

# STANDARDS FOR PESTICIDE, HERBICIDE, AND FERTILIZER USE IN ENVIRONMENTALLY CRITICAL AREAS

Clay Antieau, MS, PhC  
Botanist, Horticulturist,  
Science Communicator

Sr. Environmental Analyst  
ECAs and Tree Protection  
Seattle Dept. Construction and  
Inspections (SDCI; DPD)

City of Seattle IPM Pesticide  
Continuing Education Seminar

October 30, 2018



*Iris pseudacorus*; photo: G. Carr

# Seattle Municipal Code (SMC) Title 23:

## LAND USE CODE

*(...regulates uses and structures and is intended to protect and promote public health, safety and general welfare; provide adequate light, air, access, and open space; conserve the natural environment and historic resources; maintain a compatible scale within an area; minimize traffic congestion and enhance the streetscape and pedestrian environment.)*

### Chapter 23.60A:

## SHORELINE MASTER PROGRAM REGULATIONS

*"to prevent the inherent harm in an uncoordinated and piecemeal development of the State's shorelines."*

**Last updated 2015**

# **Seattle Municipal Code (SMC) Title 25:**

## **ENVIRONMENTAL PROTECTION AND HISTORIC PRESERVATION**

### **Chapter 25.09: REGULATIONS FOR ENVIRONMENTALLY CRITICAL AREAS**

**Last updated early 2017**

# **Seattle Municipal Code (SMC) Title 25:**

## **ENVIRONMENTAL PROTECTION AND HISTORIC PRESERVATION**

### **Chapter 25.11: REGULATIONS FOR TREE PROTECTION**

*“...protection of the urban forest.”*

**Last updated 2015**

# Seattle Municipal Code (SMC) Title 25:

## ENVIRONMENTAL PROTECTION AND HISTORIC PRESERVATION

Chapter 25.05 mirroring WAC 197-11:  
STATE ENVIRONMENTAL POLICY ACT (SEPA)

*“...identifies and analyzes environmental impacts associated with governmental decisions and actions...”*

# SHORELINE MASTER PROGRAM REGULATIONS (23.60A)

**Mandated by Washington State Shoreline Management Act (SMA), created by referendum in 1972; includes goals, policies, and regulations governing land use, public access, and environmental protection in the Shoreline District.**

**Seattle's Shoreline District includes:**

- *Duwamish Waterway*
- *Ship Canal*
- *Lake Union*
- *Lake Washington*
- *Green Lake*
- *Puget Sound*
- *...their associated wetlands and floodplains*
- *...all land within 200 feet of these*

**Applies to both parcels and  
rights-of-way**

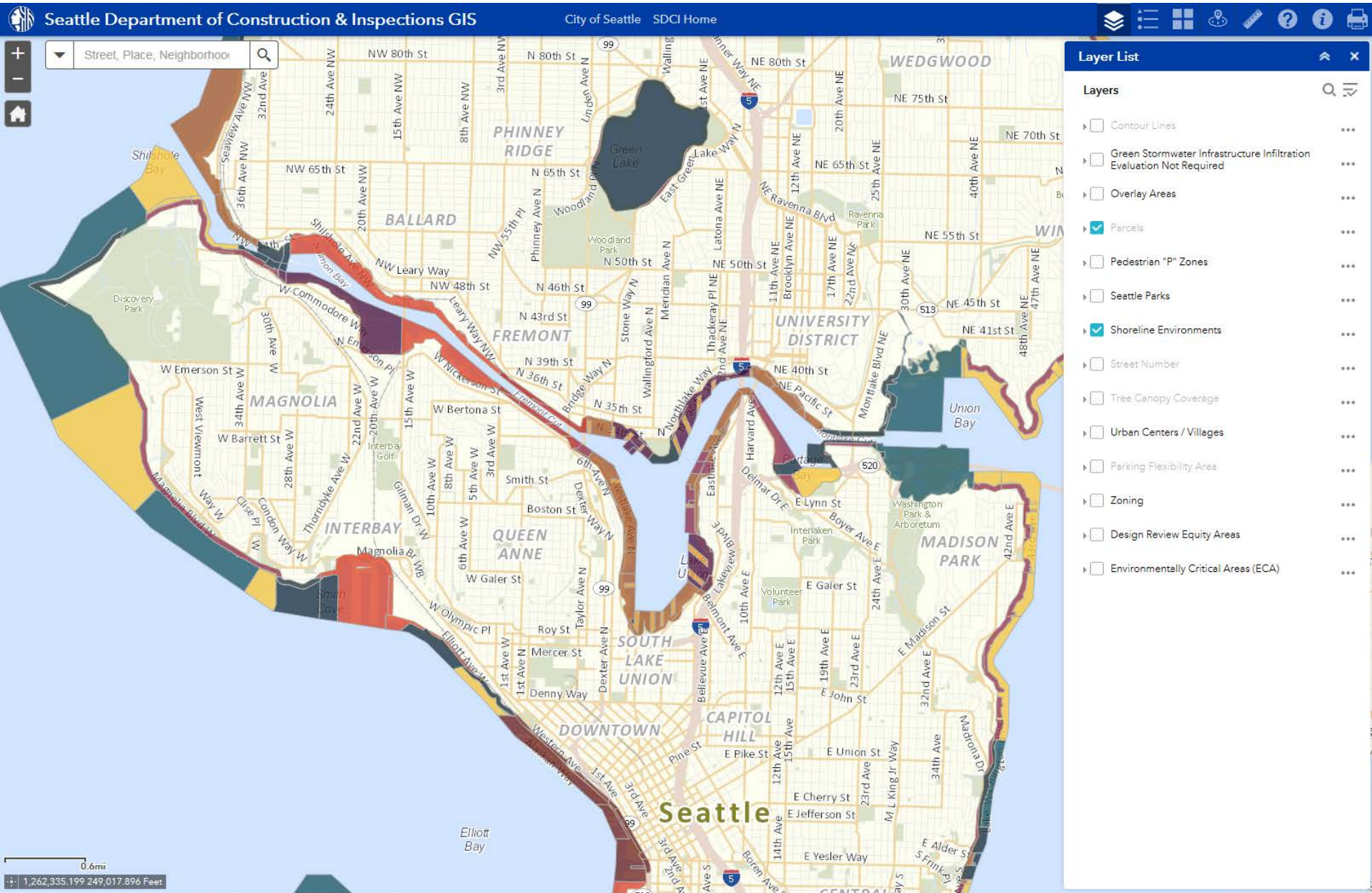


*Lysimachia vulgaris*, Lake Washington; photo: Ben Legler



# GOOGLE: DPD GIS

<http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>



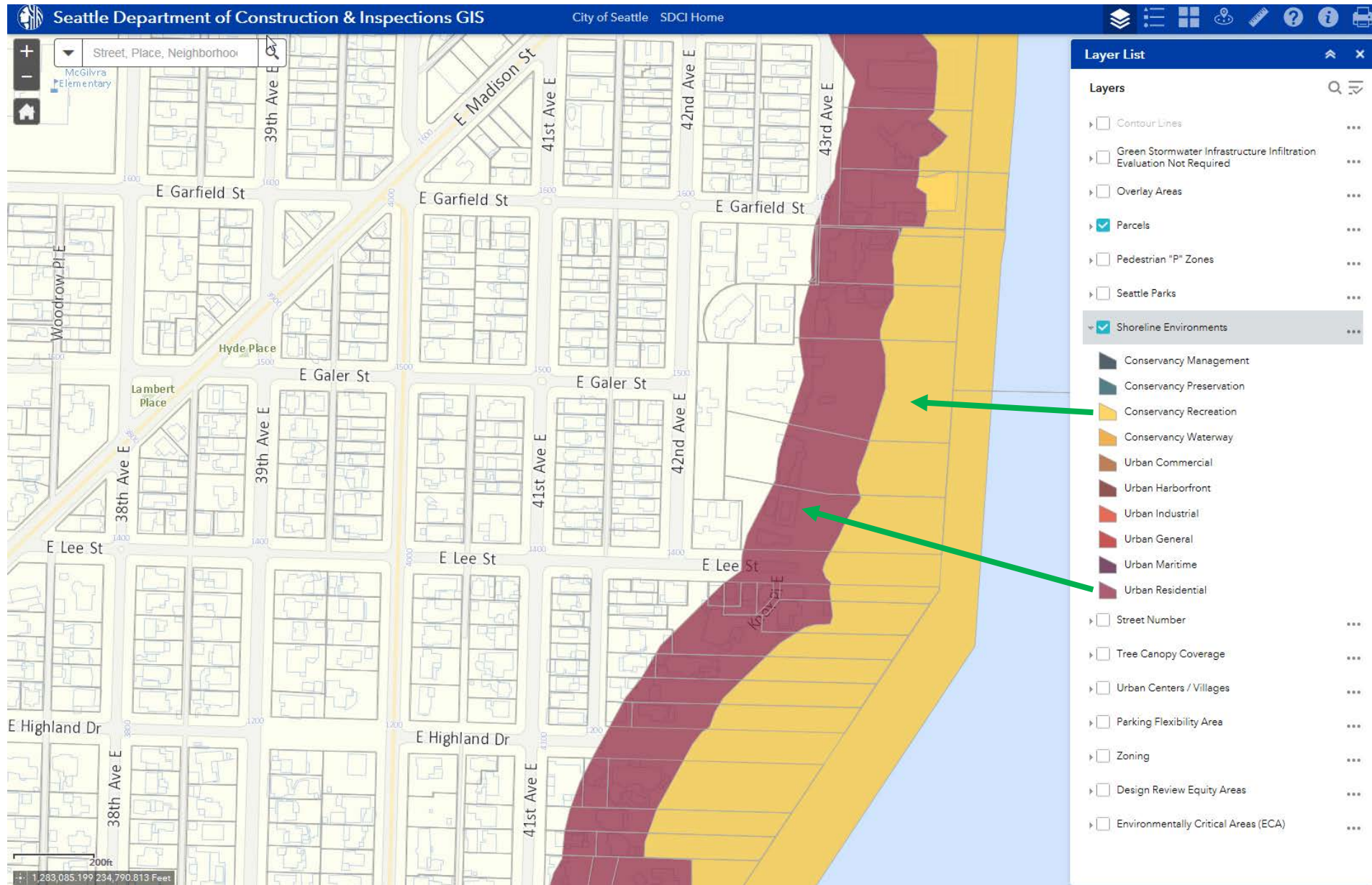







# DPD GIS

<http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>



# ENVIRONMENTALLY CRITICAL AREA (ECA) REGULATIONS (25.09)

- As required by Washington State Growth Management Act
- A formally designated and protected area containing a natural resource or hazard such as landslide-prone areas, steep slope erosion hazard areas, fish and wildlife habitat conservation areas, and wetlands and their buffers
- Defined for City of Seattle in SMC Chapter 25.09
  - Google “SEATTLE SMC”  [https://library.municode.com/wa/seattle/codes/municipal\\_code](https://library.municode.com/wa/seattle/codes/municipal_code)

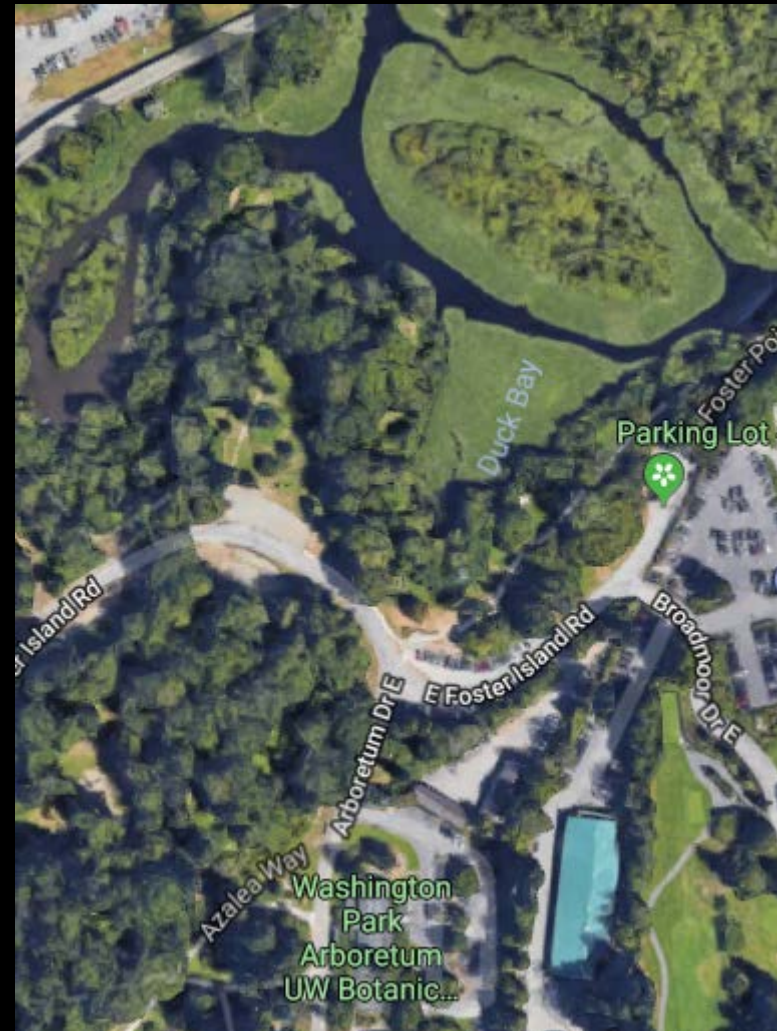
# ENVIRONMENTALLY CRITICAL AREAS (ECA)

- Geologic Hazard Areas
  - Liquefaction-prone Areas
  - Peat Settlement-prone Areas
  - Landslide-prone Areas
    - ✓ includes Known and Potential Landslide Areas (incl. Steep Slopes)
  - Seismic Hazard Areas
  - Volcanic Hazard Areas
- Abandoned Landfills
- Flood-prone Areas



# ENVIRONMENTALLY CRITICAL AREAS (ECA)

- Wetlands (and Wetland Buffers)
- Fish and Wildlife Habitat Conservation Areas
  - Riparian Corridors
  - Priority Habitats (WDFW; e.g. biodiversity corridors and areas)
  - Habitats for Species of Local Importance (Great Blue Heron)
  - Eagle Nest Sites





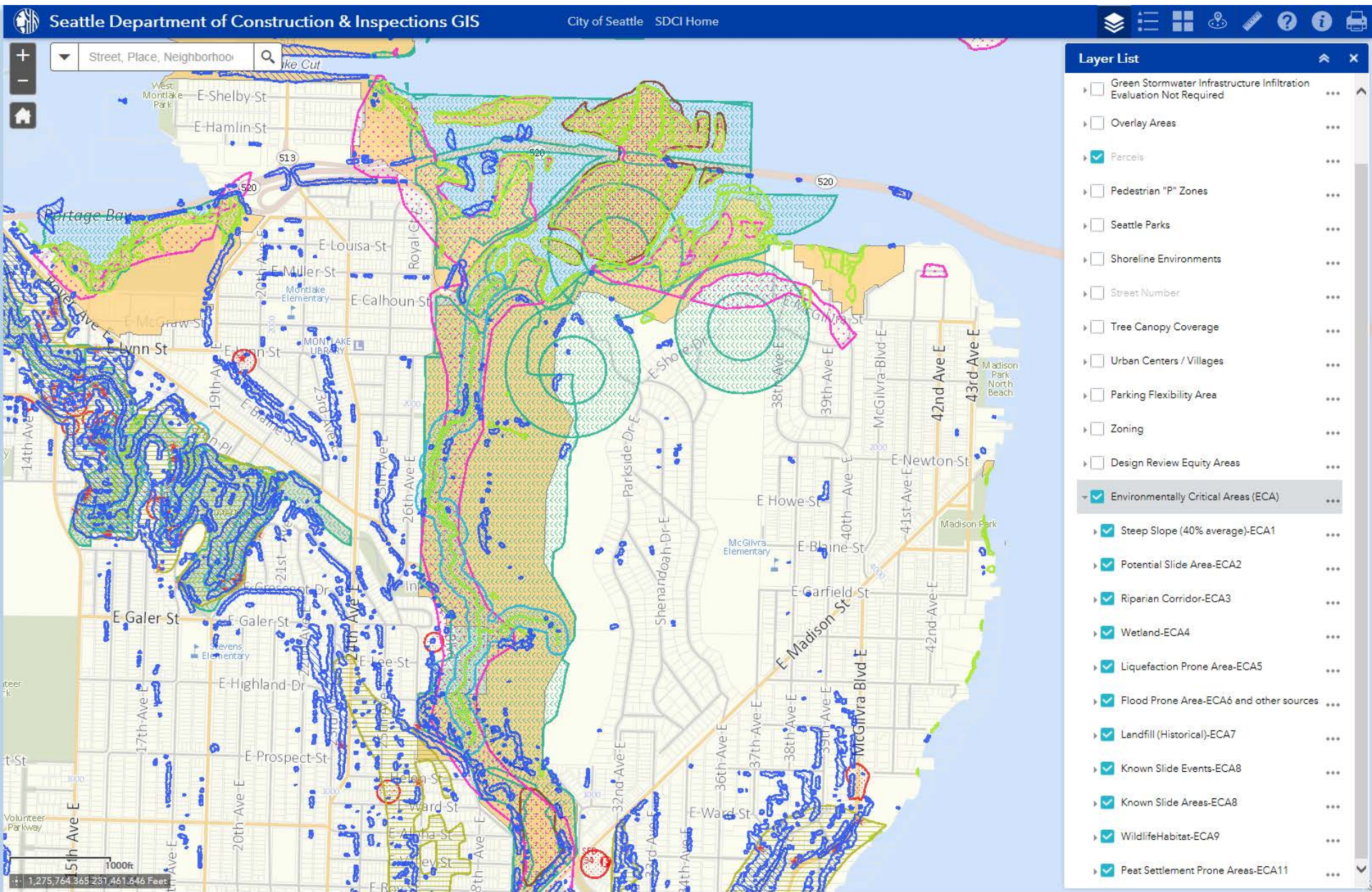
# **ENVIRONMENTALLY CRITICAL AREAS (ECA)**

**By protecting ECAs, the City protects valuable biological, chemical, physical, and human social functions benefitting Seattle, its residents/visitors, and the larger region and world:**

- ✓ Maintaining air and water quality**
- ✓ Storing, conveying, and otherwise managing stormwater and floodwater**
- ✓ Moderating temperatures in streams and other waterbodies**
- ✓ Recharging/discharging groundwater**
- ✓ Reducing sedimentation and erosion**
- ✓ Reducing sediment, chemical nutrient. and toxic pollutants**
- ✓ Providing important habitat, resources, and corridors that support diverse biodiversity**
- ✓ Providing valuable opportunities for recreation, education, scientific study, and aesthetic appreciation**
- ✓ Contributing to the sense of place that is Seattle**

# DPD GIS

<http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>



# FISH AND WILDLIFE HABITAT CONSERVATION AREAS (SMC 25.09.012.D)

1. Areas defined and/or mapped by WDFW as biodiversity areas and corridors
2. Areas designated by WDFW as Priority Habitats and Species areas except wetlands (SMC 25.09.012.C)
3. Corridors of land or water connecting Priority Habitats and Species areas or habitat areas for species of local importance meeting one of these criteria:
  - a. WDFW or the Department's species habitat management plan identifies the parcel as part of a corridor connecting habitat areas for priority species or species of local importance;
  - b. Parcel is adjacent to or connects parcels containing priority species or species of local importance and the Director determines that the parcel is part of a wildlife corridor based on information provided by a qualified wildlife biologist; or
  - c. Parcel provides fish passage between fish habitat in Type S, F, Np and Ns waters per WAC 222-16-030 and 222-16-031 upstream and downstream of the parcel, whether that passage is in riparian watercourses, pipes, or culverts.
4. Areas that provide habitat for species of local importance
5. Riparian areas
6. Priority habitats as regulated in 23.60A.156 and 23.60A.160....(Shoreline Management Program)
7. Areas that state or federally designated endangered, threatened, and sensitive species have a primary association



# FISH AND WILDLIFE HABITAT CONSERVATION AREAS (SMC 25.09.012.D)

3. Corridors of land or water connecting Priority Habitats and Species areas or habitat areas for [species of local importance](#) meeting one of these criteria:
- a. WDFW or the Department's species habitat management plan identifies the parcel as part of a corridor connecting habitat areas for Priority Species or [species of local importance](#)
  - b. Parcel is adjacent to or connects parcels containing Priority Species or [species of local importance](#) and the Director determines that the parcel is part of a wildlife corridor based on information provided by a qualified wildlife biologist
4. Areas that provide habitat for [species of local importance](#)

*In the City of Seattle, only Great Blue Heron has been identified as a [Species of Local Importance](#). Process for nominating a Species of Local Importance is found at SMC 25.09.200.C.*

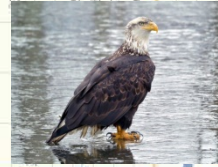




# DPD GIS

<http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=f822b2c6498c4163b0cf908e2241e9c2>

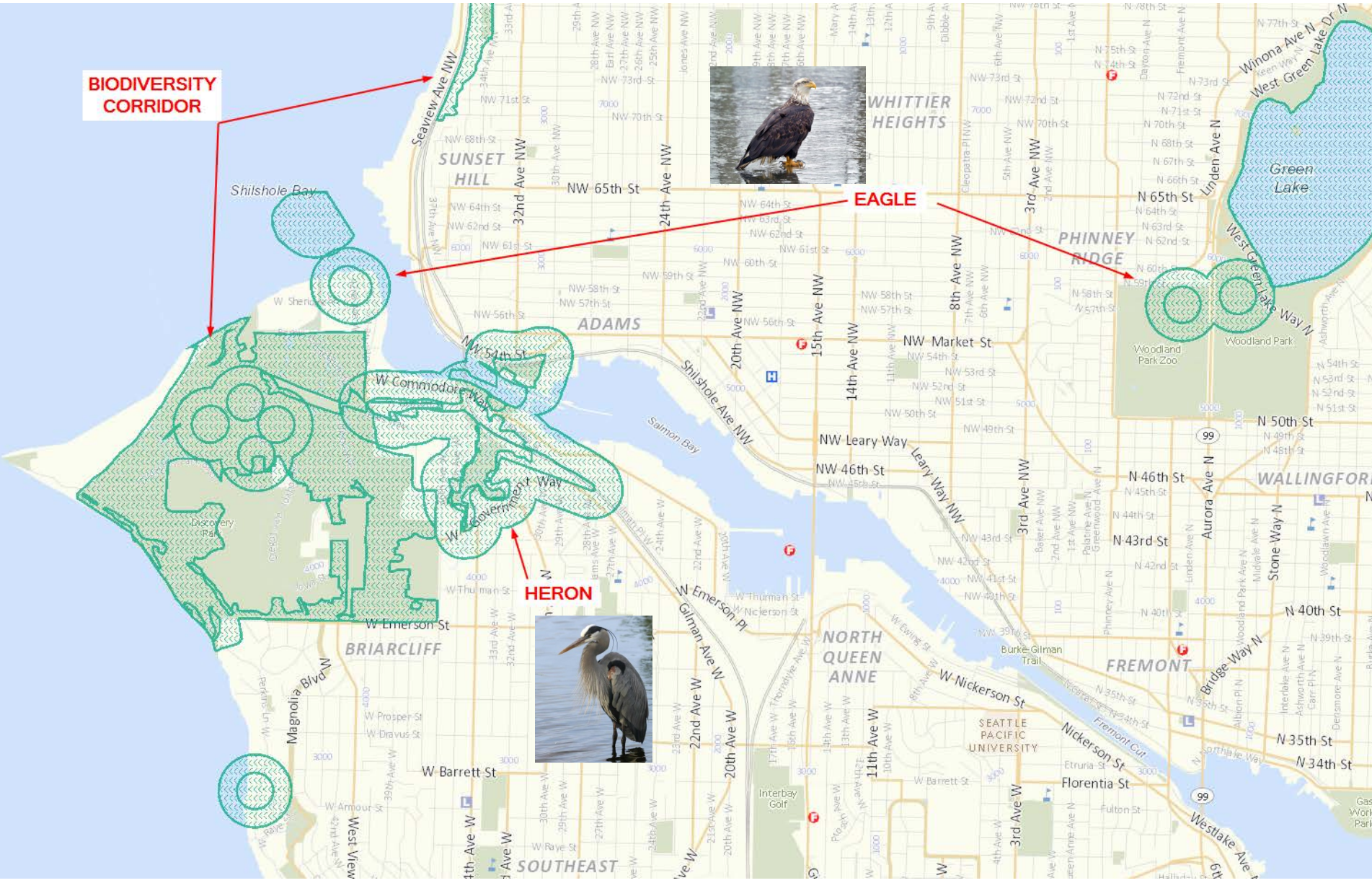
**BIODIVERSITY  
CORRIDOR**



**EAGLE**



**HERON**



# WDFW PHS

<https://wdfw.wa.gov/mapping/phs/>

The screenshot shows the Washington Department of Fish & Wildlife (WDFW) website. The top navigation bar includes 'Home', 'About WDFW', 'Conservation', 'Fishing', 'Hunting', 'Enforcement', 'Wildlife Viewing', 'Licensing & Permits', and 'Living with Wildlife'. A search bar is located in the top right. The main content area features a large heading 'Priority Habitats and Species (PHS)' and a sub-heading 'PHS on the Web'. A prominent red button reads 'CLICK HERE TO ENTER PHS on the Web'. To the right is a thumbnail image of the interactive map. Below the map is a list of 'PHS RESOURCES' including links for 'How to use PHS on the Web', 'Using PHS Data: FAQs', 'PHS Management Recommendations', 'Requesting PHS Maps & Digital Information', and 'Growth Management Act & Shoreline Management Act Technical Assistance'. A sidebar on the left contains links for 'What is GIS?' and 'GIS at WDFW', along with contact information for Wildlife GIS, Fish GIS, and Habitat GIS. A 'Warning' box at the bottom states that the application is graphics-intensive and may take time to load on slower connections. 'Browser Requirements' specify Internet Explorer 7.0/Firefox 3.0 and newer. 'Internet Explorer 9 Users' are advised to use 'compatibility view'.



WASHINGTON DEPARTMENT OF FISH & WILDLIFE

## CONSERVATION

[HELP](#) | [EMPLOYMENT](#) | [NEWS](#) | [CONTACT](#)

Search

- Home
- About WDFW
- Conservation
- Fishing
- Hunting
- Enforcement
- Wildlife Viewing
- Licensing & Permits
- Living with Wildlife

Priority Habitats & Species (PHS) Home

PHS on the Web  
*Interactive Mapping*

PHS Habitat & Species List

PHS Management Recommendations

Maps & Digital Data

- ▶ [What is GIS?](#)
- ▶ [GIS at WDFW](#)

For more information on WDFW maps and data products:

**Wildlife GIS**  
360-902-2515  
[wildthing@dfw.wa.gov](mailto:wildthing@dfw.wa.gov)

**Fish GIS**  
360-902-2700  
[fishpgm@dfw.wa.gov](mailto:fishpgm@dfw.wa.gov)

**Habitat GIS**  
360-902-2534  
[habitatprogram@dfw.wa.gov](mailto:habitatprogram@dfw.wa.gov)

## Priority Habitats and Species (PHS)

### PHS on the Web

[CLICK HERE TO ENTER PHS on the Web](#)

*PHS on the Web* is a Washington Department of Fish and Wildlife web-based, interactive map for citizens, landowners, cities and counties, tribal governments, other agencies, developers, conservation groups, and interested parties to find basic information about the known location of [Priority Habitats and Species \(PHS\)](#) in Washington State. PHS is a source of best available science that can inform local planning activities, development projects, conservation strategies, incentive programs, and numerous other land use applications.

The species and habitats that appear on the map are informed by WDFW's PHS List. The map displays known locations of priority habitats and species that have been provided to the department by agency biologists and other sources of scientific data about species and habitat locations. Data is updated as new information is gathered and verified in the field. This map should not be considered an exhaustive survey of all fish and wildlife presence.

The data displayed on *PHS on the Web* is for informational purposes only. Before making final decisions about a project or plan using this map, WDFW strongly recommends a field visit by a fish and wildlife biologist or habitat expert to make determinations about species presence, absence, or exact location. The location of species can change over time, not every parcel has been surveyed and biologists add new field observations on a regular basis.

**Please note:** The specific location of some fish and wildlife information is not available on *PHS on the Web*. These locations deemed "sensitive" by WDFW are not displayed on the map beyond a certain resolution (e.g. Township or Section) due to an increased risk of human interference. Eligible landowners, University researchers, government agencies, tribes and some others may qualify to receive this data. Please visit WDFW's [PHS Data Release](#) web page for more information about how to receive sensitive data.

#### Warning:

This application is graphics intensive and contains extensive javascript. On slower dial-up internet connections, the initial screen may take several minutes to load.

#### Browser Requirements:

*PHS on the Web* was developed for Internet Explorer 7.0/Firefox 3.0 and newer browser releases. It may work with other modern browsers but has not been fully tested. *PHS on the Web* works best with a screen resolution of 1280 X 1024.

**Internet Explorer 9 Users:** For use with IE9, turn on "compatibility view". See <http://windows.microsoft.com/en-US/internet-explorer/products/ie-9/features/compatibility-view> for more information.



#### PHS RESOURCES

- [How to use PHS on the Web](#)
- [Using PHS Data: FAQs](#)
- [PHS Management Recommendations](#)
- [Requesting PHS Maps & Digital Information](#)
- [Growth Management Act & Shoreline Management Act Technical Assistance](#)



# WDFW PHS (must use Google Chrome)

<https://wdfw.wa.gov/mapping/phs/>



PHS Features Found

Location Clicked in Lat:Long: -122.40058, 47.66167

Common Name	Scientific Name	Priority Area	Display Resolution	Feature Type	Full Record
Freshwater Forested/Shrub Wetland ( <a href="#">show</a> )	Null	Aquatic Habitat	AS MAPPED	Area	<a href="#">Show Full Record</a>
Great blue heron ( <a href="#">show</a> )	Ardea herodias	Breeding Area	AS MAPPED	Area	<a href="#">Show Full Record</a>
Freshwater Forested/Shrub Wetland ( <a href="#">show</a> )	Null	Aquatic Habitat	AS MAPPED	Area	<a href="#">Show Full Record</a>
Biodiversity Areas And Corridor ( <a href="#">show</a> )	Null	Terrestrial Habitat	AS MAPPED	Area	<a href="#">Show Full Record</a>
Freshwater Emergent Wetland ( <a href="#">show</a> )	Null	Aquatic Habitat	AS MAPPED	Area	<a href="#">Show Full Record</a>
Freshwater Forested/Shrub Wetland ( <a href="#">show</a> )	Null	Aquatic Habitat	AS MAPPED	Area	<a href="#">Show Full Record</a>
Freshwater Forested/Shrub Wetland ( <a href="#">show</a> )	Null	Aquatic Habitat	AS MAPPED	Area	<a href="#">Show Full Record</a>

[Dismiss](#)



# FISH AND WILDLIFE HABITAT CONSERVATION AREAS: HERON MANAGEMENT

- Directors Rule (DR 13-2018) directs management of great blue herons
- For proposals affected by these rules, applicants can opt to use the Standard Management Plan (Appendix I, DR) or consult with WDFW (425-775-1311) to negotiate an Alternative Management Plan (Appendix II, DR). City defers to WDFW in developing Alternative Plans
- Heron Management Area consists of
  - nesting colony
  - permanent, year-round buffer of 197 ft
  - seasonal buffer of 300 ft or 500 ft (Feb 1 through Aug 31)
- Heron Management Core Zone consists of
  - nesting colony
  - permanent, year-round buffer of 197 ft
- DR regulates noise, vegetation management, and development in the Management Area and Core Zone
- No federal, state, or local agency actively tracks status or exact boundaries of heron colonies



# FISH AND WILDLIFE HABITAT CONSERVATION AREAS: EAGLE MANAGEMENT

- Bald eagle is not listed specifically as a Priority Species by WDFW or as a Species of Local Importance by the City of Seattle. It is, however, protected by the Bald and Golden Eagle Protection Act and federal Migratory Bird Treaty Act and is thusly captured by the City's ECA provisions (25.09.012.D.7) due to these federal regulations
- In enforcing its ECA provisions related to eagles (primarily eagle nest sites), the City relies on guidelines developed by (and permits issued by) U.S. Fish and Wildlife Service (USFWS)
- For each active nest site, there are two concentric management zones: 330 ft, 660 ft
- No federal, state, or local agency actively tracks nest site activity

# FISH AND WILDLIFE HABITAT CONSERVATION AREAS: EAGLE MANAGEMENT

- For regulatory purposes, breeding season for eagles in Washington is assumed to be Jan 1 through Aug 31
- For applicants with projects affected by an active eagle nest site, SDCI recommends proposed work be conducted between Sept 1 and Dec 31 in any year
- If unable to conduct proposed work during this time, applicant would generally need to present a permit from USFWS ([https://www.fws.gov/pacific/eagle/permit\\_types/do\\_i\\_need\\_a\\_permit.html](https://www.fws.gov/pacific/eagle/permit_types/do_i_need_a_permit.html) ) before SDCI issues its permit(s)
- USFWS permit is relatively easy to obtain but costs \$500 and requires lead-time and coordination with USFWS in Olympia

# **SMP REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE**

23.60A.155: Best management practices for over-water uses and structures

23.60A.155.A.8: Do not use herbicides, pesticides, or fertilizers, except as allowed in subsection 23.60A.190.J.2

23.60A.172: Aquatic noxious weed control is allowed by SDCI-issued permit only in all Environmental Designations

23.60A.190: Standards for vegetation and impervious surface management

# SMP REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE

23.60A.190.J: Application of pesticides, herbicides, and fertilizers in the Shoreline District

1. **Application of pesticides and herbicides is prohibited in the Shoreline District**, except as provided in 23.60A.190.J.2. The Director shall adopt a rule identifying best management practices (SDCI Tip 250) including identifying pesticides, herbicides, and fertilizers that are prohibited due to impacts on ecological functions, using appropriate scientific and technical information as described in WAC 173-26-201(2)(a).
2. Application of pesticides and herbicides is prohibited in and over wetlands, riparian watercourses, and other water bodies and within 200 feet of wetlands, riparian watercourses, and other water bodies and waterward of OHWM of riparian watercourses and other water bodies, except as provided in 23.60A.190.C.2.b.4 or as allowed by the Director for these circumstances **and if the allowed pesticide or herbicide application is done by a licensed applicator**:
  - a. The State or local Health Department recommends or directs their use to address a threat to public health;
  - b. A County, State, or federal agency with jurisdiction directs their use for control of a State-listed noxious weed or plant pests covered by the WSDA plant pest program, and non-chemical alternatives have been evaluated;
  - c. If the Director determines the applicant has demonstrated use of pesticides will have no adverse impact to fish and wildlife. Such a determination may be in the form of concurring the applicant has developed BMPs or an IPM plan consistent with standards developed by the Director;
  - d. If the Director has determined use of a pesticide to control invasive plants would have less overall adverse environmental impact than other control strategies; or
  - e. If the Director determines there is a serious threat to public safety, health, or the environment.
3. **Application of synthetic fertilizers is prohibited in the Shoreline District**. Application of organic fertilizers shall follow BMPs for use of fertilizers within 200 feet of water bodies, including limiting use of fertilizers, hand-mixing the fertilizer with ingredients that do not dissolve quickly, and using composted dry grass clippings, leaves, and saw dust as fertilizer.



# SMP REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE

23.60A.190.C: Shoreline District waterward of the OHWM. Waterward of the OHWM vegetation management is allowed or prohibited as provided in 23.60A.190.C.1 and 23.60A.190.C.2 and requires mitigation as provided in 23.60A.190.C.3.

1. Removing or disturbing aquatic vegetation, except for aquatic noxious weeds, is prohibited except as necessary for development, uses or shoreline modifications approved under this Chapter 23.60A and authorized by the Director.
2. Aquatic noxious weed removal
  - a. Removing or controlling aquatic noxious weeds is allowed, allowed as a special use, allowed as a shoreline conditional use, or prohibited as provided in 23.60A.172 and this Section 23.60A.190.
  - b. In removing aquatic noxious weeds the following **techniques are required to be used in the sequence listed below**, unless the applicant demonstrates the priority is inapplicable or not feasible or that a different sequence or technique will be more effective in reducing impacts on ecological functions; all other techniques are prohibited:
    - 1) Hand-pulling or mechanical harvesting and cutting;
    - 2) Placement of bottom barriers. Bottom barriers are required to be made of biodegradable material and shall not cover an area greater than 1,000 square feet;
    - 3) Rotovating, weed rolling, or other methods that disturbs bottom sediments or the benthos;
    - 4) Use of herbicides or other chemical treatment methods applicable to the control of aquatic noxious weeds that are approved by Ecology and the federal Environmental Protection Agency.
3. In applying **mitigation sequencing** pursuant to 23.60A.158, adverse impacts on ecological functions to be addressed include, but are not limited to: disturbance of underwater substrate; turbidity; loss or disturbance of food, shelter, spawning, and migration habitat; and loss or disturbance of fish runs, biological communities and biodiversity, particularly benthic productivity.

# SMP REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE

## 23.60A.158: Standards for mitigation sequencing

- A. Regulations set out in this Chapter 23.60A are minimum requirements that shall be supplemented by mitigation sequencing in this Section 23.60A.158 when needed to achieve no net loss of ecological functions. Mitigation under this Section 23.60A.158 is not intended to duplicate mitigation for the same ecological function that is required under other City regulations or under state and federal permits: coordination among local, state and federal regulatory agencies and Indian Tribes, as applicable, shall occur when determining required mitigation for shoreline substantial development permits.
- B. Mitigation sequencing 1. Mitigation sequence below shall be undertaken in the following priority:
- Step A. Avoiding** the impact altogether by not taking a certain action or parts of an action;
  - Step B. Minimizing** impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
  - Step C. Rectifying** the impact by repairing, rehabilitating, or restoring the affected environment;
  - Step D. Reducing or eliminating** the impact over time by preservation and maintenance operations;
  - Step E. Compensating** for the impact by replacing, enhancing, or providing substitute resources or environments; and
  - Step F. Monitoring** the impact and the compensation projects and taking appropriate corrective measures.

# **ECA REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE**

25.09.075: Standards for pesticide, herbicide, and fertilizer use

Similar code language as SMP.....

# ECA REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE

25.09.075: Standards for pesticide, herbicide, and fertilizer use

- A. Application of pesticides, herbicides, and synthetic fertilizer is prohibited in a riparian corridor, wetland, or wetland buffer except as allowed by the Director for one of the following circumstances:
1. The State or local Health Department recommends or directs their use to address threat to public health;
  2. County, State, or federal agency with jurisdiction directs their use for control of a state listed noxious weed or plant pests covered by WSDA plant pest program, and non-chemical alternatives have been evaluated;
  3. If the Director determines the applicant has demonstrated the use will have no adverse impact to fish and wildlife. Such a determination may be in the form of concurring in writing the applicant has developed BMPs or an IPM plan consistent with standards developed by the Director;
  4. If the Director determines that use of a pesticide to control invasive plants would have less overall adverse environmental impact than other control strategies; or
  5. If the Director determines there is a serious threat to public safety, health, or the environment.
- B. If allowed, pesticide, herbicide, and synthetic fertilizer applications will be done by a Washington State licensed Commercial Applicator or Private Commercial Applicator.
- C. Application of organic fertilizers shall follow BMPs for use of fertilizers in a riparian corridor, wetland, or wetland buffer, including limiting the use of the fertilizers, hand-mixing the fertilizer with ingredients that do not dissolve quickly, and using ingredients such as compost, composted dry grass clippings, leaves, and sawdust as fertilizer.

# ECA REGULATION OF PESTICIDE, HERBICIDE, AND FERTILIZER USE

## IMPLEMENTATION

- 25.09 applies to parcels as well as rights-of-way
- 25.09.065 (Mitigation Sequencing) and 25.09.070 (Standards for Tree and Vegetation and Impervious Surface Management): captures all vegetation modification proposals in landslide-prone, steep slope erosion hazard areas and their buffers, fish and wildlife habitat conservation areas, and wetlands and their buffers.
- 25.09.045 (Exemptions) allows all City agencies to self-regulate under 25.09 for Exempt proposals only.
- If a City agency determines their proposal is Exempt from the ECA regulations they need not apply to SDCI for any ECA approvals. However, that City agency still must comply with other provisions of 25.09, including but not limited to 25.09.045.B (BMPs and documentation), 25.09.065 (Mitigation Standards), and 25.09.070 (revegetation using native plants).
- If a City agency determines their proposal is not Exempt, they need to formally apply for an SDCI approval.



# SUMMARY

## SHORELINE MANAGEMENT DISTRICT

- All activities require an approval from SDCI; no “self-exemption”
- No pesticides or herbicides allowed unless certain criteria are met and technique sequencing has been completed
- All applications must be made by Washington State licensed Commercial Applicator or Private Commercial Applicator
- Mitigation required for all vegetation modifications
- No synthetic fertilizers
- Tree Protection regulations (25.11) apply

# SUMMARY

## ENVIRONMENTALLY CRITICAL AREAS

- All activities in certain ECAs require compliance; possible “self-exemption”
- No pesticides or herbicides allowed unless certain criteria are met
- All applications must be made by Washington State licensed Commercial Applicator or Private Commercial Applicator
- Mitigation sequencing and revegetation required for all vegetation modifications
- No synthetic fertilizers
- Tree Protection regulations (25.11) apply

# STANDARDS FOR PESTICIDE, HERBICIDE, AND FERTILIZER USE IN ENVIRONMENTALLY CRITICAL AREAS

Clay Antieau, MS, PhC  
Botanist, Horticulturist,  
Science Communicator

206-615-1393

[clayton.antieau@seattle.gov](mailto:clayton.antieau@seattle.gov)

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October 30, 2018



*Impatiens glandulifera*; photo: Ben Legler