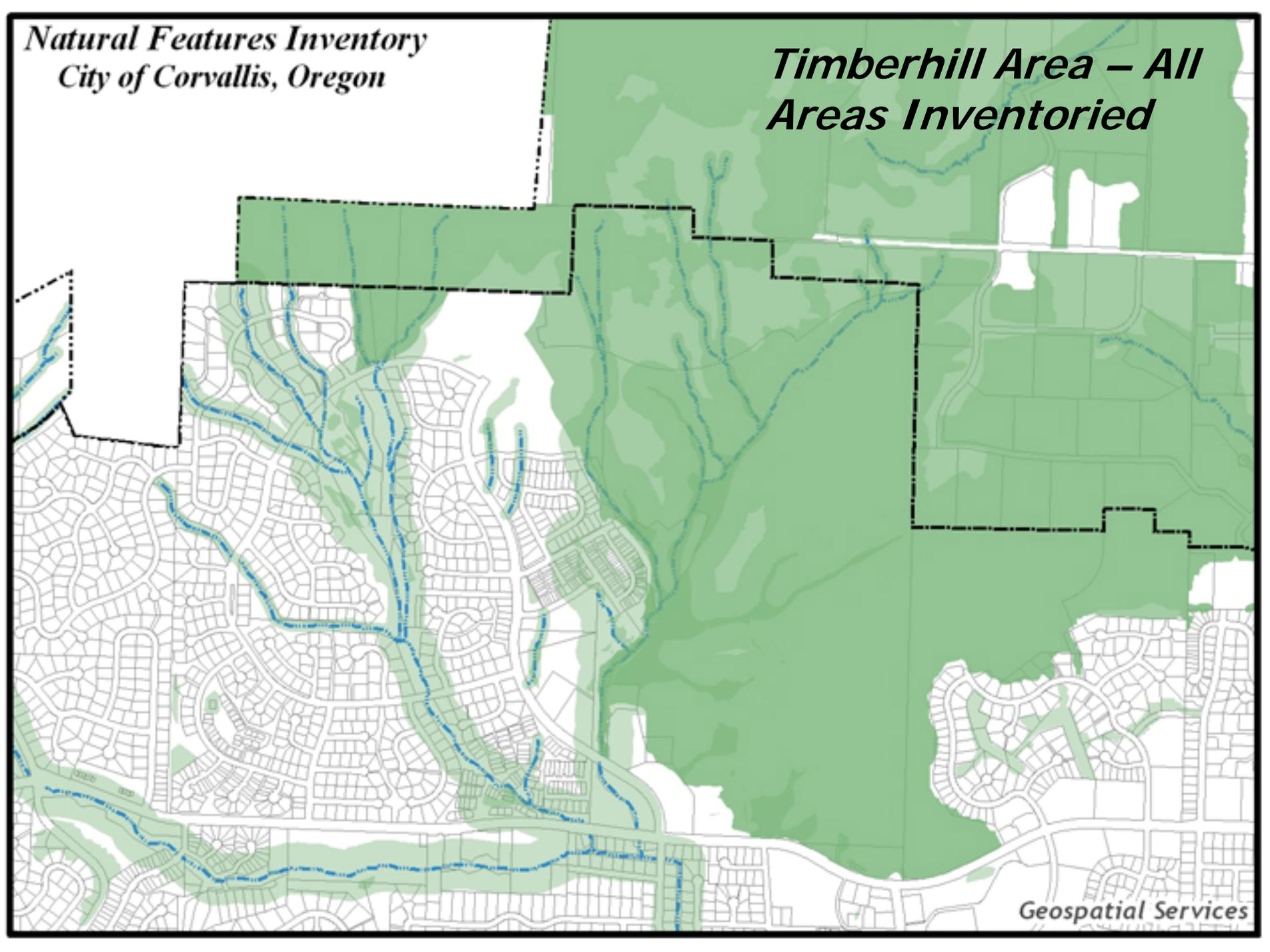
*Natural Features Inventory
City of Corvallis, Oregon*

*Timberhill Area Zoning Map –
Prior to Adding Natural Hazard
& Resource Overlays*



*Natural Features Inventory
City of Corvallis, Oregon*

*Timberhill Area – All
Areas Inventoried*

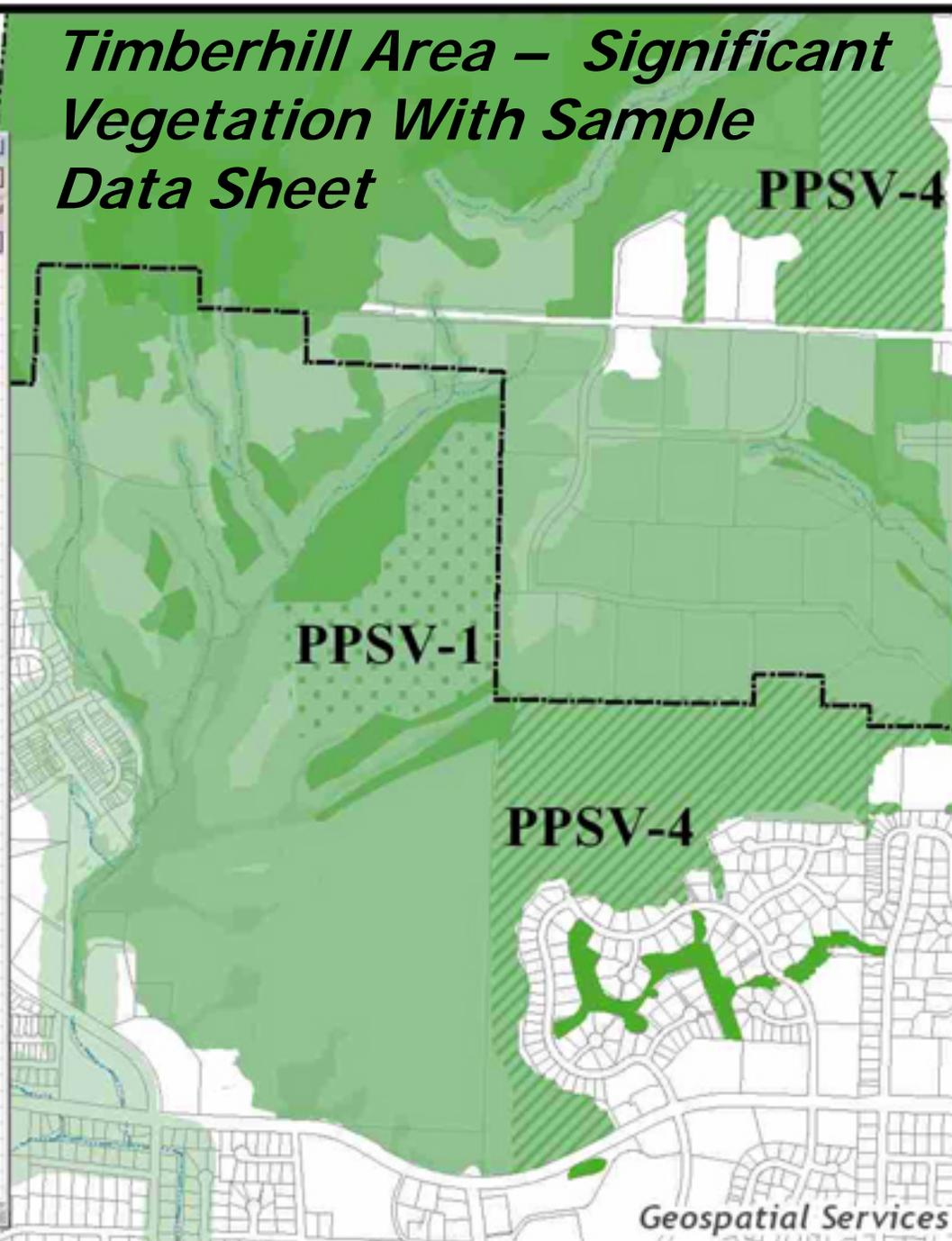


Natural Features Inventory City of Corvallis, Oregon

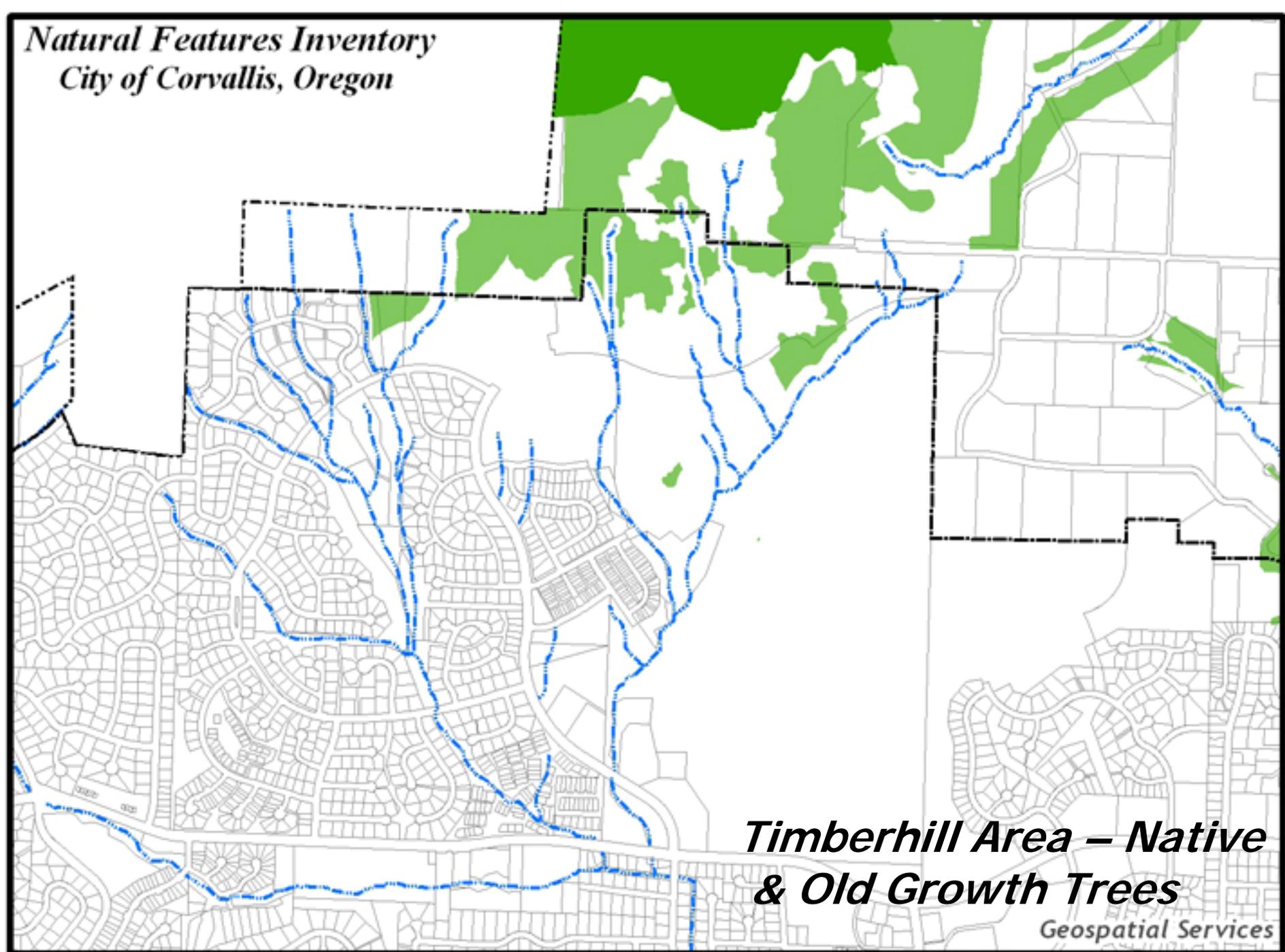
Timberhill Area – Significant Vegetation With Sample Data Sheet

Location: 1,276,704.304 353,324.315 Feet

Field	Value
FID	235
Shape	Polygon
AREA	1600000
PERIMETER	5917.549
WHA_REF	WC-2b
AREA_NAME	West/Central Corvallis
CD_TYPE	E
ACREAGE	36.308
VEG_RIP	WC-2b-E
HABITAT_SI	Timberhill East
WHA_SITE	WC-2b
SUBPOLYGON	E
SIZE	86.37
MAP	W-2, W-4, N-7
INSIDE_CIT	1
DATE	2002-11-26 00:00:00
OBSERVERS	BN
GPS_LOCATE	ONSITE
PHOTOS	Yes
METHOD	ONSITE
DOMINANT_C	Woody
ARA_TYPE	7
ARA_COVER	Mixed Forest >70% closed canopy
OTHER_ARA	None
Z_TREES	90
Z_SHRUBS	2
Z_HERBS	0
Z_BARE	0
TREE_TYPE	Mixed
DOMINANT_T	Oregon white oak, Douglas-fir
SECONDARY_T	Pacific madrone
TREE_TOT	4
TREE_INV	1
TREE_NAT	4
TREE_COMME	Some portions dominated by Douglas-fir. Some portions dominated by Oregon white oak.
SHRUB_TYPE	Mixed
DOMINANT_S	
SECONDARY_S	Himalayan blackberry, common snowberry, California hazelnut. Also, English holly (from Timberhill report)
SHRUB_TOT	3
SHRUB_INV	3
SHRUB_NA	2
SHRUB_COMM	
DOMINANT_H	Falsebrome, Pacific dewberry
SECONDARY_H	Common St. John'swort, pearly everlasting, sword fern, bracken fern, tall fescue, colonial bentgrass
HERB_TOT	4
HERB_INV	2
HERB_NAT	2
HERB_COMME	
ORNHCC_PLA	2
RTE_OBSERV	W. Bluebird, Pileated woodpecker, W. Gray Squirrel (from Timberhill report)
ORNHCC_REC	1
ORNHCC_LIS	3
RTE_HABITA	Sb, Sc
GENERAL_HE	Tree health generally very good. Oregon white oak will benefit from recently removed Douglas-fir.
UNIQUE_FEA	Two very large oaks (~5' dia). Good quality oak woodland with a number of large oaks.
RECOMMENDE	Continue removal of Douglas-firs from oaks. Continue removal of Himalayan blackberry and control falsebrome.
CURRENT_EP	Removal of Douglas-firs and Himalayan blackberry.



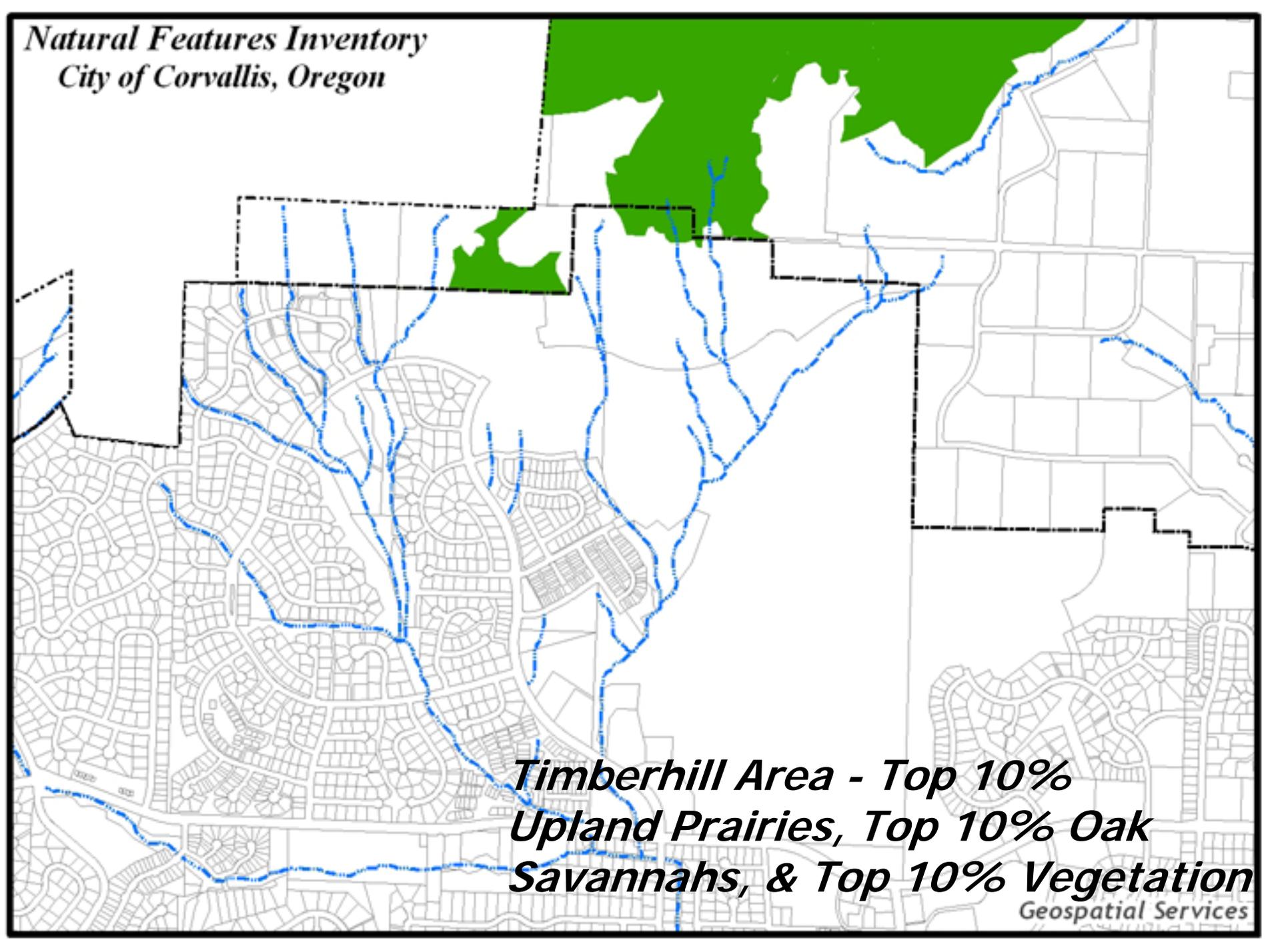
*Natural Features Inventory
City of Corvallis, Oregon*



*Timberhill Area – Native
& Old Growth Trees*

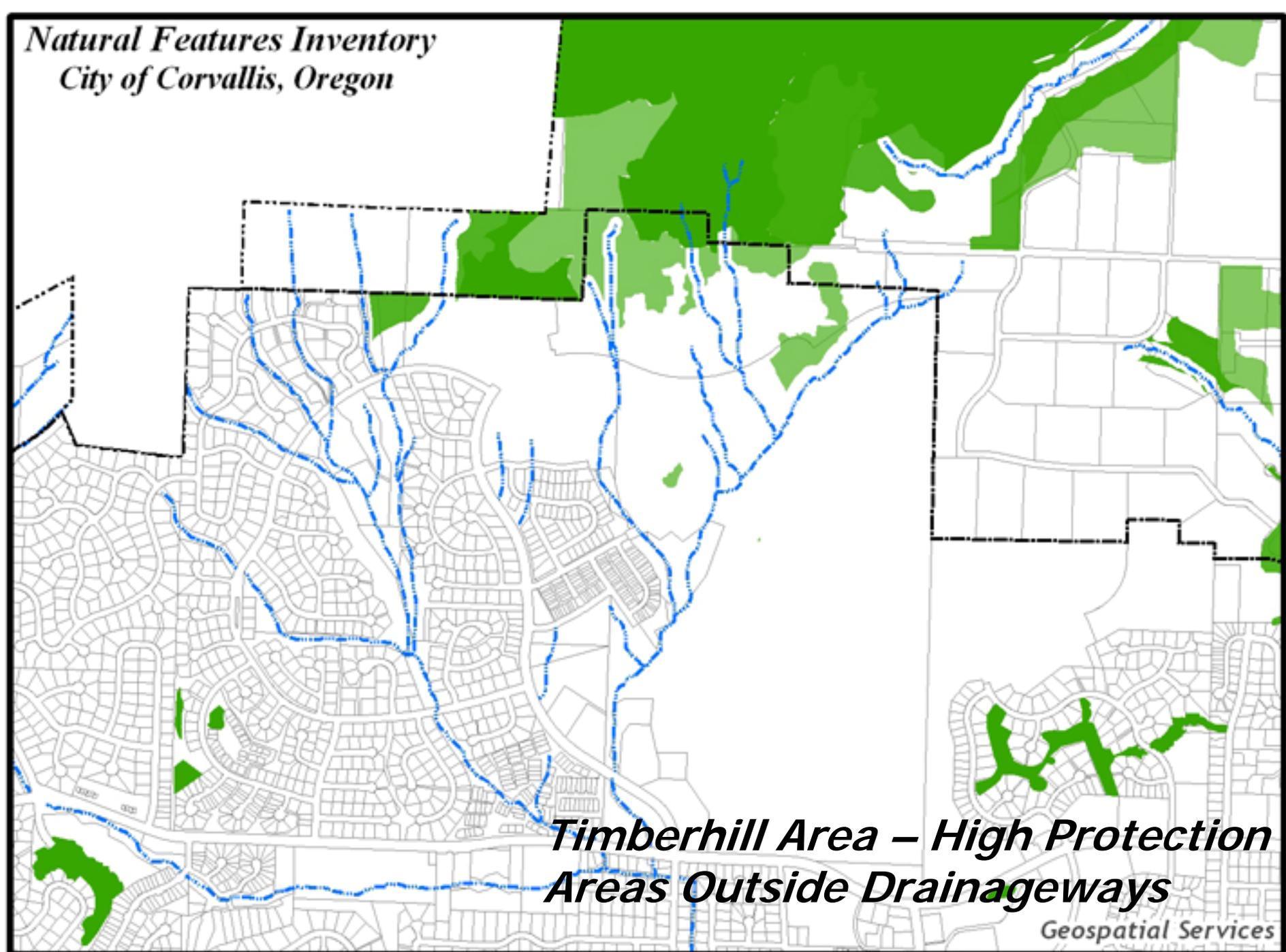
Geospatial Services

*Natural Features Inventory
City of Corvallis, Oregon*



***Timberhill Area - Top 10%
Upland Prairies, Top 10% Oak
Savannahs, & Top 10% Vegetation***

*Natural Features Inventory
City of Corvallis, Oregon*



***Timberhill Area – High Protection
Areas Outside Drainageways***

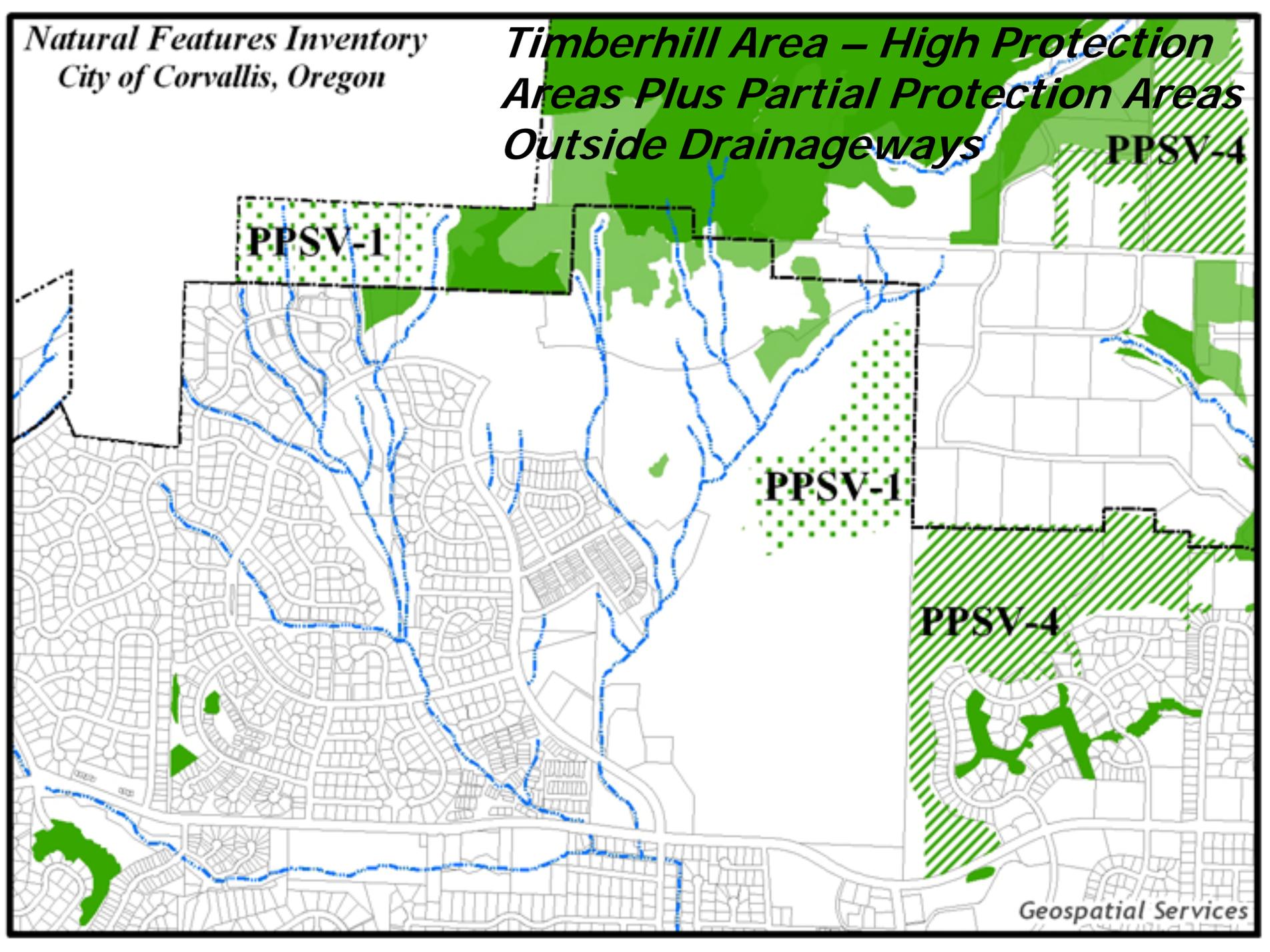
*Timberhill Area – High Protection
Areas Plus Partial Protection Areas
Outside Drainageways*

PPSV-1

PPSV-1

PPSV-4

PPSV-4



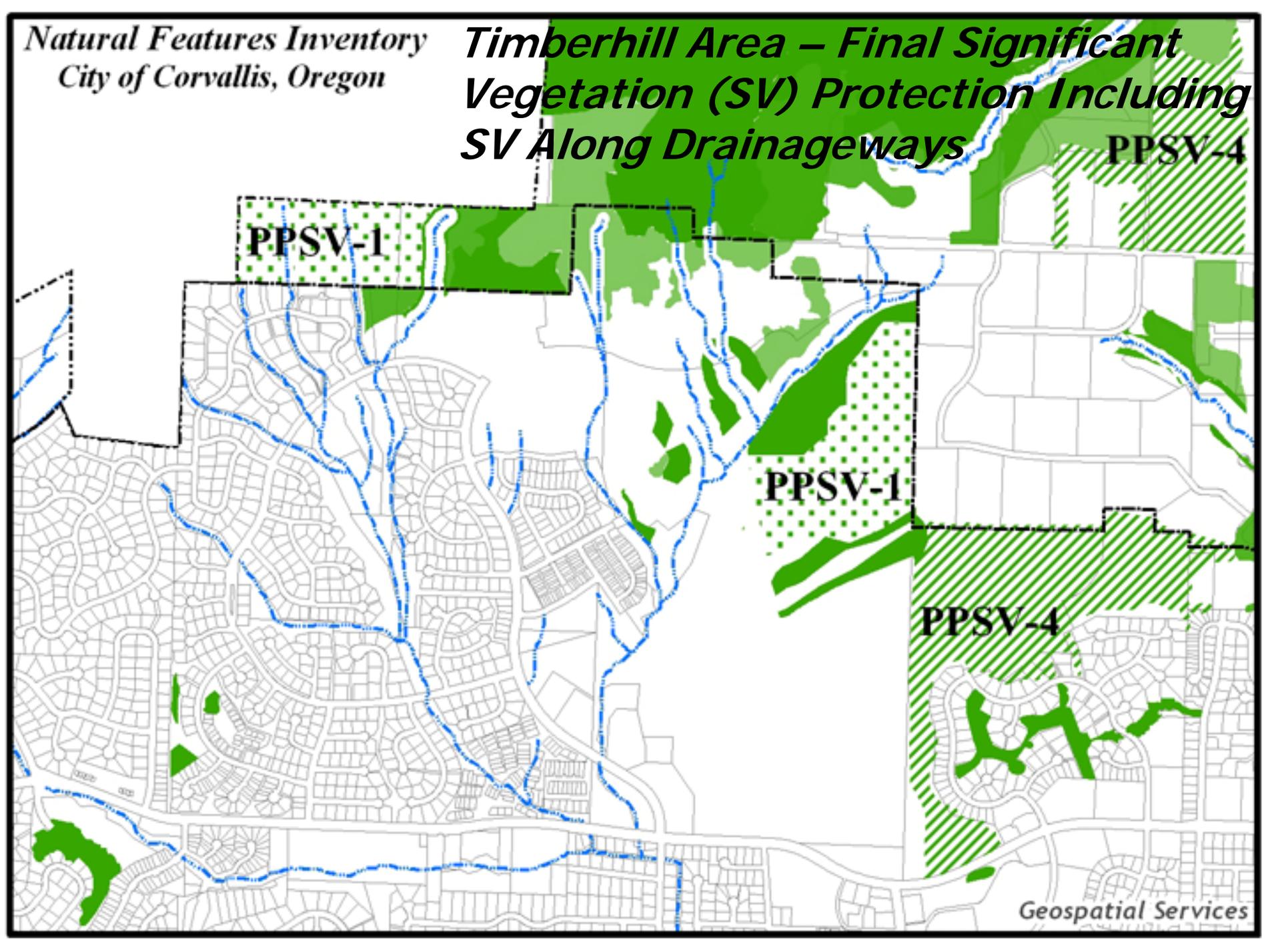
***Timberhill Area – Final Significant
Vegetation (SV) Protection Including
SV Along Drainageways***

PPSV-1

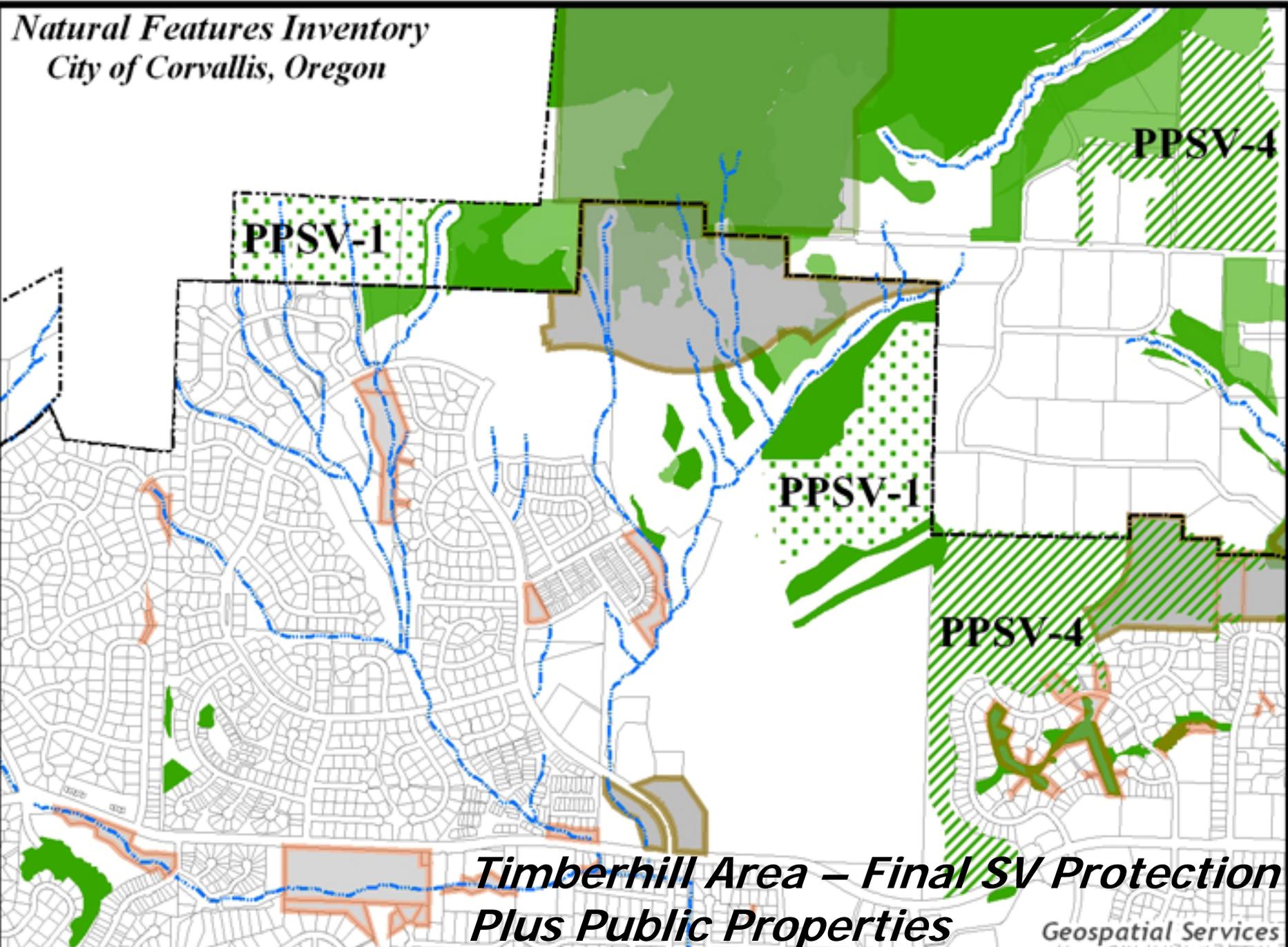
PPSV-4

PPSV-1

PPSV-4



*Natural Features Inventory
City of Corvallis, Oregon*



PPSV-1

PPSV-4

PPSV-1

PPSV-4

***Timberhill Area – Final SV Protection
Plus Public Properties***

*Natural Features Inventory
City of Corvallis, Oregon*

*Gray = Publicly owned
open space*

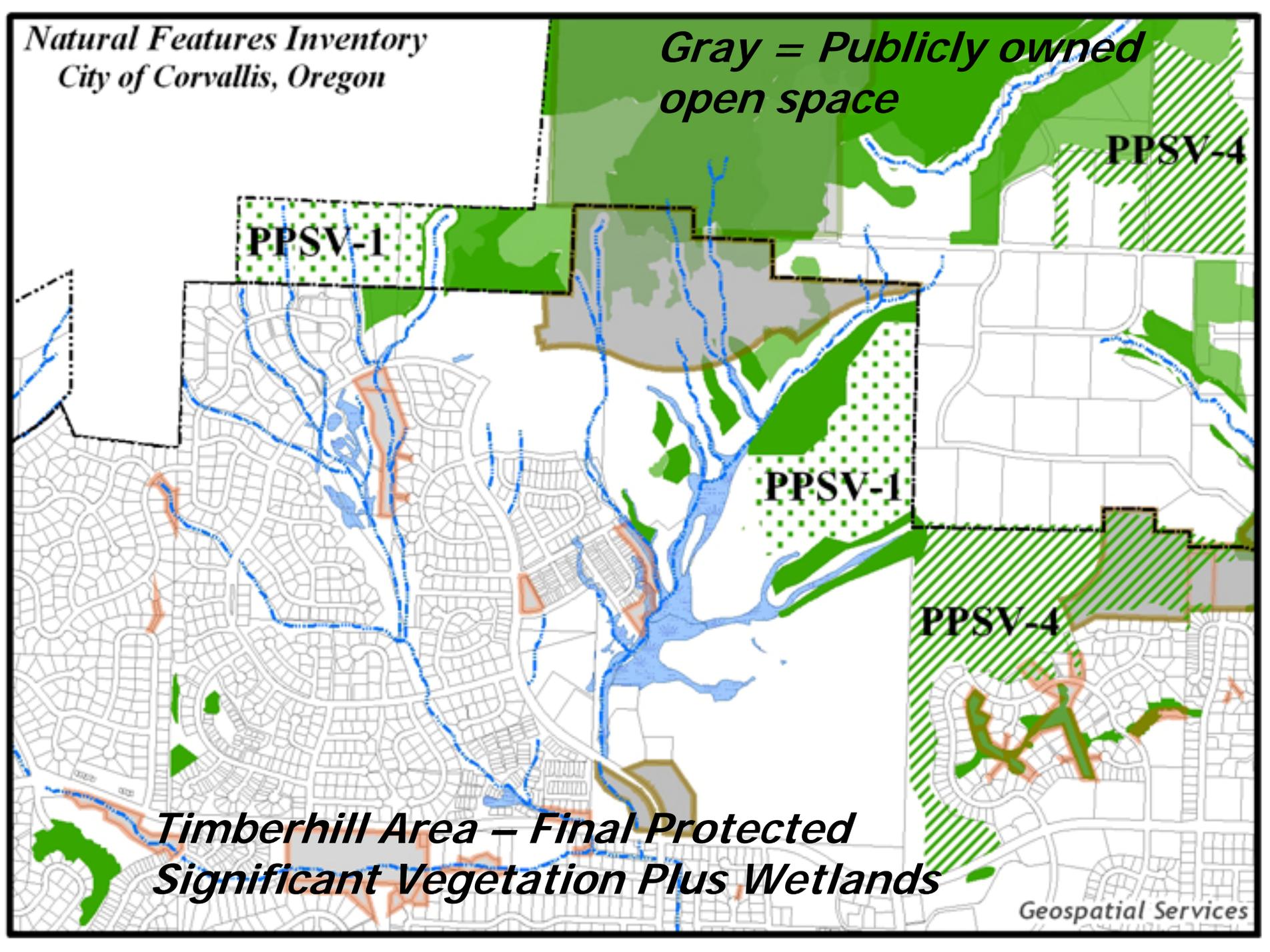
PPSV-1

PPSV-4

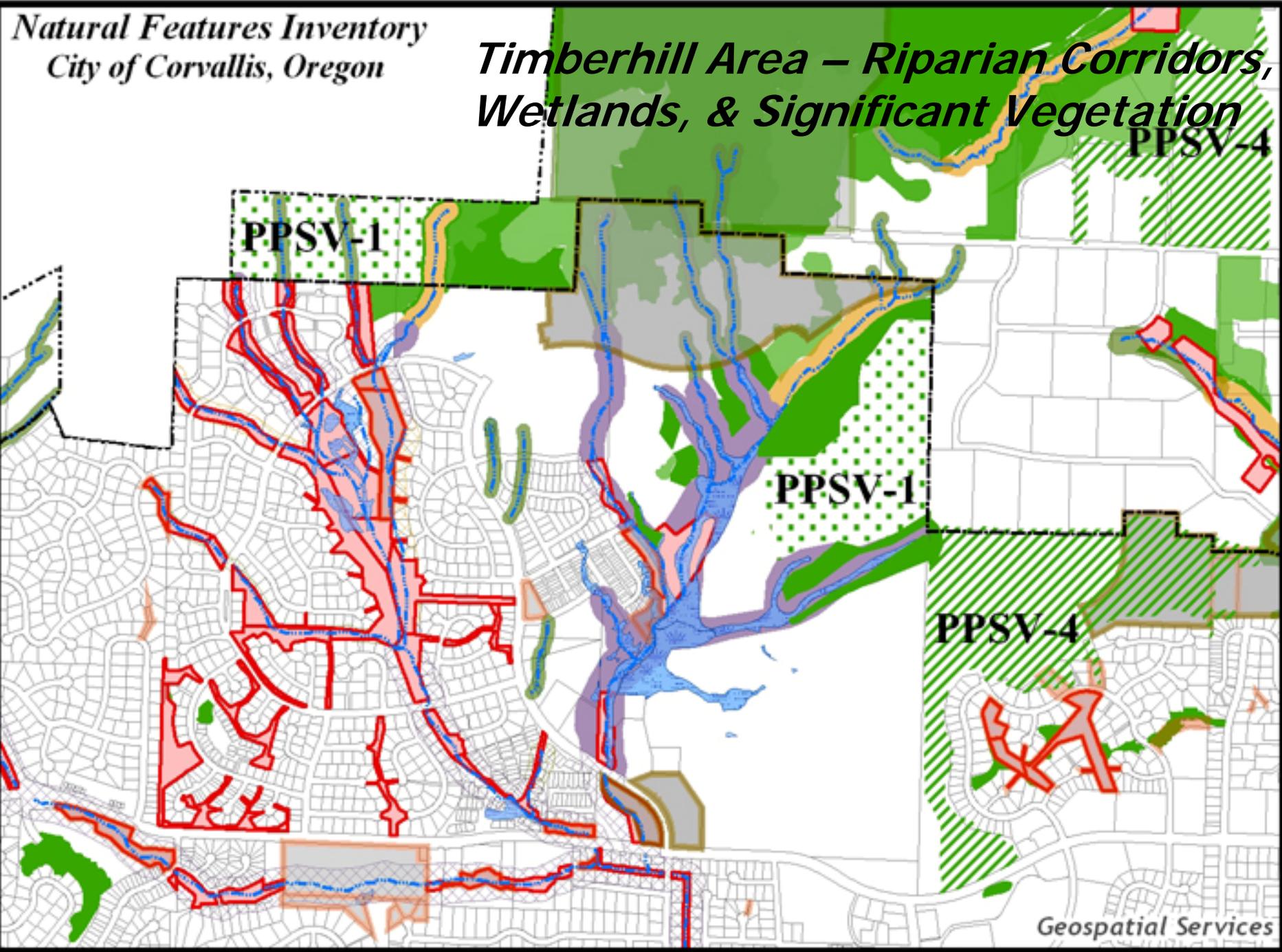
PPSV-1

PPSV-4

***Timberhill Area – Final Protected
Significant Vegetation Plus Wetlands***



*Timberhill Area – Riparian Corridors,
Wetlands, & Significant Vegetation*



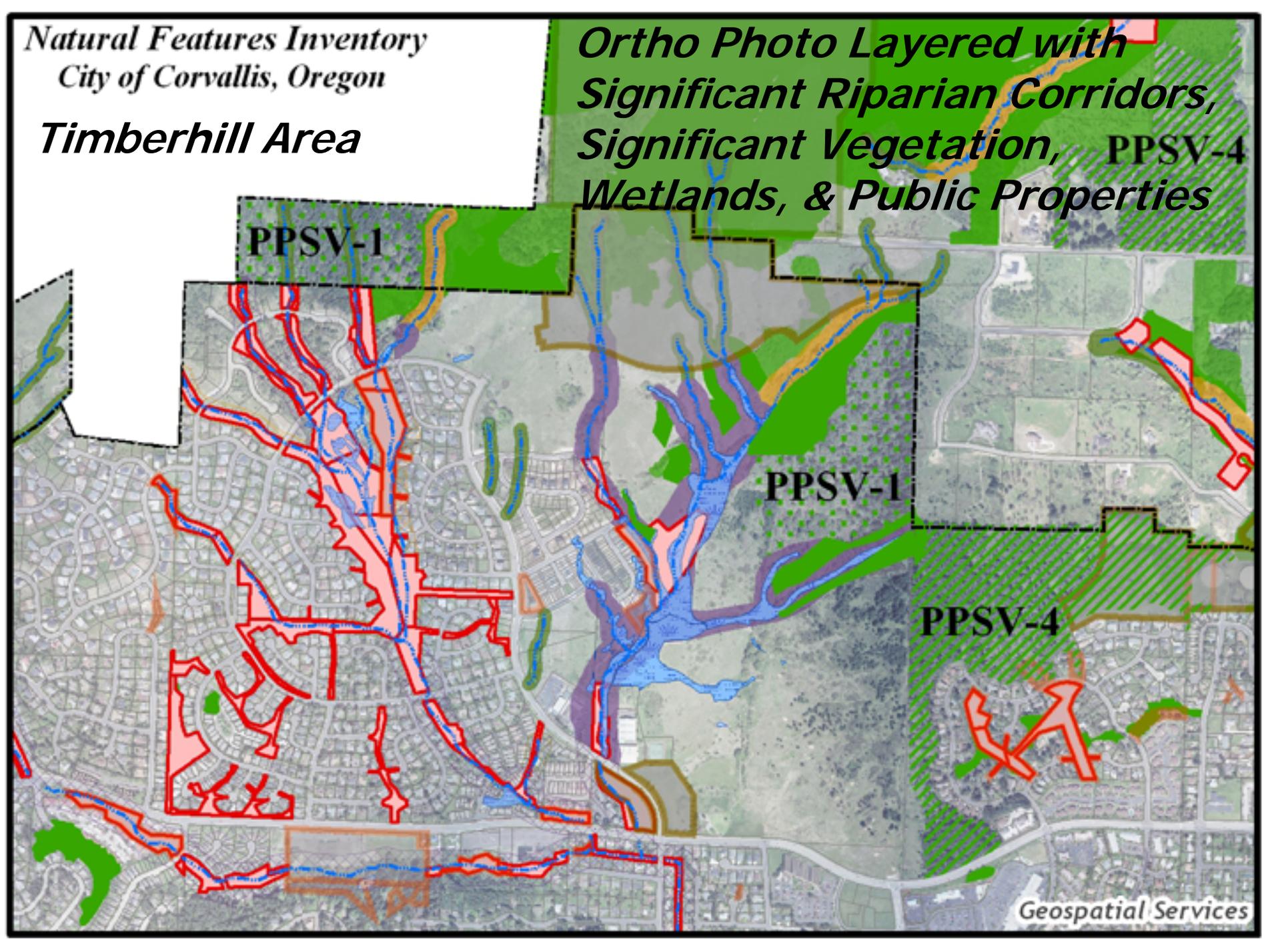
*Natural Features Inventory
City of Corvallis, Oregon
Timberhill Area*

*Ortho Photo Layered with
Significant Riparian Corridors,
Significant Vegetation, PPSV-4
Wetlands, & Public Properties*

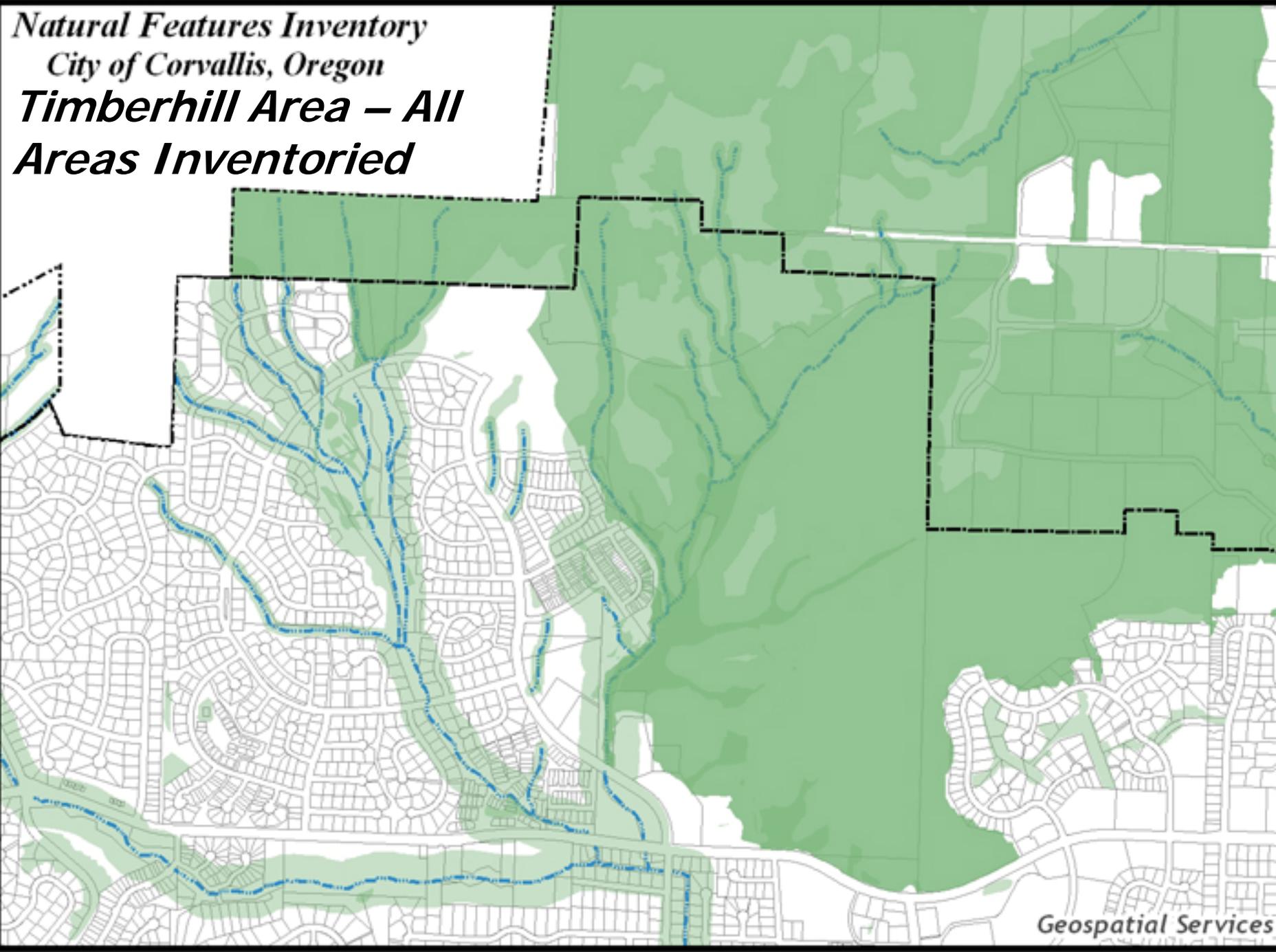
PPSV-1

PPSV-1

PPSV-4

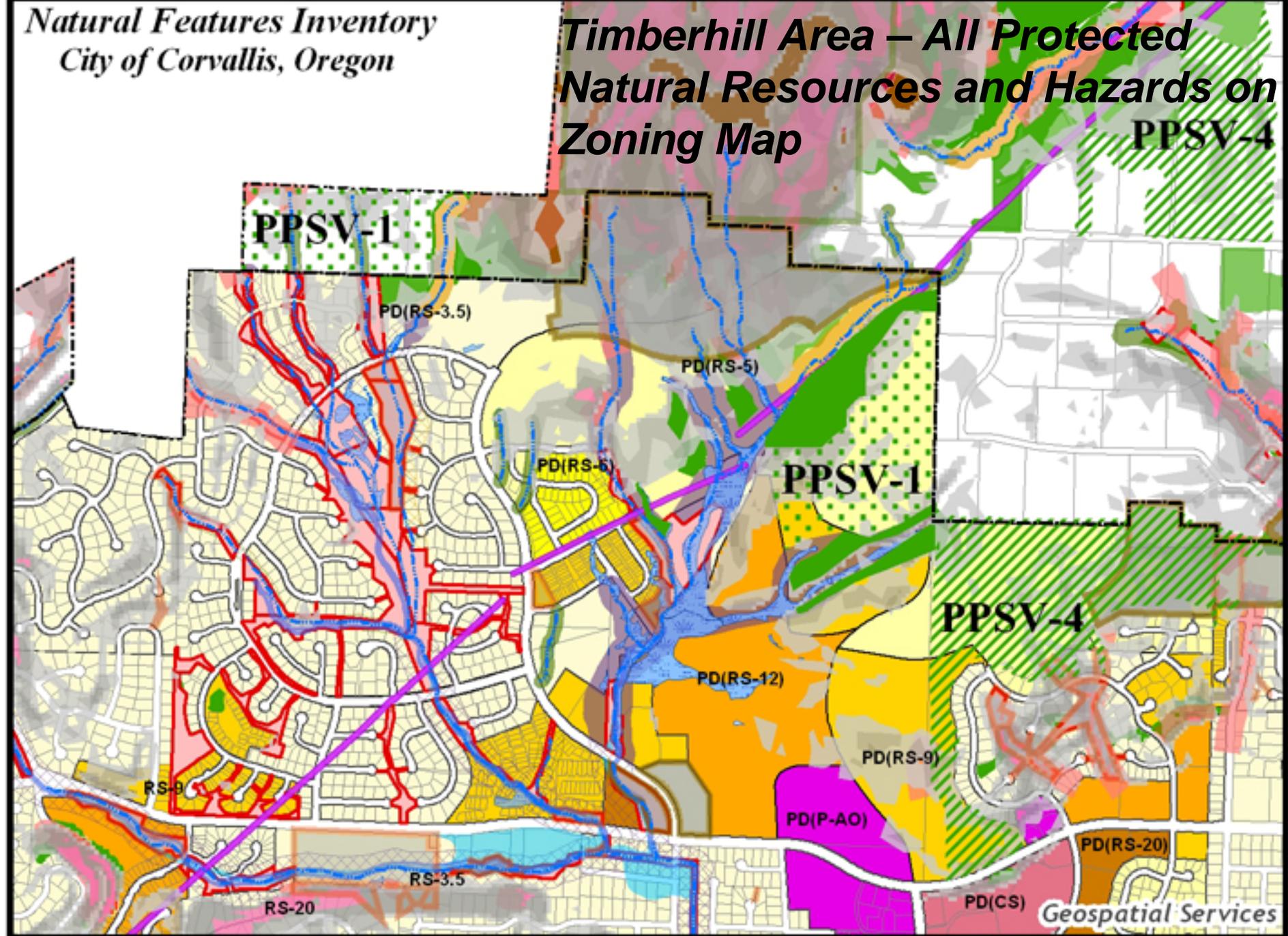


Natural Features Inventory
City of Corvallis, Oregon
Timberhill Area – All
Areas Inventoried

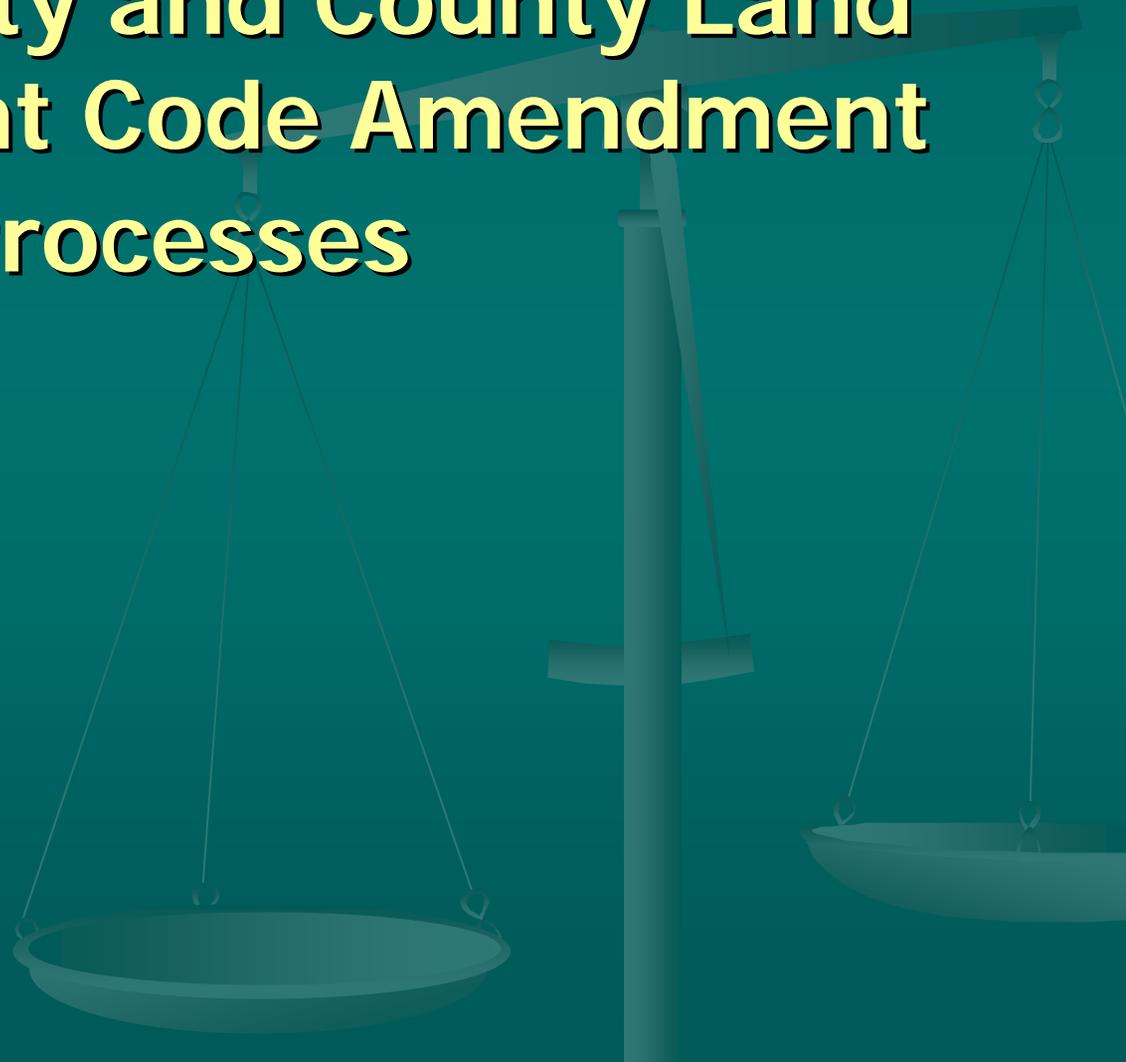


*Natural Features Inventory
City of Corvallis, Oregon*

**Timberhill Area – All Protected
Natural Resources and Hazards on
Zoning Map**



Separate City and County Land Development Code Amendment Processes



City Program Components

NATURAL RESOURCES

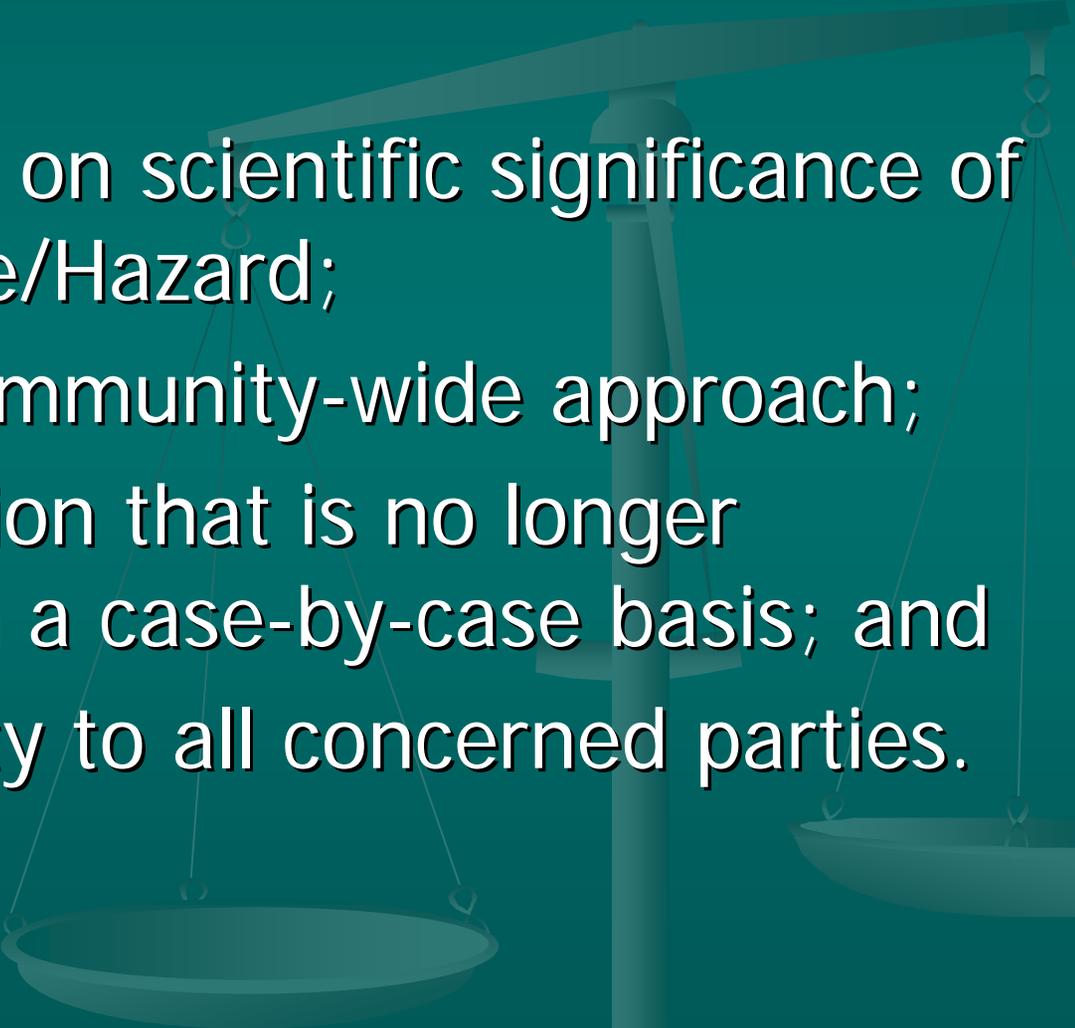
- Riparian Corridors
- Wetlands
- Significant Vegetation

NATURAL HAZARDS

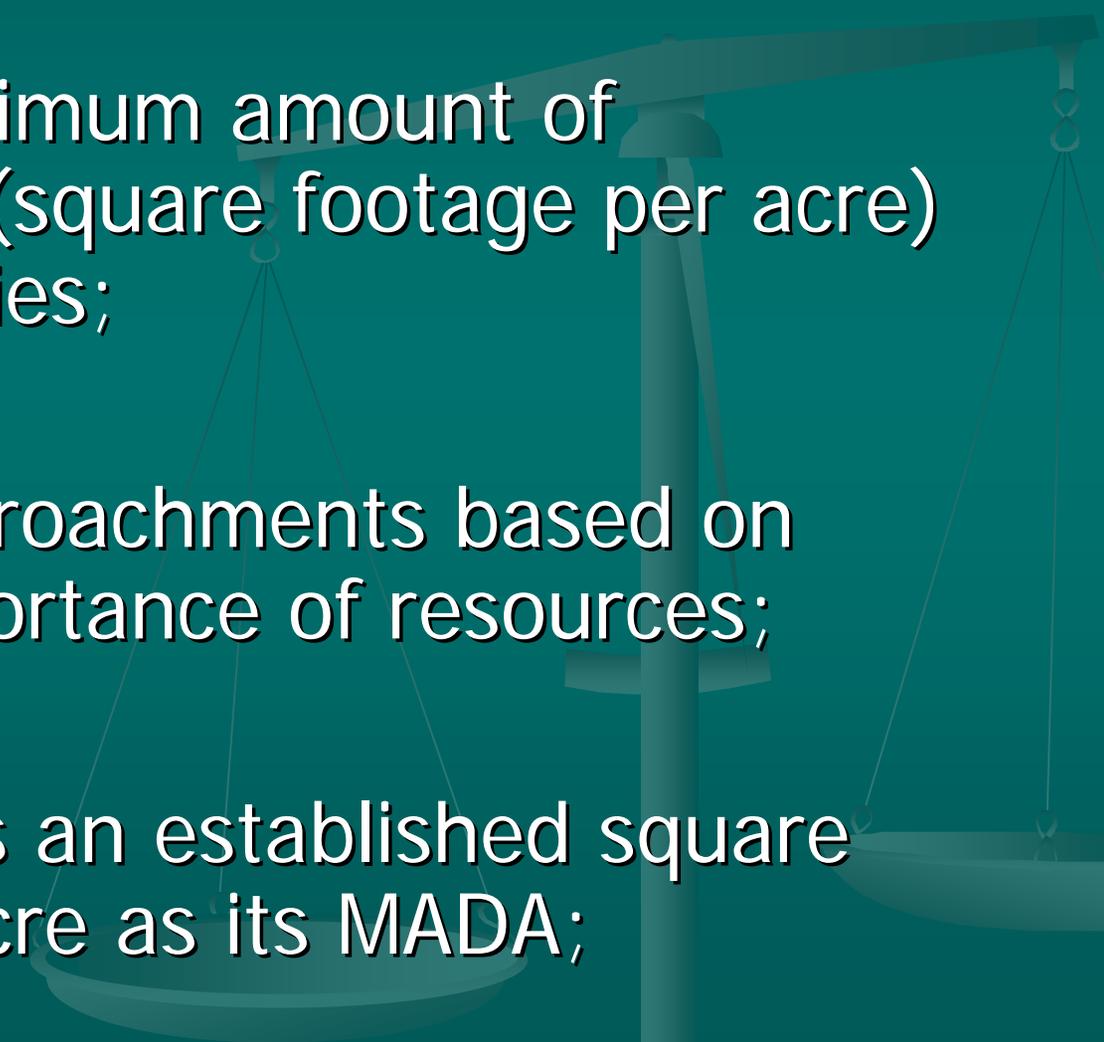
- 100-year Floodplain
- Floodway
- Slopes
- Landslide Risk Areas

MADA – Minimum Assured Development Area

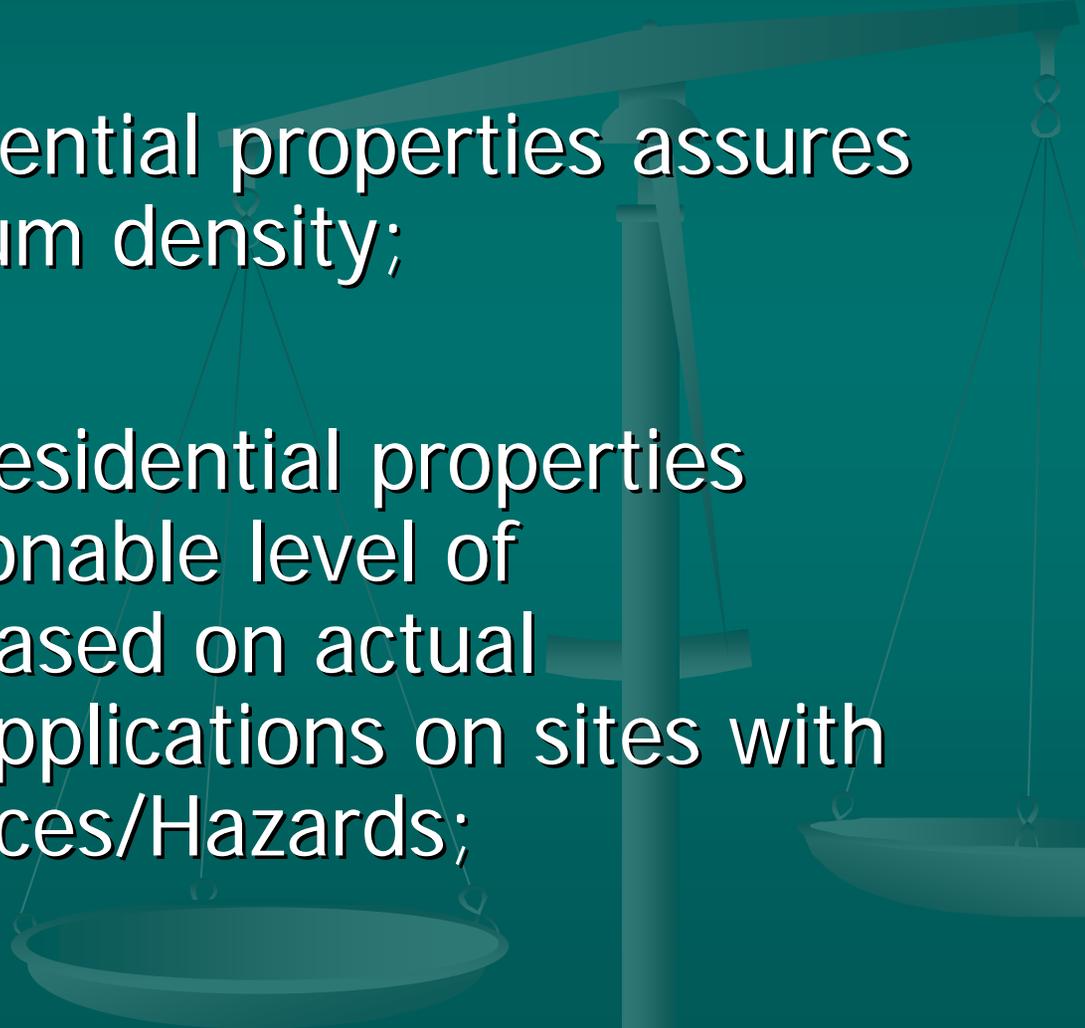
Results: Graduated Scale of Protection Program that:

- Is directly based on scientific significance of Natural Resource/Hazard;
 - Is a balanced community-wide approach;
 - Provides protection that is no longer accomplished on a case-by-case basis; and
 - Provides certainty to all concerned parties.
- 

MADA – Minimum Assured Development Area

- Assures a minimum amount of development (square footage per acre) for all properties;
 - Prioritizes encroachments based on science – importance of resources;
 - Each zone has an established square footage per acre as its MADA;
- 

MADA – Minimum Assured Development Area (Cont'd)

- MADA for residential properties assures at least minimum density;
 - MADA for nonresidential properties assures a reasonable level of development based on actual development applications on sites with Natural Resources/Hazards;
- 

Program Structure

Comprehensive Plan Map

Natural Resources Overlay

Natural Hazards Overlay

Zoning Map

Natural Resources Overlay

Natural Hazards Overlay

Significant Vegetation Map

Varying Levels of Protection
that Relate to a Code Chapter

Riparian Corridors and Wetlands Map

Varying Levels of Protection
that Relate to a Code Chapter

Natural Hazards Map

Varying Levels of Protection
that Relate to a Code Chapter

Partial Legend from Zoning & Comprehensive Plan Maps

Legend:

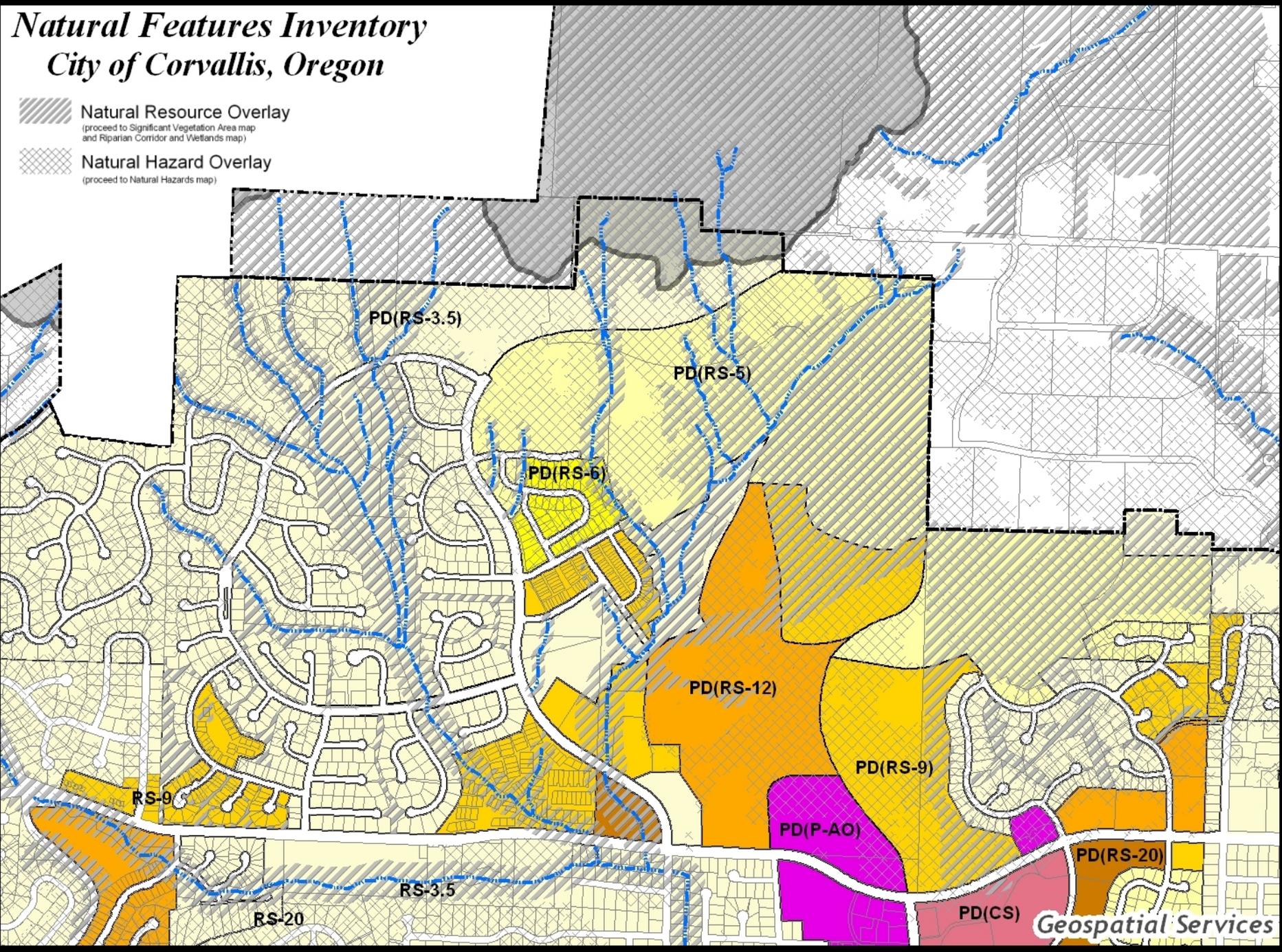
-  City Limit
-  Urban Growth Boundary
-  Streams
-  Natural Resource Overlay
(proceed to Significant Vegetation Area map
and Riparian Corridor and Wetlands map)
-  Natural Hazard Overlay
(proceed to Natural Hazards map)
-  No municipal water service area

Note: Map refinements can occur as provided in Chapters 4.5 and 4.13 of the Corvallis Land Development Code.

Natural Features Inventory

City of Corvallis, Oregon

-  Natural Resource Overlay
(proceed to Significant Vegetation Area map
and Riparian Corridor and Wetlands map)
-  Natural Hazard Overlay
(proceed to Natural Hazards map)



Code Chapters that Correlate to Zoning Sub-maps

Natural Hazards Map



Chapter 4.5 - Natural Hazard & Hillside Development Provisions

Riparian Corridors & Wetlands Map



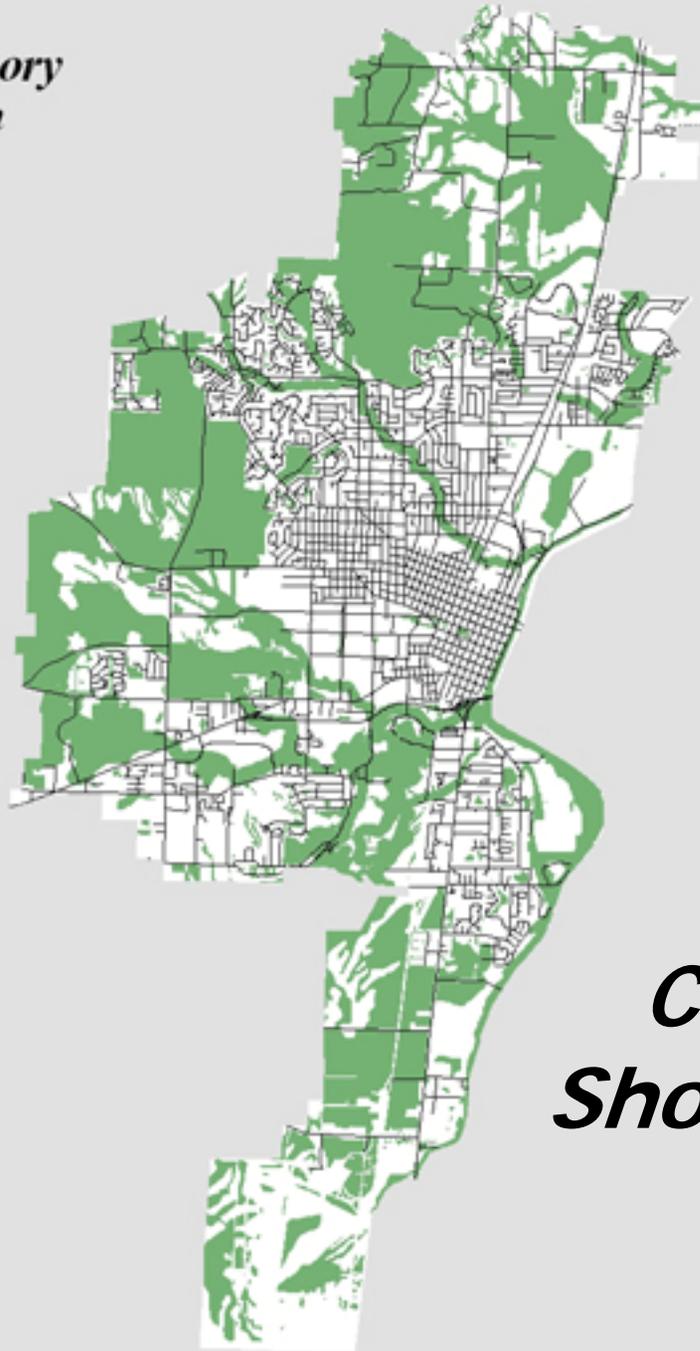
Chapter 4.13 - Riparian Corridor & Wetland Provisions

Significant Vegetation Map



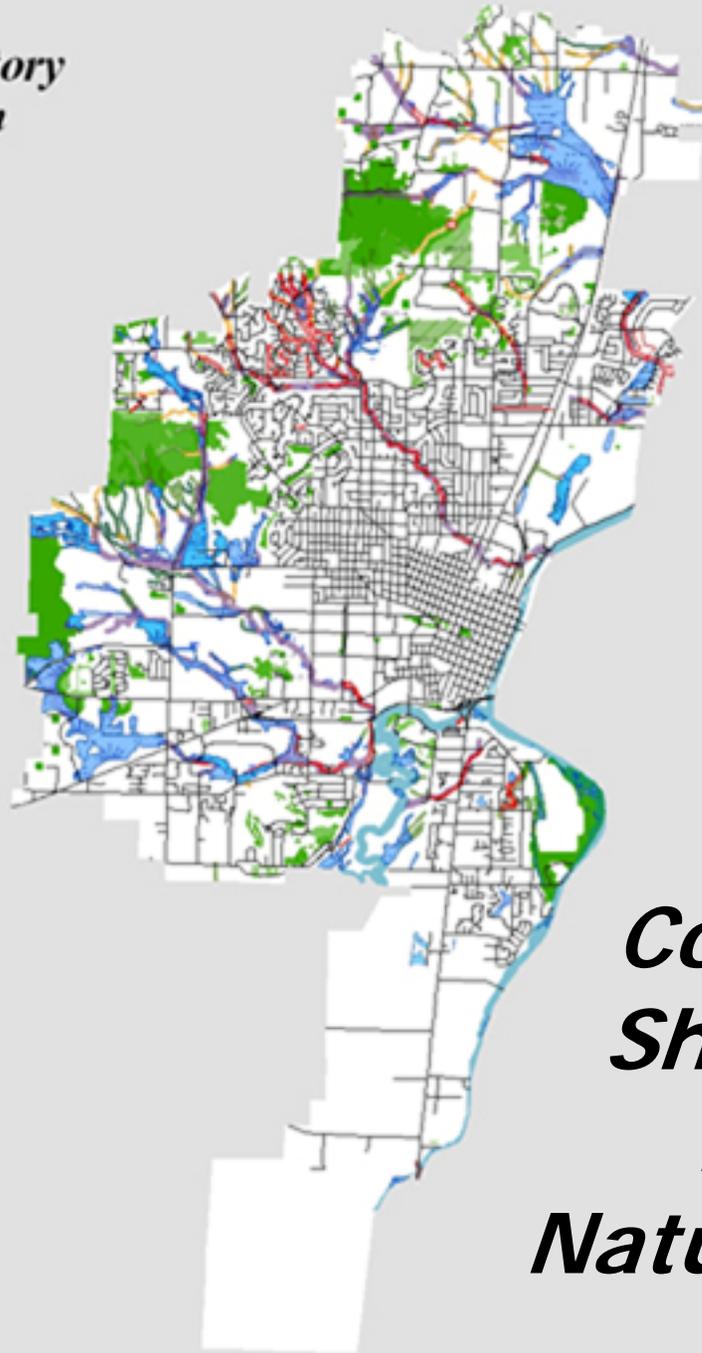
Chapter 4.12 - Significant Vegetation Provisions

*Natural Features Inventory
City of Corvallis, Oregon*



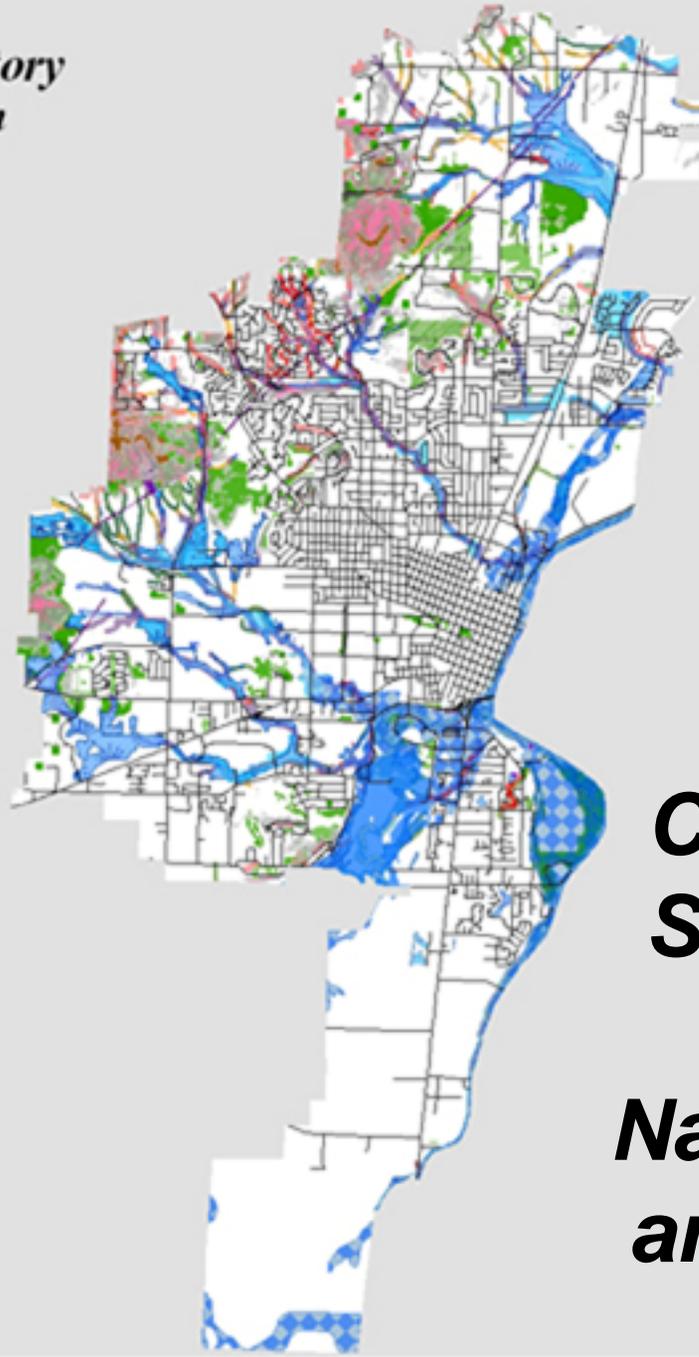
***Corvallis UGB
Showing All Areas
Inventoried***

*Natural Features Inventory
City of Corvallis, Oregon*



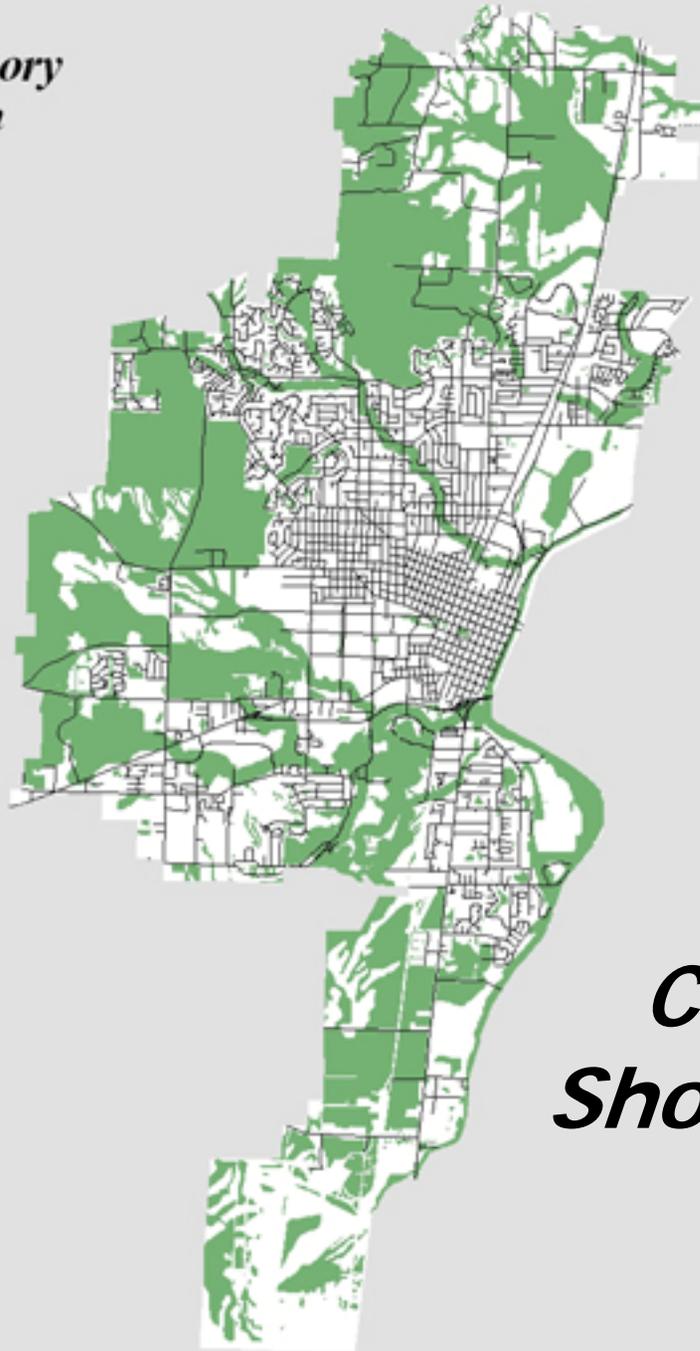
***Corvallis UGB
Showing Final
Protected
Natural Resources***

*Natural Features Inventory
City of Corvallis, Oregon*



**Corvallis UGB
Showing Final
Protected
Natural Hazards
and Resources**

*Natural Features Inventory
City of Corvallis, Oregon*



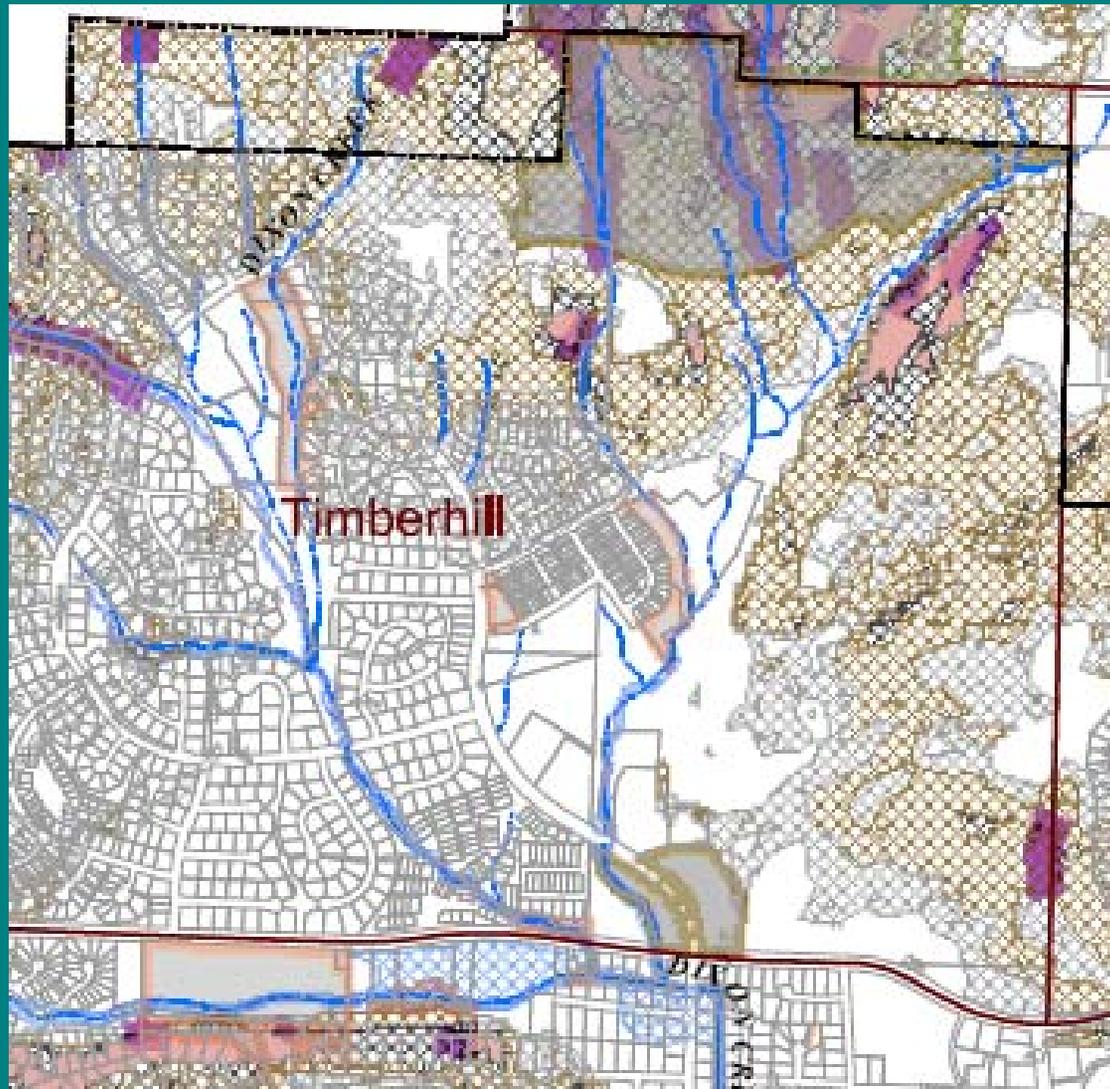
***Corvallis UGB
Showing All Areas
Inventoried***

Chapter 4.5 – Natural Hazard & Hillside Development Provisions

Provides standards for:

- Areas within the 100-yr. Floodplain;
- Identified Landslide Hazard areas; and
- Excavation, grading, and development on sites that include with land with a slope of at least 10%.
- (See Natural Hazards Map)

Natural Hazards Map – Subcomponent of Zoning Map



Partial Legend from Natural Hazards Map

Flood Hazard Areas



0.2-Ft. Floodway

100-Year Floodplain



High Protection



Partial Protection

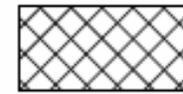
Steeply Sloped Areas



10-15% Slope



15-24.99% Slope



15-34.99% Slope



35% and greater Slope

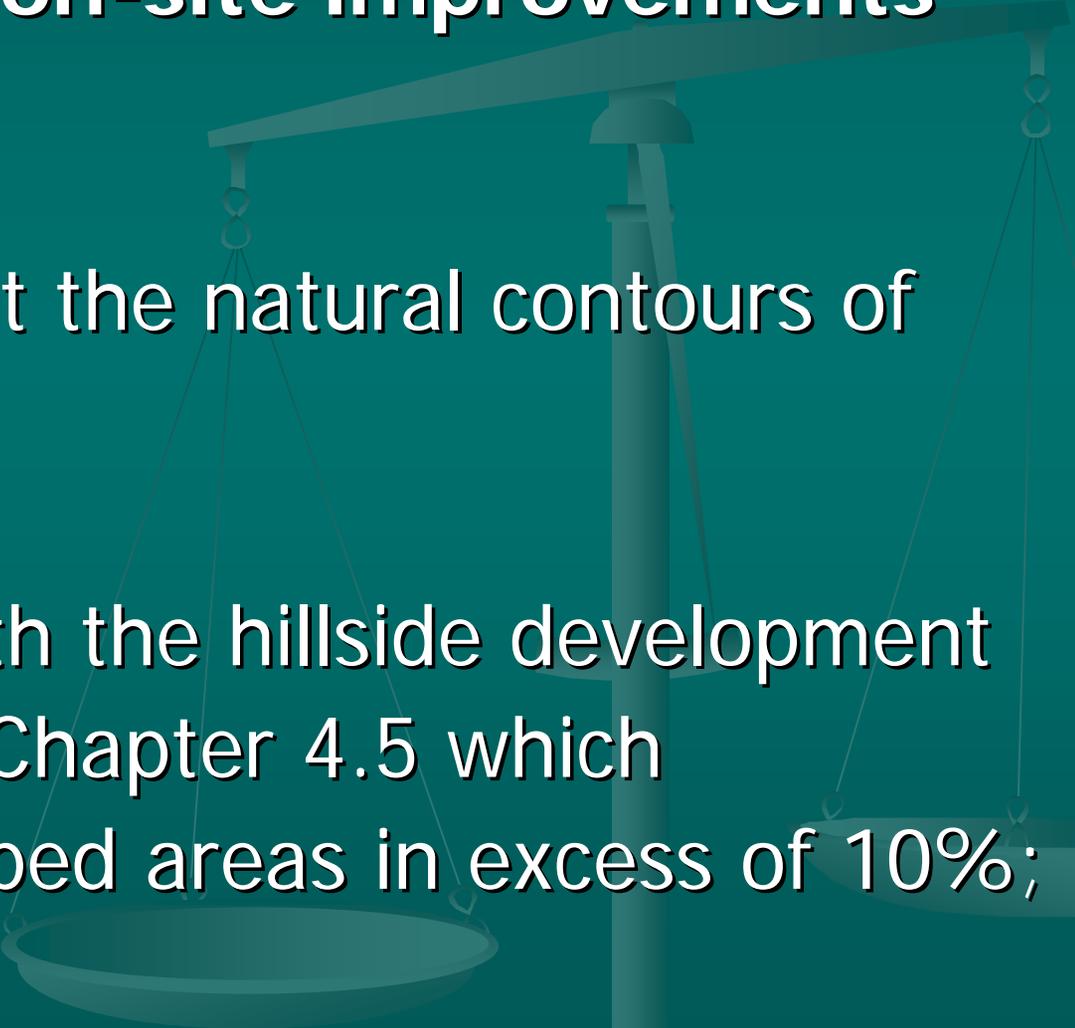
Landslides Risk



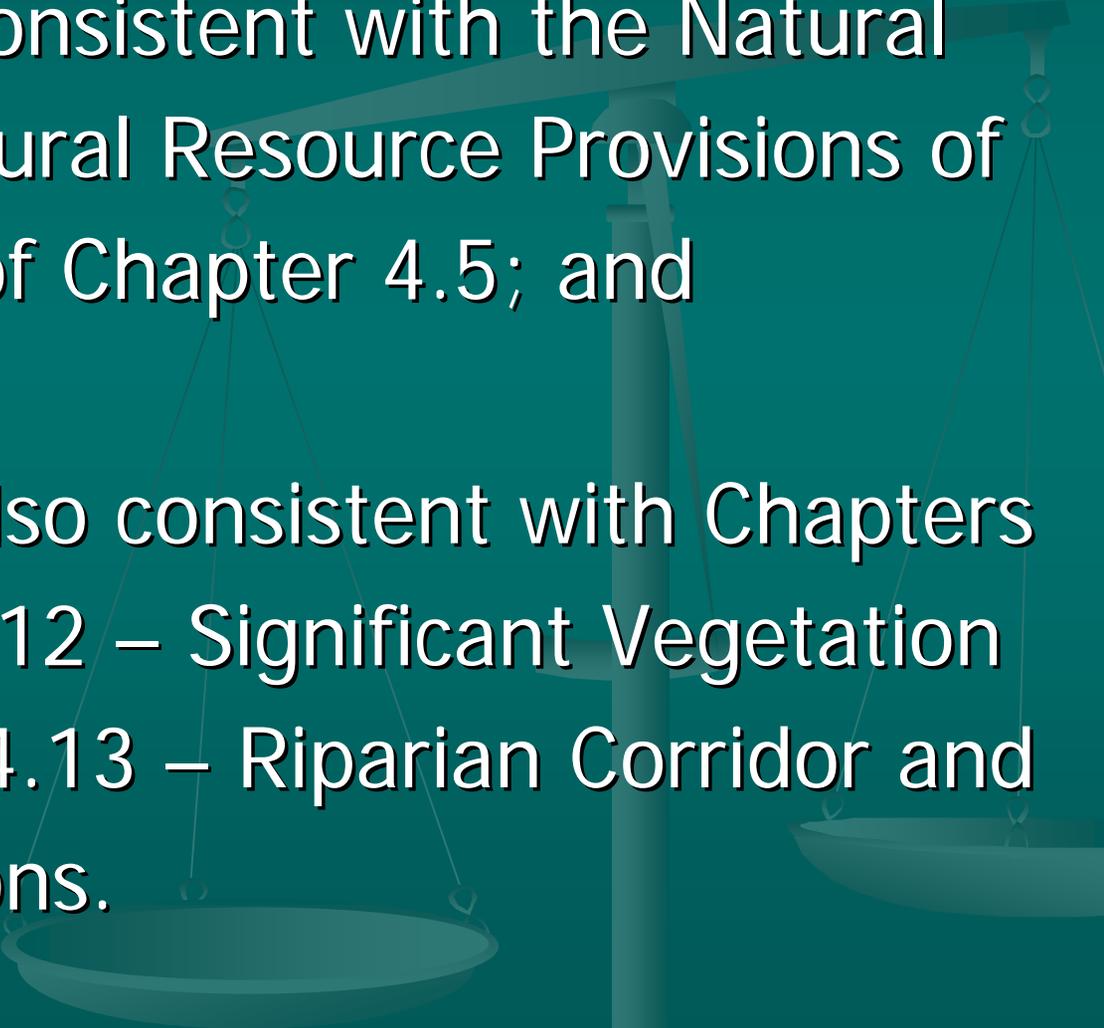
High

(Includes high landslide risk areas,
existing landslide areas and landslide
debris runout areas)

Grading (Cuts and Fills)

- **Structures and on-site improvements must be:**
 1. Designed to fit the natural contours of the site;
 2. Consistent with the hillside development provisions in Chapter 4.5 which pertain to sloped areas in excess of 10%;
- 

Grading (Cuts and Fills) (Cont'd)

3. As applicable, consistent with the Natural Hazard and Natural Resource Provisions of the remainder of Chapter 4.5; and
 4. As applicable, also consistent with Chapters 4.11 – MADA, 4.12 – Significant Vegetation Provisions, and 4.13 – Riparian Corridor and Wetland Provisions.
- 

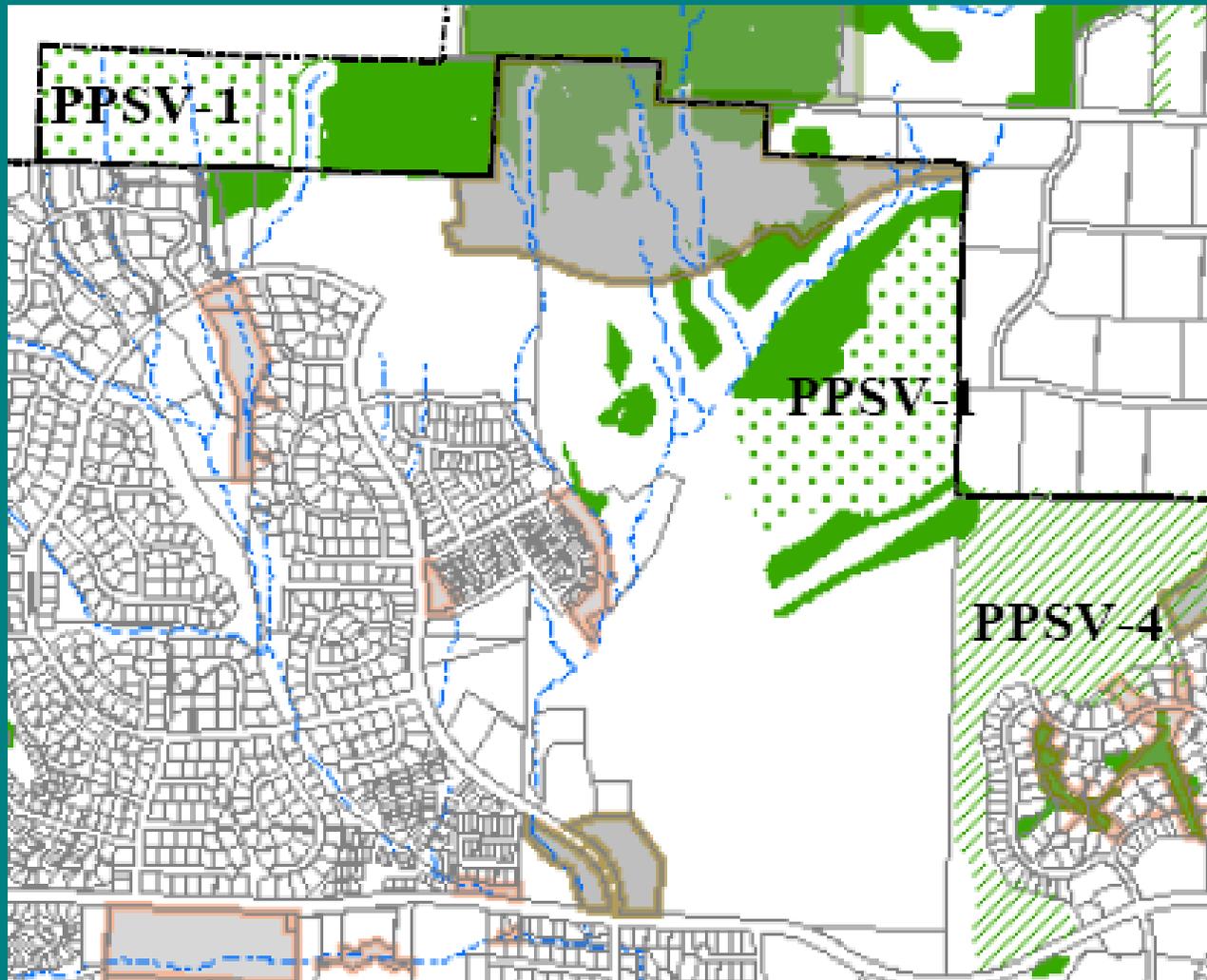
Example of Minimizing Cuts and Fills in Residential Development – Home design stepped to address slopes.



Chapter 4.12 – Significant Vegetation Protection Provisions

- Protect Significant Vegetation Areas chosen for protection and shown on the Significant Vegetation Map;
- Allow outright removal of Non-native, Invasive, &/or Noxious Vegetation; and
- Require approval of a Significant Vegetation Management Plan prior to removal of other vegetation in the protected areas.

Significant Vegetation Map – Subcomponent of Zoning Map



Partial Legend for Significant Vegetation Map

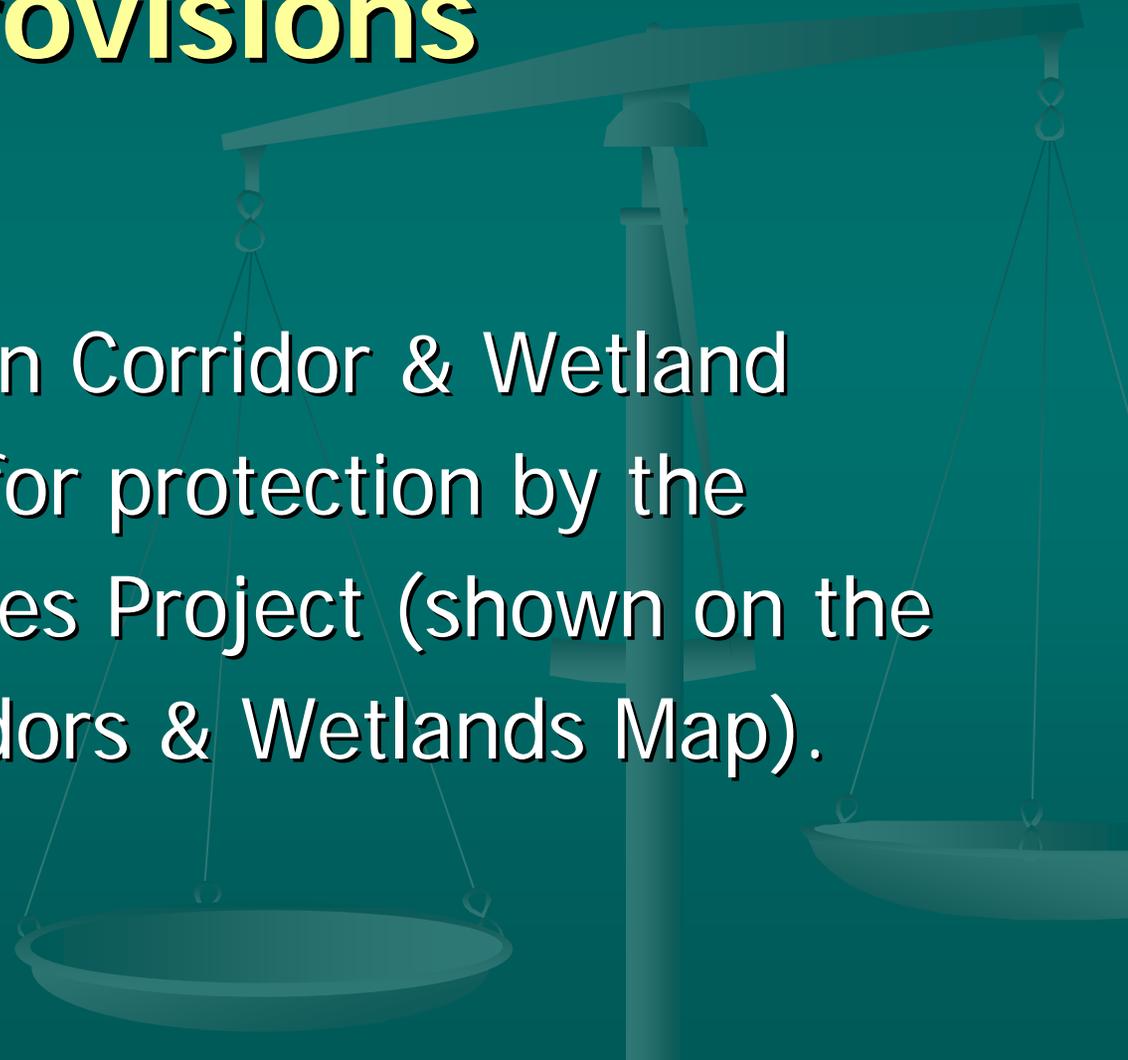


Residential Development next to Preserved Oak Grove

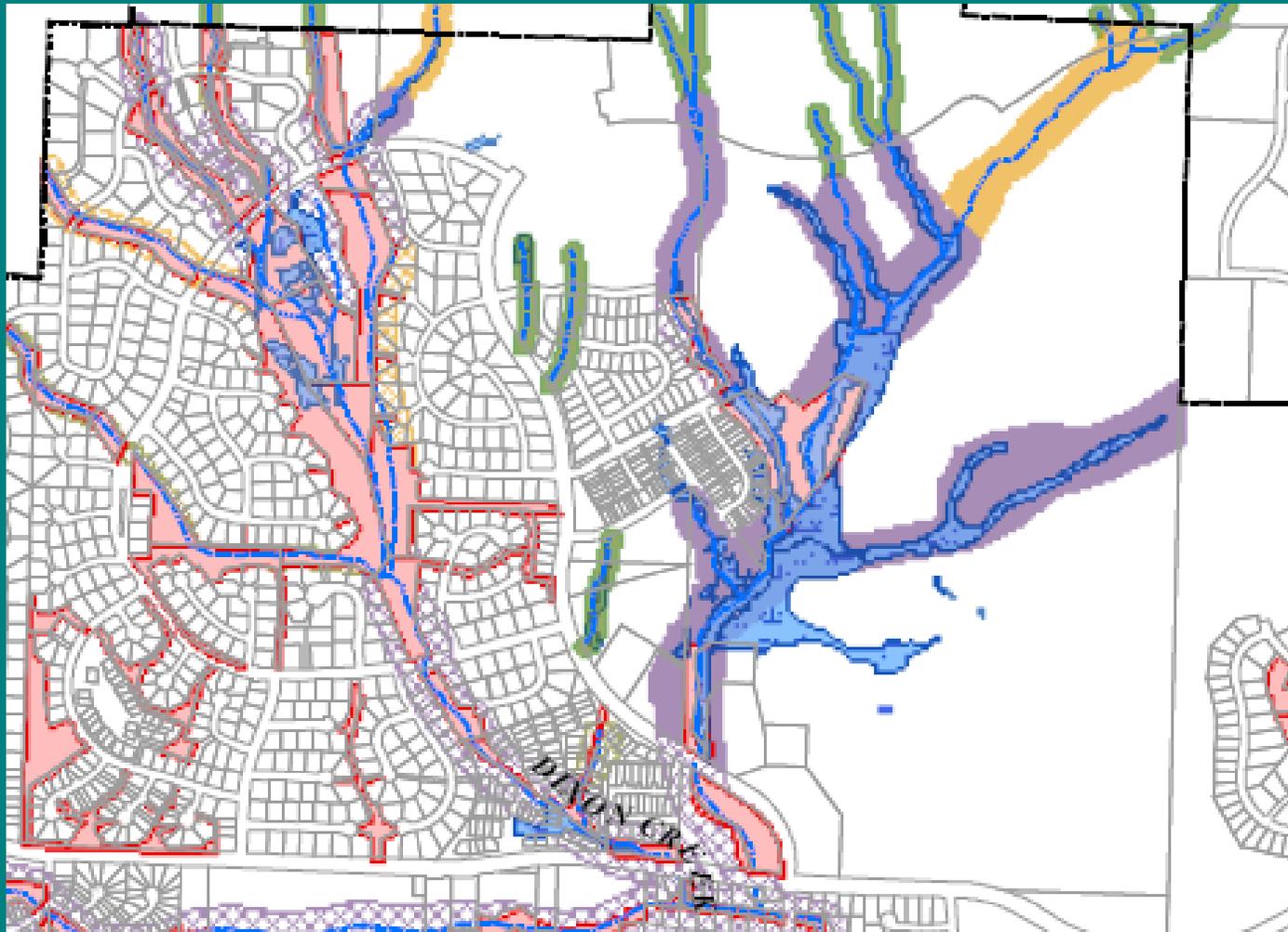


Chapter 4.13 – Riparian Corridor & Wetland Provisions

- Protect Riparian Corridor & Wetland areas chosen for protection by the Natural Features Project (shown on the Riparian Corridors & Wetlands Map).



Riparian Corridors & Wetlands Map – Subcomponent of Zoning Map



Partial Legend from Riparian Corridors & Wetlands Map

50-Foot Riparian Corridor (Where drainage basin <20 acres.)



High Protection



Partial Protection

75-Foot Riparian Corridor (Where drainage basin 20-160 acres.)



High Protection



Partial Protection

100-Foot Riparian Corridor (Where drainage basin >160 acres.)



High Protection



Partial Protection

120-Foot Riparian Corridor (Willamette and Mary's Rivers except Downtown)



High Protection



Partial Protection

Proximate Wetlands



Adjacent to Riparian Corridors

Open Space and Drainage Areas



(Including dedications and easements - other areas may exist which are not yet included on the map.)

Locally Protected Wetlands



Locally Protected Locally Significant Wetlands



Wetlands of Special Significance

Residential Development next to Preserved Riparian/creek Area

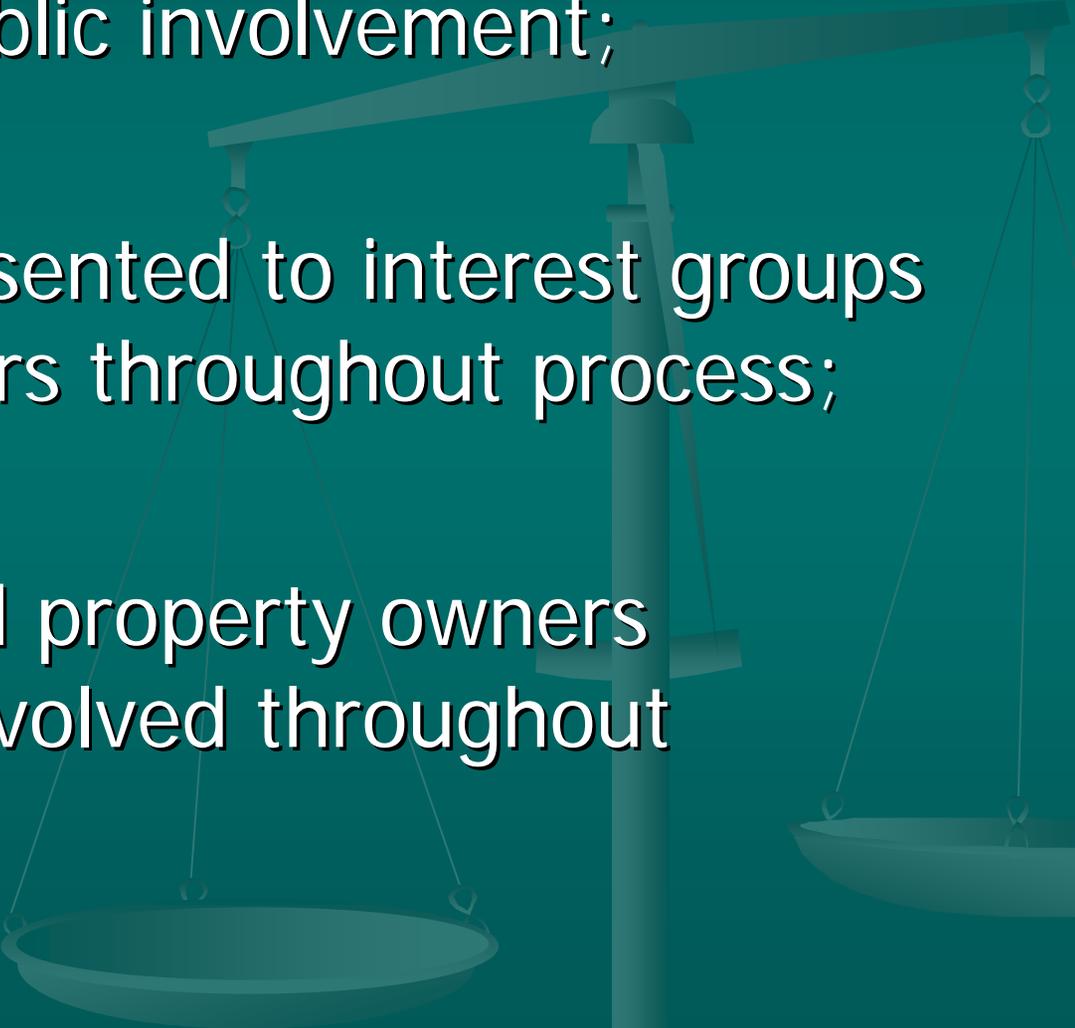


Key Reasons for Success

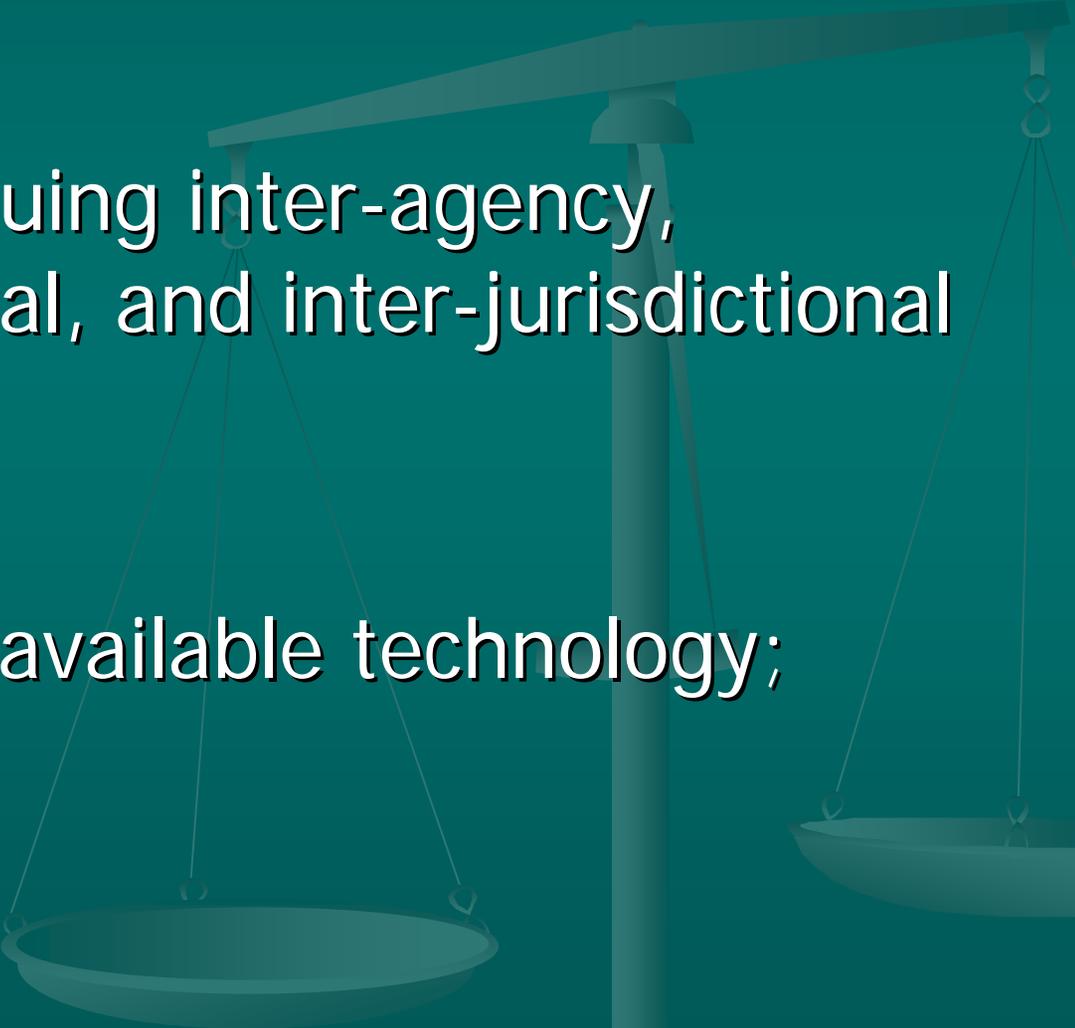


- Comprehensive, integrated program allowed effective balancing of the community's values and land use needs;
- Each step built upon previous steps;
- Dedicated decision-makers;
- Competent consultant team and experienced staff;

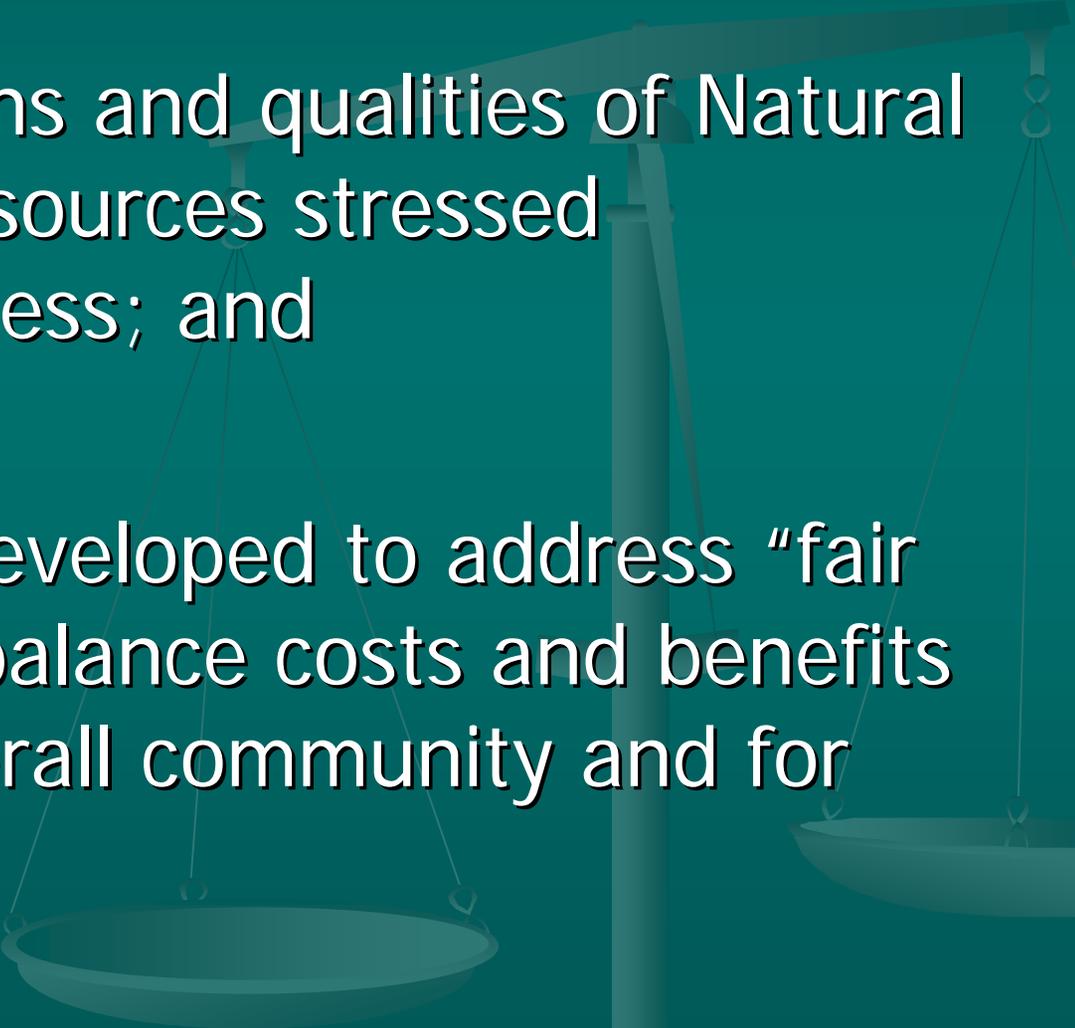
Key Reasons for Success (Cont'd)

- Broad-based public involvement;
 - Information presented to interest groups and stake-holders throughout process;
 - Directly-affected property owners informed and involved throughout process;
- 

Key Reasons for Success (Cont'd)

- Early and continuing inter-agency, interdepartmental, and inter-jurisdictional coordination;
 - Effective use of available technology;
- 

Key Reasons for Success (Cont'd)

- Benefits/functions and qualities of Natural Hazards and Resources stressed throughout process; and
 - MADA system developed to address “fair play” issues to balance costs and benefits for both the overall community and for individuals.
- 

What Would We Do Differently?

- Engage the media more effectively;
 - Devote more resources to keep the web information updated; and
 - Make communications more user-friendly.
- 