



Memorandum

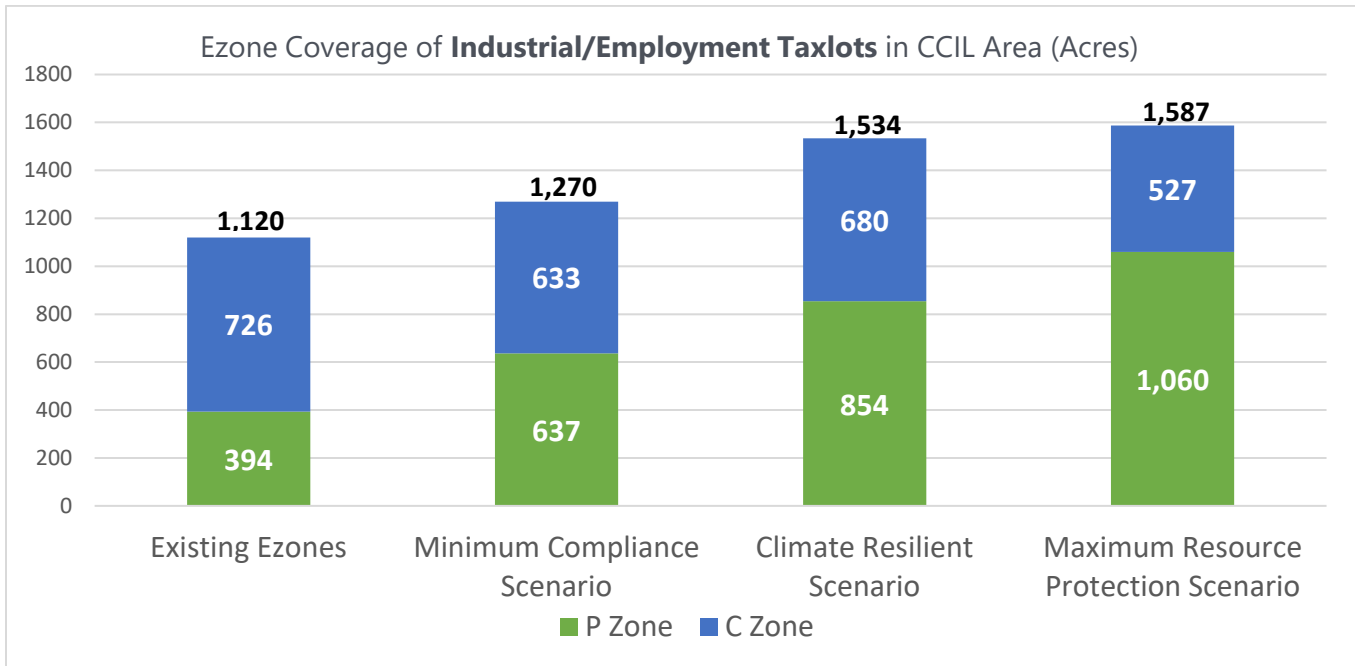
November 1, 2023

To: Economic Opportunity Analysis – Collaborative Working Group
CC: Patricia Diefenderfer, Tom Armstrong – Bureau of Planning and Sustainability
FROM: Daniel Soebbing – Bureau of Planning and Sustainability
RE: Ezone Mapping Scenarios – Columbia Corridor and Industrial Lands Ezone Project (Revised)

Summary Findings

- [Environmental Overlay Zones](#) (Ezones) are a part of Portland’s Zoning Code that protects significant natural resources through development standards and mitigation requirements.
- Three Ezone remapping scenarios have been crafted with varying levels of natural resource protections to gauge the relative impact of the draft Ezones on industrial land capacity.
 - The [Minimum Compliance Scenario](#) would apply Ezones that are roughly consistent with the existing Ezone mapping that is found throughout the project area.
 - The [Climate Resilient Scenario](#) would require mandatory setbacks for new development to allow for resource enhancement and protection.
 - The [Maximum Resource Protection Scenario](#) would ensure that new development has mandatory setbacks from streams/sloughs/wetlands that are greater than those of the Climate Resilient Scenario.
- The Ezone remapping scenarios result in changes to both the overall area of Ezones and how Conservation (c zone) and Protection (p zone) zones are applied.
- The analysis encompasses changes across the entire project area (all zones), industrial and employment zones, and the Buildable Land Inventory (BLI).
- There are 6,961 acres of taxlots that are zoned for industrial (IH, IG1, IG2) or employment (EG1, EG2) uses in the project area.
- In the three scenarios, the Ezone coverage of industrial and employment taxlots ranges from 18 percent to 23 percent, compared to 16 percent coverage by existing Ezones.
- According to the BLI, there are 1,044 acres of industrial and employment land citywide that could feasibly be developed by 2045.
- The Ezone scenarios would result in a reduction in industrial development capacity of 56 acres (5 percent of the citywide total), 107 acres (10 percent), and 149 acres (14 percent) respectively.

Ezone Coverage of Industrial/Employment Taxlots



Purpose

The Columbia Corridor and Industrial Lands Ezone Project (CCIL) is a proposal to remap environmental overlay zones (Ezones) in the Columbia Corridor and other industrialized areas in Portland. The Columbia Corridor is a major economic engine in the City of Portland, but it also harbors a network of sloughs, wetlands, and other water bodies that provide important habitat for threatened and endangered species. Resources located in the Columbia Corridor also provide vital ecosystem services that protect property and human lives from natural hazards and mitigate urban heat island effect. The project area includes the majority of the Columbia Slough and Columbia River watersheds between the eastern edge of the City of Portland and the Willamette River. Also included are small areas of industrial land between Forest Park and St Helens Road, portions of the bluff that overlooks the North Reach of the Willamette River, and a single industrial site in the Johnson Creek watershed that is located to the east of I-205 between the Springwater Corridor and SE Knapp St.

Ezones are a part of Portland's Zoning Code that protects significant natural resources through development standards and mitigation requirements, which help to prevent disturbance and encroachment on the natural resources and the ecosystem services they provide. Portland implemented Ezones through the adoption of more than a dozen different natural resource protection plans, starting in 1990. After their initial adoption, Ezone mapping has been refined and updated throughout most of Portland in a series of map correction projects, the most recent of which went into effect in October 2022. The Columbia Corridor contains some of the earliest adopted Ezones, and there are many areas in

the Columbia Corridor in which the Ezone mapping has not been updated for decades. The CCIL Ezone Project is an opportunity to use updated technology to more accurately map and protect significant natural resources that were overlooked when Ezones were originally applied.

Due to the intersection of natural resource protection and site development, the CCIL is being conducted in conjunction with a citywide Economic Opportunity Analysis (EOA). The EOA will include a forecast that will predict the future job growth in the region on the basis of expected changes in the regional population and future economic conditions. Portland is required by Statewide Planning Goal 9 to demonstrate adequate land capacity to meet future job growth needs. As such, the EOA will have to account for proposed changes to Ezone mapping and the constraints that Ezones could impose on new development. At the same time, it is important to protect natural resources and their functions, but the level of protection that is proposed in industrial areas may be less than what is appropriate in residential areas.

Ezones are an important piece of Portland's compliance with Statewide Planning Goal 5, and with Title 13 of Metro's Regional Growth Management Functional Plan. Any changes that are proposed to the Ezones need to be done in a way that ensures that Portland can remain in compliance with Goal 5 and Title 13.

Ezone Scenarios

Three Ezone remapping scenarios have been crafted with varying levels of natural resource protections to gauge the relative impact of the draft Ezones on industrial land capacity. At the low end of resource protection is the Minimum Compliance Scenario. The middle scenario is the Climate Resilient Scenario. And at the high end is the Maximum Resource Protection Scenario. All three scenarios apply a mix of Conservation zone (c zone) and Protection zone (p zone). But the amount of c and p zone that is applied in the different scenarios varies significantly.

The Minimum Compliance Scenario would apply Ezones that are roughly consistent with the existing Ezone mapping that is found throughout the project area. There would be small expansions in some places to cover resources that were missed by the existing Ezones, and reductions in other Ezones where there are no natural resources. This scenario would extend the Ezones to protect many streams, sloughs, and wetlands that are not currently covered by Ezones. This would prevent most of these features from being lost completely through site development by the application of small buffers around the features, which would allow potentially impactful development to occur with minimal or no setbacks. The application of Ezone buffers around water features would be more consistent than they are in current zoning, but the buffers around many features would shrink modestly from their current extent. In this scenario, total Ezone coverage would increase by approximately 9% across the entire project area compared to existing Ezones. The increase on sites that are zoned for industrial or employment uses would be approximately 13 percent.

The Climate Resilient Scenario would require mandatory setbacks for new development to allow for resource enhancement and protection, but the setbacks would be smaller than in the Maximum Resource Protection Scenario. This scenario would be significantly more protective of natural resources than the existing Ezones are because the Protection zone and a Protection zone buffer would be consistently and uniformly applied to all water features. Under current zoning, there is a great deal of variability, with the Protection zone applied to some features and not others, and substantial variance in the size of buffers from one site to the next. The increase in protections compared to existing Ezones and the greater area covered by the Ezones will help to make Portland more resilient to the future effects of climate change, including more intense precipitation events and elevated peak summer temperatures over longer periods. In this scenario, total Ezone coverage would increase by approximately 19 percent across the entire project area compared to existing Ezones. The increase on sites that are zoned for industrial or employment uses would be approximately 37 percent.

The Maximum Resource Protection Scenario would ensure that new development has mandatory setbacks from streams/sloughs/wetlands that are greater than those of the Climate Resilient Scenario. These setbacks would provide more area where riparian vegetation can be established to enhance natural habitats for wildlife and provide vital ecosystem services, such as retaining runoff, sediment, and pollutants, and mitigating heat island effect. The Maximum Resource Protection Scenario would apply Ezones in a way that is consistent with the highest levels of protection that were applied in residential areas in the recently completed Environmental Overlay Zone Map Correction Project. In this scenario, total Ezone coverage would increase by approximately 22% across the entire project area compared to existing Ezones. The increase on sites that are zoned for industrial or employment uses would be approximately 42 percent.

Ezone Scenarios: Detailed Description

Table 1. Summary Table of Ezone Scenarios

	Conservation Zone	Protection Zone
Minimum Compliance Scenario	Only Highest Value Riparian Resources. 30' buffers.	Streams, Sloughs, and most wetlands. No Buffers.
Climate Resilient Scenario	High and Medium Value Riparian Resources	All Streams, Sloughs, and Wetlands. 25 ft Buffers.
Maximum Resource Protection Scenario	High, Medium, and some Low Value Riparian Resources	All Streams, Sloughs, and Wetlands. 50 ft Buffers.

Minimum Compliance Scenario

In the Minimum Compliance Scenario, the Conservation zone is applied to areas that score as high ranking in the NRI Riparian Resource rankings (see background material section below for more information about the NRI). High-ranking resources are wetlands and forest or woodland vegetation patches that intersect with streams or wetlands extending out up to 50 feet.

The Protection zone is applied to all streams/sloughs within the mapped top of bank, and to all wetlands that are located in the floodplain or within 150' of streams. Conservation zone is applied to other wetlands that are not in the floodplain, or which are further than 150' from streams. A Conservation zone buffer extends 30' from the edge of all wetlands and the banks of all streams/sloughs. Given the allowances for development in the Conservation zone, this scenario would allow for some wetlands to be filled and built upon. The filling of wetlands would require environmental review and mitigation, but it would not be prohibited. Mitigation wetlands may duplicate the water storage functions of natural wetlands, but they often fail to provide equivalent habitat values, at least in the short term.

The outer 25' feet of the Ezones is known as the Transition Area. Within the Transition Area, new development is allowed with few limitations (see background material below for more information). The only impacts that are required to be mitigated in the Transition Area are for tree removal. Because of this, the 30' Conservation zone buffer equates to a 5' setback standard from the edge of streams/sloughs/wetlands on sites on which there is no mapped forest or woodland vegetation. A 5' setback is extremely small and may not be adequate to protect resources on sites where heavy equipment, noxious chemicals, vehicle emissions, noise, vibrations, and other industrial site-related impacts are expected. Because the setbacks would be small, the Ezones would not consistently preserve the wildlife habitat functions or provide space to establish new trees in the riparian area. But the setbacks would prevent these important features from being filled in or graded without mitigation requirements.

Climate Resilient Scenario

In the Climate Resilient Scenario, the Conservation zone is applied to all areas that are ranked as high or medium value riparian resources by the NRI (see background materials section below for more information on the NRI). The medium value riparian rankings extend up to 100' on vegetated areas where grassland and shrubland surround streams/sloughs/wetlands, and they extend up to 200' on vegetated areas where forest and woodlands are mapped around streams/sloughs/wetlands. This means the c zone could extend up to 100 or 200' from the banks of streams/sloughs/wetlands on sites that are vegetated. Development can occur within the Conservation zone, but mitigation is required for impacts to the resources. On large sites with partial Conservation zone coverage, new disturbances in the Conservation zone may be largely restricted unless there is no other option for site development.

The Protection zone would be applied to all streams/sloughs/wetlands, and there would be a 25' Protection zone buffer, plus a Conservation zone buffer between 25-50'. This would ensure that all new development is set back a mandatory 25' from all water features. The setback could not be adjusted or reduced through environmental review. This mandatory setback would be a significant increase in protections in many parts of the Columbia Corridor, an area where the Protection zone has been applied inconsistently in the past. Mandatory setbacks would minimize disruptive impacts from development on the natural features, but they would render portions of some sites unbuildable.

Maximum Resource Protection Scenario

In the Maximum Resource Protection Scenario, the Conservation zone is applied to all areas that are ranked as high or medium value riparian resources, and to areas of forest or woodland vegetation that are mapped as low value riparian resources. The overall area covered by the ezones would be slightly greater than it would be in the Climate Resilient Scenario.

Like the Climate Resilient Scenario, in the Maximum Resource Protection Scenario, the Protection zone is applied to all streams/sloughs/wetlands, but in this scenario, a larger, 50' Protection zone buffer is applied to the area around all of these features. This ensures a mandatory 50' setback for all new development that can't be adjusted or reduced. This larger setback would allow for the establishment of more trees in the riparian area around water features. High structure vegetation that would grow in this riparian area would significantly increase the shading of and habitat value of wetlands, streams, sloughs and other water features over time. The greater amount of vegetation would also retain more stormwater runoff and have a greater impact on mitigating the urban heat island effect than would the Climate Resilient Scenario.

Floodplain Protections

In 2016, NOAA Fisheries issued a Biological Opinion (BiOp) in response to a lawsuit that was filed against FEMA's National Flood Insurance Program (NFIP) by community activists and environmental organizations. The BiOp found that the NFIP was in violation of the Endangered Species Act in the State of Oregon because its implementation jeopardized the survival of 16 species of threatened or endangered fish. The BiOp made recommendations to limit or restrict development in floodplains, to implement building codes that prevent or mitigate for fill that is added by development in the floodplain, and to protect natural resources that are located in the floodplain, with a particular emphasis on high canopy vegetation that is located within 170' of the banks of the rivers and streams.

The three Ezone scenarios are all intended to fully comply with the BiOp. In all three scenarios, the Conservation zone is applied to all portions of the floodplain that are not protected by levees that are located within 170' of the top-of-bank of streams/sloughs, or within 170' of Ordinary High Water of the Columbia River.

The BiOp also included recommendations to mitigate for new fill that is placed in the floodplain by creating compensatory excavations. Limitations on fill and compensatory excavations are addressed in Portland’s building code (Title 24), which is separate from the Ezones, which are part of Portland’s zoning code (Title 33).

There are detailed tables that feature a comprehensive description of how the draft Ezones are mapped in each of the three scenarios at the conclusion of this document in the Background Materials section.

DRAFT

Statistical Analysis

Ezones protect important natural resources and they also have the potential to constrain development of the industrial and employment land supply. There are three critical questions that need to be answered about the various Ezone scenarios:

1. How well do they protect natural resources within the project area?
2. How much do they constrain industrial/employment land within the project area?
3. How would the proposed Ezones impact that supply of industrial/employment land as determined by the Buildable Lands Inventory (BLI)?

Project Area

The project area includes the majority of the Columbia Slough and Columbia River watersheds between the eastern edge of the City of Portland and the Willamette River. Also included are small areas of industrial land between Forest Park and St Helens Road, portions of the bluff that overlooks the North Reach of the Willamette River, and a single industrial site in the Johnson Creek watershed that is located to the east of I-205 between the Springwater Corridor and SE Knapp St.

Industrial and Employment Lands

Portland is required by Statewide Planning Goal 9 to plan for future economic development, including job growth in a variety of sectors, including commercial and industrial. To demonstrate compliance with this goal, cities must create an inventory of land that is available to meet future growth needs and to update the inventory periodically. The Buildable Lands Inventory (BLI) is one of the key tools that Portland uses to demonstrate compliance with Goal 9. The BLI shows that Portland has a surplus of land that is zoned for commercial, office, and residential uses, but there is a tight supply of lands that are zoned for industrial uses. Therefore, it is critically important to assess what the impacts of any changes to Ezones could have on land that is zoned for industrial or employment uses. Portland's industrial and employment zones include Heavy Industrial (IH), General Industrial 1 (IG1), General Industrial 2 (IG2), General Employment 1 (EG1), and General Employment 2 (EG2), as well as sites with other base zones that have Industrial Sanctuary or Mixed Employment Comprehensive Plan designations, which would allow them to be rezoned for industrial or employment uses in the future.

Buildable Lands Inventory

The Buildable Lands Inventory (BLI) is an assessment of the development capacity of land within the city of Portland to accommodate forecasted housing and employment needs through the year 2045. To generate the BLI, city staff employ a methodology that takes into account market trends and land values to determine which sites are likely to be developed or redeveloped. The methodology also takes into account constraints that could make development less feasible or less likely. Sites that are more constrained are determined to have less capacity than unconstrained sites. The most highly constrained sites are determined to have no development capacity. Ezones are one of many constraints that are factored into the BLI methodology.

Protection of NRI Riparian Resources in the Project (CCIL) Area

The first analysis is how the remapping scenarios impact low, medium, and high value natural resources.

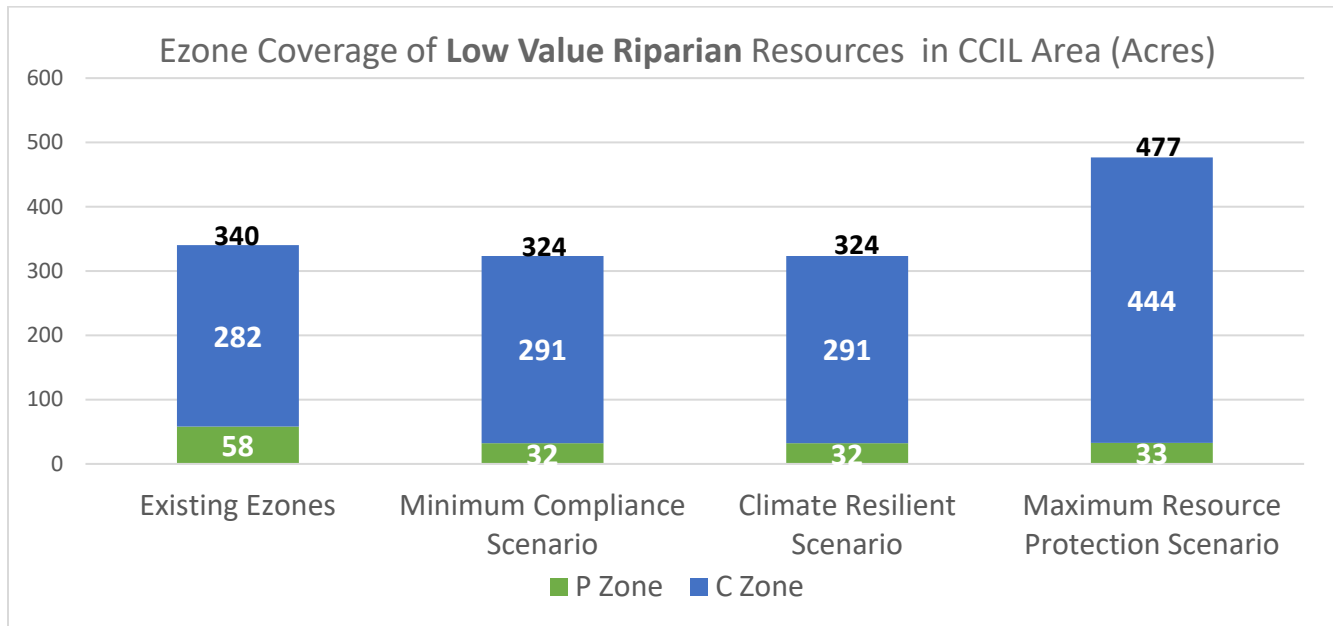


Figure 1. Ezone Coverage of Low Value Riparian Resources

Low value riparian resources are vegetated areas that are located more than 200' away from water features and all portions of the floodplain, developed or undeveloped, that are not protected by levees. The vegetated areas receive the low value riparian resource designation provide some habitat for locally significant bird species, such as the Western Meadowlark, and include some small patches of forest and woodland vegetation. The developed floodplain provides little or no habitat value or other present day ecosystem services. The value of the developed floodplain is speculative, in that the developed areas could provide ecosystem services, including habitat for threatened and endangered species, if they were redeveloped. There are a total of 1,432 acres of low value riparian resources in the CCIL project area. The existing Ezones cover 340 acres, which is about 24% of the total area of low value riparian resources. Both the Minimum Compliance Scenario and the Climate Resilient Scenario would cover slightly less low value riparian resources, whereas the Maximum Resource Protection Scenario would increase the coverage by 137 acres. All three scenarios would apply fewer acres of protection zone to low value resources than do the existing Ezones.

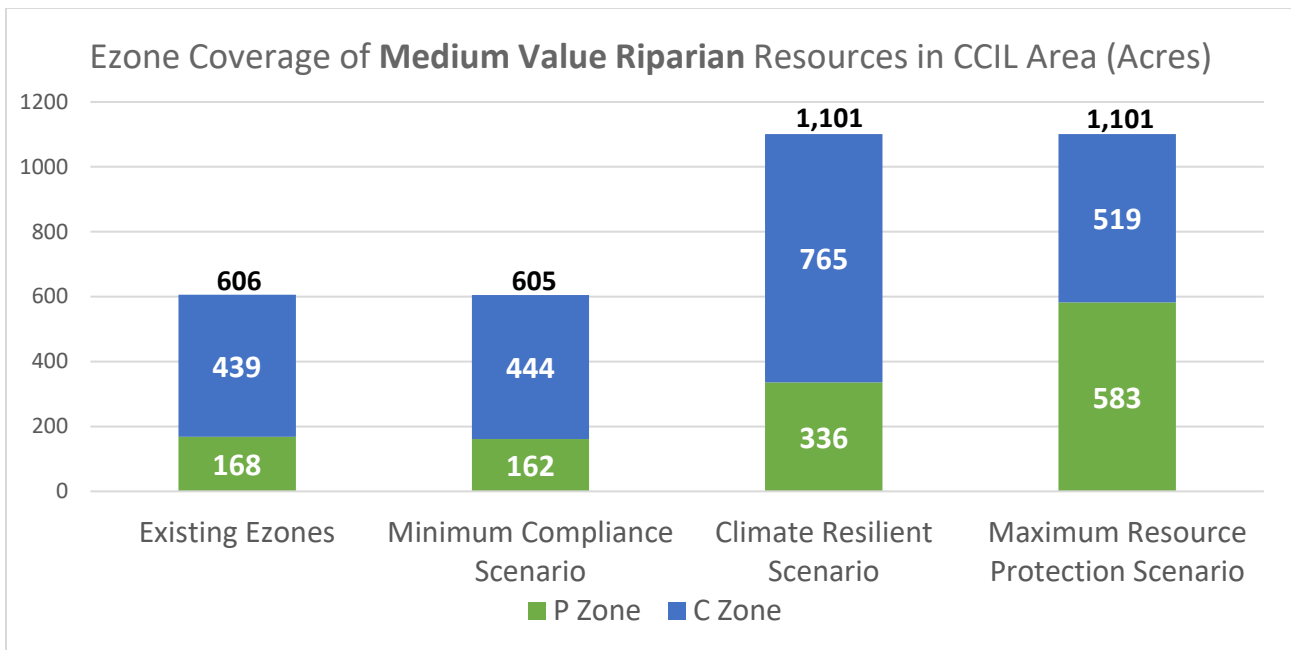


Figure 2. Ezone Coverage of Medium Value Riparian Resources

Medium value riparian resources include streams and sloughs that lack any forest or woodland vegetation cover, land within 50' of streams, sloughs, or wetlands, and vegetation that is located between 50' and 200' of streams, sloughs, and wetlands. Medium value riparian resources provide important habitat and contribute to habitat functional values that support threatened and endangered species. They also help to retain stormwater runoff, filter nutrients and pollutants that would otherwise flow directly into waterbodies, and mitigate urban heat island effect. There are 1,101 acres of medium value riparian resources that are mapped in the CCIL Project Area. The existing Ezones cover 606 acres, or 55% of the medium value riparian resources that are located in the CCIL Project Area. The minimum compliance scenario coverage of medium value riparian resources is nearly identical to the existing Ezones. Both the Climate Resilient Scenario and the Maximum Resource Protection Scenario would cover 100% of the medium value riparian resources, with the main difference being that the Maximum Resource Protection Scenario would cover 247 more acres in the Protection zone than would the Climate Resilient Scenario. The difference in Protection zone coverage between the two scenarios is the result of the larger Protection zone buffers that would be applied in the Maximum Resource Protection Scenario.

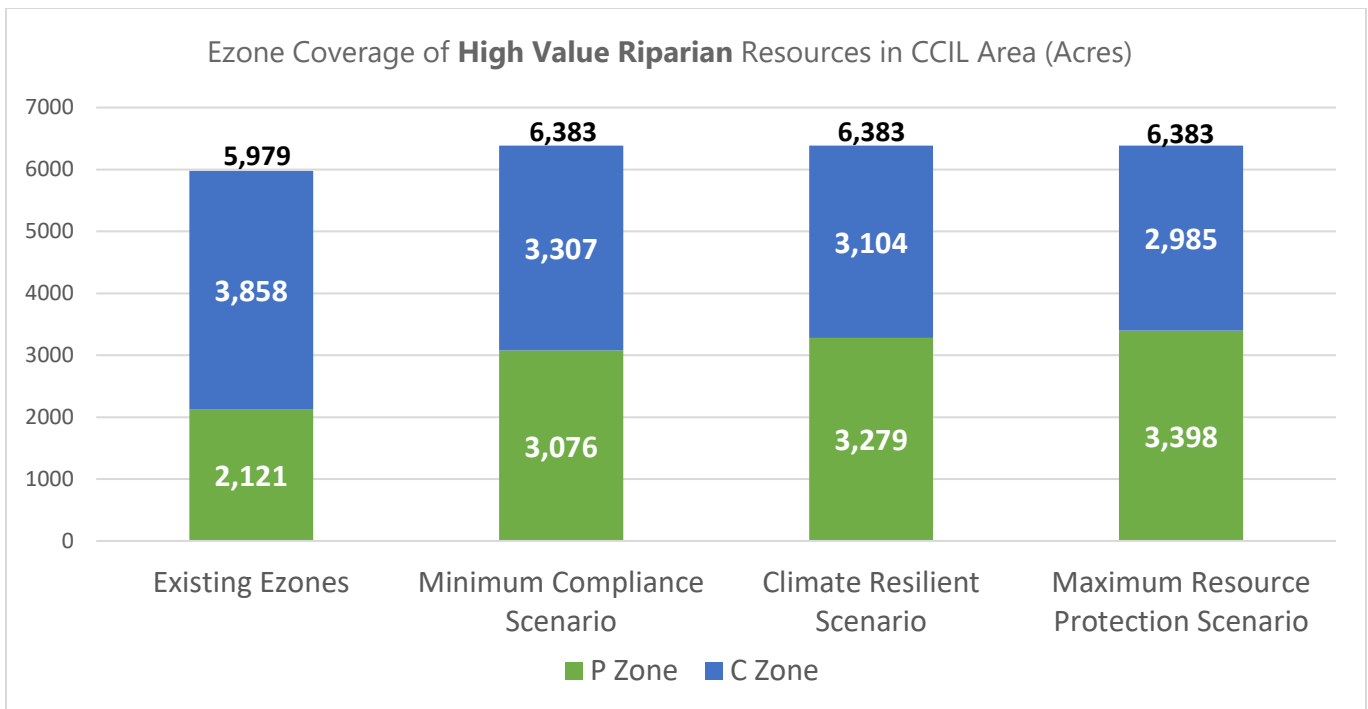


Figure 3. Ezone Coverage of High Value Riparian Resources

High value riparian resources include all wetlands and areas of forest and woodland vegetation that intersect with streams, sloughs, and wetlands. These are the most important natural resources, and the existing Ezones already cover most of these features. There are 6,383 acres of high value riparian resources in the CCIL project area, and the existing Ezones cover 5,979 acres, or 94%. But this leaves a gap of 404 acres that have been left completely unprotected. Of those 404 acres of unprotected high value riparian resources, 152 acres are wetlands. All three of the draft Ezone scenarios would cover 100% of the high value riparian resources. But there is a difference in how much Protection zone would be applied in the three scenarios, with the Maximum Resource Protection Scenario applying 322 more Protection zone to high value riparian resources than the Minimum Compliance Scenario.

Ezone Coverage of Industrial/Employment Taxlots

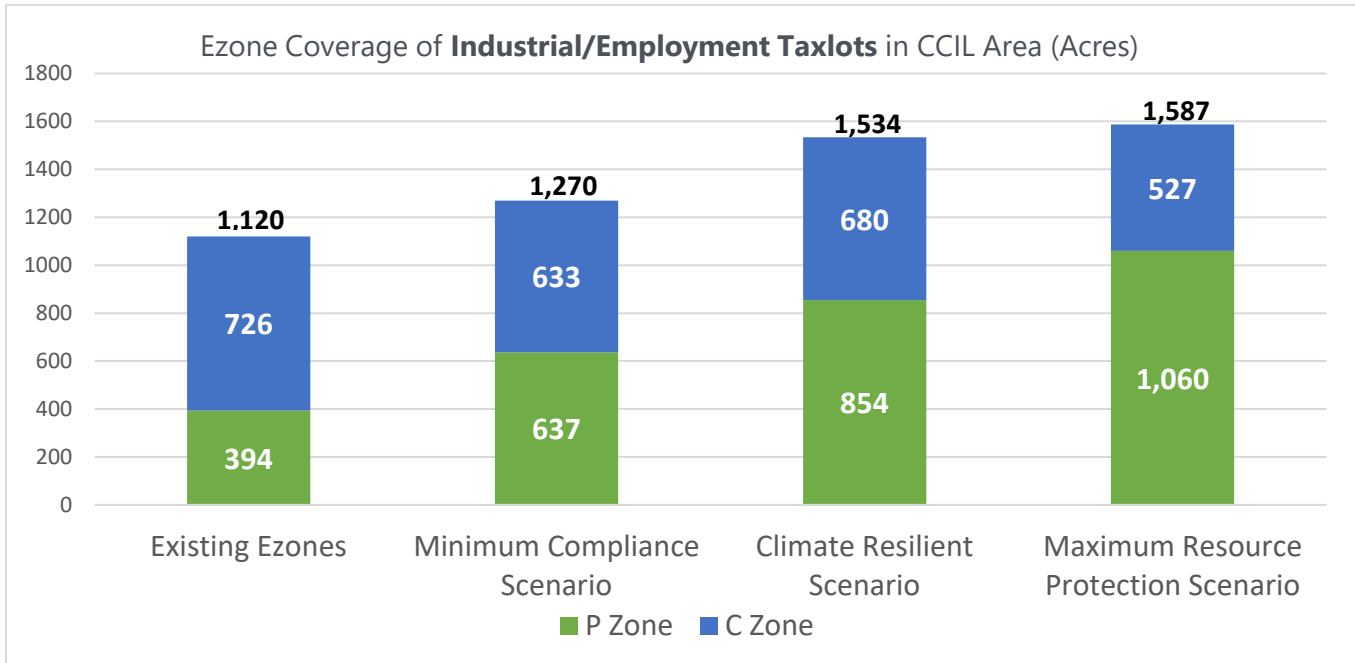


Figure 4. Ezone Coverage of Industrial or Employment Zoned Taxlots

There are a total of 6,961 acres of taxlots that are zoned for industrial (IH, IG1, IG2) or employment (EG1, EG2) uses (plus a few lots that have industrial or employment Comprehensive Plan map designations). This includes areas that are currently zoned for residential or open space uses that have industrial or employment Comprehensive Plan designations, which could be converted to industrial or employment zoning in the future. The existing Ezones cover 1,120 acres, or 16 percent of the total industrial/employment taxlot area. The Climate Resilient Scenario would cover 1,270 acres (18 percent) of industrial/employment taxlot area, for a net increase of 150 acres. The Climate Resilient Scenario and the Maximum Resource Protection Scenario would cover 1,534 acres (22 percent) and 1,587 acres (23 percent) of industrial/employment taxlot area, respectively.

All three of the draft Ezone scenarios would result in increases in the amount of Protection zone that is applied on industrial/employment lots. Because the Protection zone effectively represents a no-build area for private development, the increase in Protection zone coverage would represent a greater constraint on industrial/employment land development than would the general increase in total Ezone coverage. The Minimum Compliance Scenario would result in an increase of 243 acres of Protection zone, the Climate Resilient Scenario would result in an increase of 460 acres of Protection zone, and the Maximum Resource Protection Scenario would result in an increase of 666 acres on lots that are zoned for industrial, or employment uses.

Ezone Coverage of BLI Industrial/Employment Taxlots

It's important to note that the areas of changes in Ezone coverage would be on both developed sites and BLI sites. Ezones can potentially constrain development or redevelopment on any site, but they are

likely to be more impactful on vacant or redevelopment sites. Figure 5 focuses on how the three scenarios would impact the industrial and employment sites that are in the BLI.

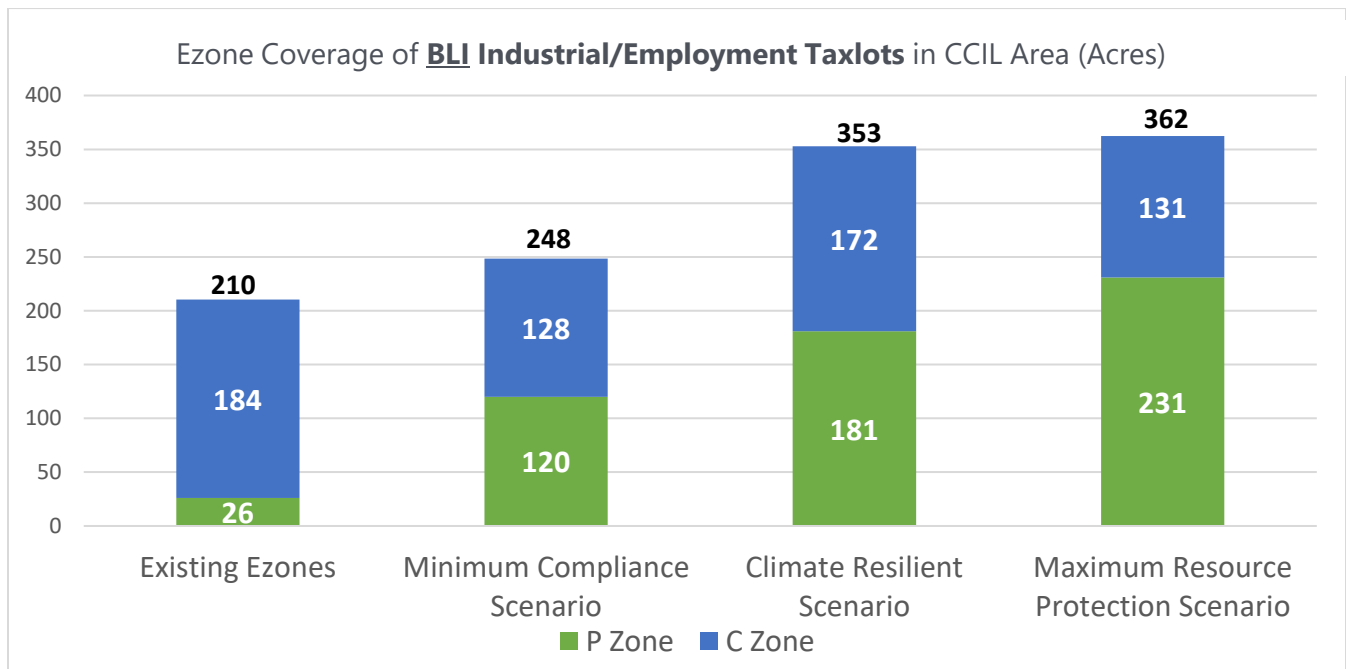


Figure 5. Ezone Coverage of BLI Industrial/Employment Taxlots

There are 1,098 acres of taxlots that are zoned for Industrial (IH, IG1, IG2) or Employment (EG1, EG2) uses that are included in the BLI that are located in the CCIL Project Area. Figure 5 illustrates how much of the BLI Industrial/Employment taxlot area is covered by the existing and draft Ezones. Sites with partial Protection zone coverage are included in the BLI as long as the coverage does not exceed 33% of a site. Sites with greater than 33% coverage by the Protection zone are excluded from the BLI. Sites with both partial or full Conservation zone coverage are included in the BLI. Sites with greater than 33% coverage reduces gross development capacity by half. Capacity is not adjusted on sites with coverage less than 33%.

The existing Ezones cover 210 acres, or 19 percent of the BLI Industrial/Employment taxlot area. The Minimum Compliance Scenario, Climate Resilient Scenario, and the Maximum Resource Protection Scenario would increase the Ezone coverage on these sites to 248 acres (22 percent), 353 acres (32 percent), and 362 acres (33 percent), respectively. It is also important to note that the Protection zone coverage would increase in all three of the scenarios.

The increase in Ezone coverage on sites that were previously included in the BLI will have an impact on the estimates of buildable Industrial/Employment land.

Impacts of Ezone Scenarios on the BLI

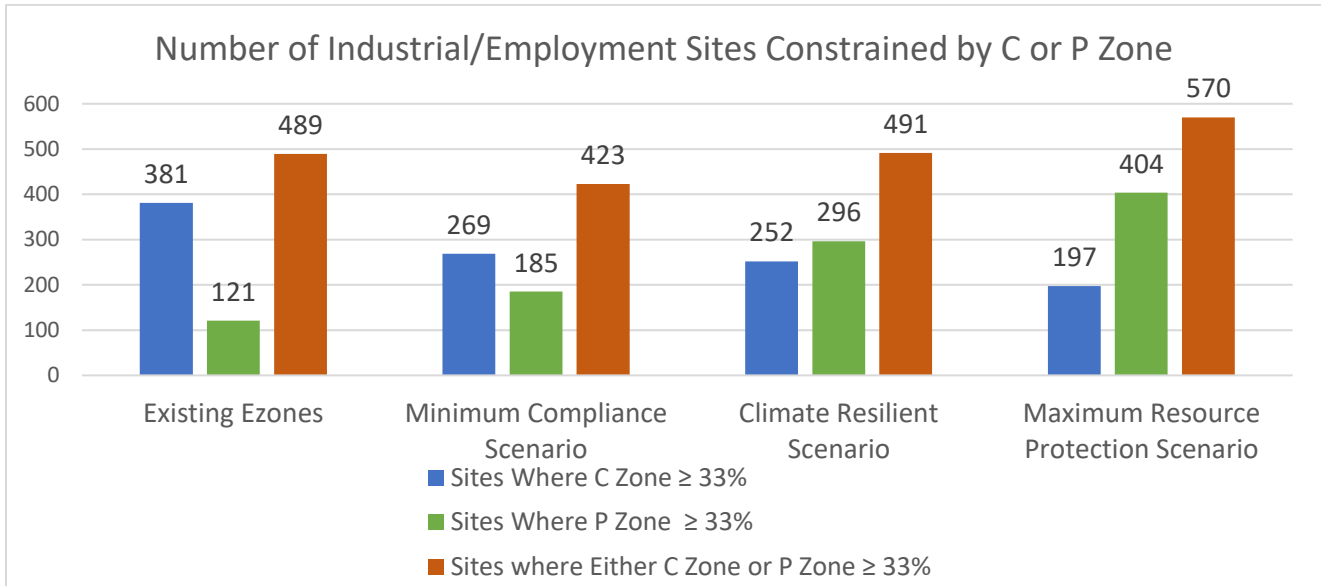


Figure 6. Ezone Coverage of BLI Industrial/Employment Taxlots

Figure 6 shows the difference between the number of sites that are constrained by either the Conservation Zone or the Protection zone in each of the scenarios. There is a total of 2,451 industrial/employment taxlots in the CCIL Project Area. Of the total, 489 (20 percent) of those lots are currently constrained by existing Ezones. The variance in the total number of sites with either a Conservation zone or Protection zone constraint is relatively small between the three scenarios and the existing Ezones, but the ratio of sites that are constrained by the Protection zone to the number of sites that are constrained by the Conservation zone would increase significantly in all three scenarios. Because the BLI treats the Protection zone constraint as a 100% reduction in development capacity for the site, compared to a 50% reduction for the Conservation zone constraint, the increase in Protection zone constraints that would result from the application of any of the three scenarios would have a significant impact on the amount of industrial land development capacity that is calculated by the BLI.

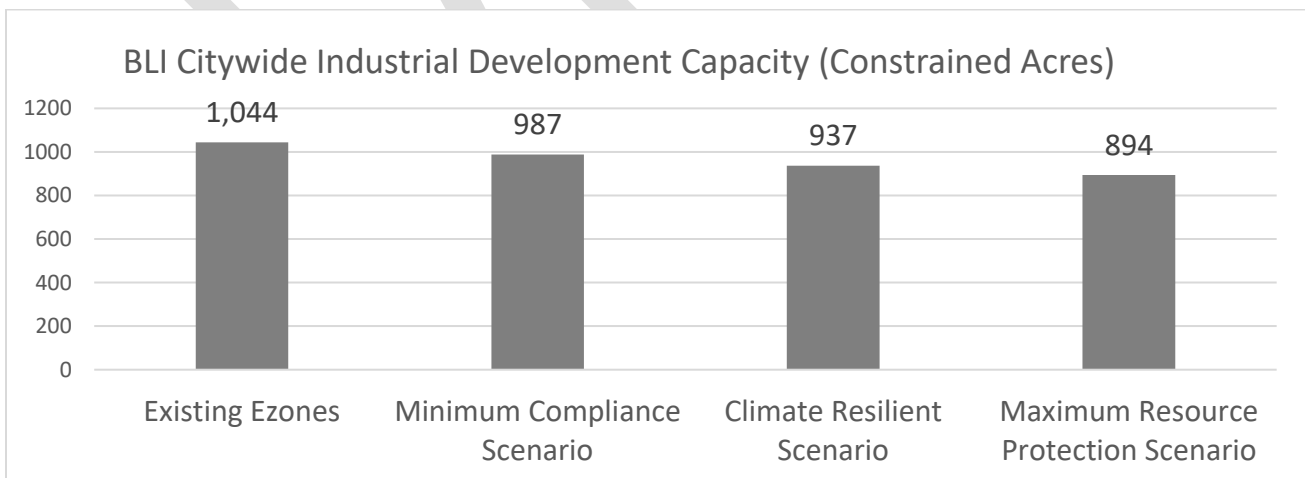


Figure 7. Ezone Scenario Impact on Citywide BLI Industrial Capacity

The BLI model was run four different times to see how the Ezone scenarios would impact the BLI outputs compared to the existing Ezones. For each of the BLI program runs, all of the other inputs were kept the same; only the Ezones were changed. The results of this analysis are summarized in Figure 7.

With the existing Ezones, there are currently 1,044 acres of industrial and employment development capacity. To calculate this acreage, the gross area of sites that are identified as underutilized are multiplied by all of the identified constraints that apply to each individual site. After the discount factor is applied, the adjusted acreage is summed to produce a citywide total. Underutilized sites include sites that are vacant or sites on which it would be economically feasible to redevelop or add new buildings given current and future market conditions. The gross acreage is multiplied by a discount factor that is determined by adding up all of the identified constraints that apply to the site. The Conservation zone constraint and the Protection zone constraint are two of many constraints that could apply to a site. Other constraints include transportation infrastructure deficits, sewer capacity issues, the presence of historical artifacts, floodplain regulations, etc... If the Minimum Compliance Scenario was implemented, the changes in the constraints that are imposed by the Ezones would result in a reduction of 56 acres (5% of the citywide total), the Climate Resilient Scenario would result in a reduction of 107 acres (10% of the citywide total), and the Maximum Resource Protection Scenario would result in a reduction of 149 acres (14% of the citywide total) of BLI industrial and employment land.

Discussion

The three scenarios represent real tradeoffs that would have significant impacts on Industrial/Employment land supply and natural resource protections. Industrial land supply is already highly constrained in the city of Portland. If further constraints on industrial lands were imposed, there would need to be offsetting changes to how Portland plans for future economic growth in other locations or other sectors. All three scenarios would, at a minimum, apply Ezones to every single mapped stream, slough, or wetland that has been identified in the project area. This would be a significant improvement over existing Ezones, which are missing many of these features.

The Minimum Compliance Scenario minimizes constraints on Industrial and Employment land by applying relatively small (30 foot) buffers around most water features. Water features that are surrounded by forest or woodland vegetation or Special Habitat Area (SHA) designations would have slightly larger c zone buffers, depending on how far away from the water feature the edge of the vegetation or the SHA extended. If this scenario was adopted, some existing Ezone buffers would shrink modestly. This scenario would provide adequate protection to the water features because it would prevent them from being filled or graded except in extraordinary circumstances. But this scenario would allow development to occur with virtually no setback through a non-discretionary permitting process, which could result in undesirable impacts and degradation of the water features.

The Climate Resilient Scenario would be more protective of resources. It would establish setbacks from all streams, sloughs, and wetlands. But the setbacks would only be 25 feet in many cases. Best practices in forestry and natural resource management generally require buffers of 50 feet or more. The

Maximum Resource Protection Scenario would provide mandatory 50-foot setbacks from all streams, sloughs, and wetlands, which would be consistent with the best available science on natural resource protection. But both the Climate Resilient Scenario and the Maximum Resource Protection Scenario would result in significant increases in the constraints on Industrial and Employment lands.

Background Material

Natural Resource Inventory (NRI) and history of natural resource protection

Between 1989 and 2010, Portland adopted 13 different natural resource protection plans that applied environmental overlay zones (Ezones) to different parts of the city to comply with State Land Use Planning Goal 5. In 2010, Metro adopted Title 13 as part of its Regional Growth Management Functional Plan. Title 13 created new standards for Goal 5 natural resource protections that had to be met by all governmental jurisdictions within the Metro region. These standards included an inventory of natural resources and a ranking system for prioritizing natural resource protections. Jurisdictions had the option to either adopt Metro's inventory and model natural resource protection code, or they could use their own inventory and code if they could demonstrate that it was substantially equivalent to Metro's inventory and regulations.

Portland chose to keep its existing natural resource protection program, and to demonstrate substantial compliance with Metro's regulations. In 2012, Portland adopted the Natural Resource Inventory (NRI) as a methodology for mapping natural resources and demonstrating compliance with Metro Title 13. Since then, all of the natural resource protection plans that have been adopted by the City of Portland have used the NRI as the basis for mapping natural resource protection zoning and for demonstrating compliance with Goal 5 and Title 13 rules and regulations.

The NRI maps rivers, streams, wetlands, and vegetation. It includes a systematic methodology for ranking riparian resources and wildlife habitat. The resource ranking methodologies assign high, medium, or low value rankings to various different natural resources. The NRI also includes maps of Special Habitat Areas (SHAs), which are defined natural resource areas that are known to provide habitat to threatened, endangered, or regionally significant wildlife species.

In 2013, Metro determined that Portland had demonstrated substantial compliance with Title 13 on the basis of the Ezones, the NRI, and other resource protection programs, such as natural resource protections that are contained in the land division chapter of the zoning code, protections for trees that are contained in the Tree Code, and the Bureau of Environmental Services stormwater management regulations, including the Drainageway Reserves. But Metro and Portland also recognized that further work was required. They entered into an intergovernmental agreement that committed Portland to update and modernize natural resource protections in the industrial Columbia Corridor and the North Reach of the Willamette River.

Middle Columbia/Airport Futures Plan

The Middle Columbia/Airport Futures Plan (2010) was the first natural resource protection plan that was adopted in Portland that utilized the Natural Resource Inventory as a basis for mapping Ezones. It set a recent precedent and methodology for mapping Ezones in industrial areas.

The Middle Columbia/Airport Futures Plan recommended the following:

- Apply Conservation zone to all NRI High-Ranking Riparian Resources
- Apply Protection zone (and a 50-foot Protection zone buffer) to all wetlands, streams, and sloughs
- Variably apply protection or conservation overlay zones to some SHAs

The recommendations of the Middle Columbia/Airport Futures Plan were adopted for all sites that are owned by the Port of Portland that are outside of a defined area around the Portland International Airport, where no Ezones are applied. The recommendations of the plan were also applied to sites that were zoned for residential and open space uses within the project area. The plan made recommendations for changes to Ezones on sites that were zoned for industrial, or employment uses, but due to an outdated Economic Opportunities Analysis (EOA), no changes in Ezone mapping were adopted for industrial/employment sites that were not owned by the Port of Portland.

The CCIL Ezone Project will make recommendations for changes to Ezones that are mapped on all sites that are located within the project area, including those that were left unchanged by the Middle Columbia/Airport Futures Plan. The methodology that is used to map draft ezones in the CCIL Plan is consistent with the methodology that was employed in the Middle Columbia/Airport Futures Plan. The natural resource protection recommendations for the sites that are owned by the Port of Portland will be identical to those that were applied in the Middle Columbia/Airport Futures Plan, but for sites that are not owned by the Port of Portland, three different resource protection scenarios are proposed that range from a Minimum Compliance Scenario, which applies Ezones at a level that is commensurate with the minimum requirements of Metro Title 13, a Climate Resilient Scenario, which applies Ezones that exceed Title 13 requirements, but which are roughly consistent with the minimum Ezones that were applied in the recently adopted Environmental Overlay Zone Map Correction Project (2022), and a Maximum Resource Protection Scenario, which applies natural resource protections that are consistent with the most protective Ezones that were applied in the Environmental Overlay Zone Map Correction Project.

Transition Area and Setbacks

The Ezones are divided into two general subareas: the Resource Area and the Transition Area. The Transition Area is defined as the outer 25' of the Ezones, measured from the outer edge inward. The Resource Area is defined as all portions of the Ezones that are >25' from the outer edge.

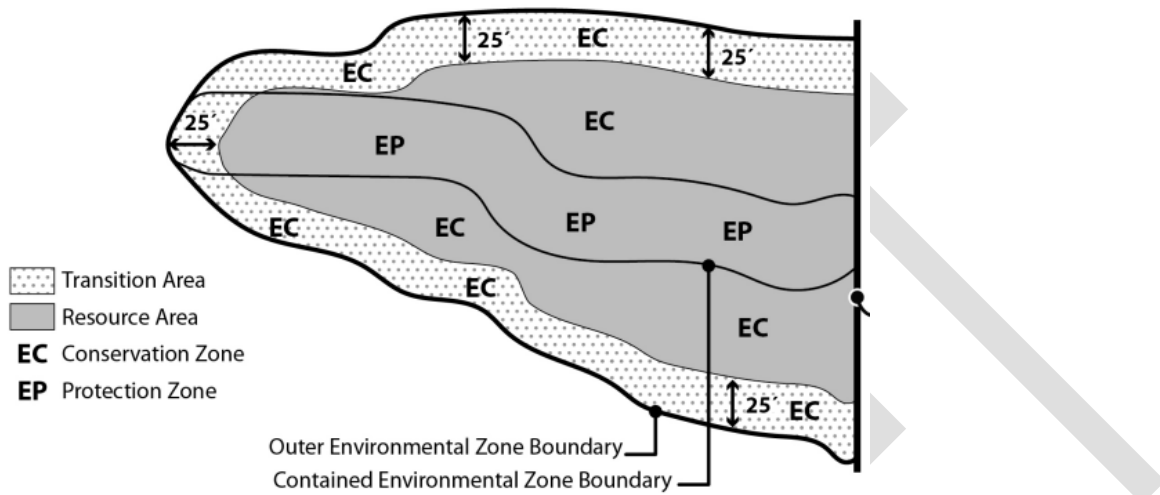


Figure 8: Subareas of the Environmental Overlay Zones

The code that applies to the Ezones contains a number of standards that must be met by any new development that is proposed to occur within the Ezones. If the standards cannot be met, then the development cannot occur unless it is approved through environmental review. The most important standards are 1) limitations on total disturbance area allowed within the Ezones per site, 2) required setbacks from streams/sloughs and wetlands, and 3) limits on tree removal.

The three standards mentioned above are the most significant protective measures for natural resources in the Ezone Code. Two of these three standards, the setback standard and the limitation on total disturbance area do not apply in the Transition Area. This means that any resources that are located in the Transition Area are at risk of being filled, removed, paved over, graded, or impacted by development in other ways without restriction and without mitigation requirements. At the very least, a small buffer of at least 25' is needed around all streams/sloughs/wetlands to ensure these features and their related ecosystem services are not destroyed. Larger buffers are more protective because they allow setback standards to be applied, which ensures that if development can't be set back from the edge of streams/sloughs/wetlands, some mitigation is required in the form of resource enhancement elsewhere on the site to replace the functional values that are lost when riparian area around the streams/sloughs/wetlands are impacted or encroached upon by development.

Special Habitat Areas

Most of the larger vegetated areas, significant wetlands and water bodies, and some of the grassland habitats in the project area are designated Special Habitat Areas (SHAs). Most, but not all, of the SHAs are protected by either a Conservation zone or a Protection zone. In all three of the scenarios, a uniform set of Ezone mapping rules are applied to SHAs that are based on their existing Ezones. If a p zone is applied to a SHA under the existing maps, the proposal will be to apply a p zone to the SHA in all of the draft scenarios. If a c zone is applied to a SHA in the existing maps, the proposal will be to apply a c zone to the SHA in all of the draft scenarios. The SHA mapping rules are crafted largely to comply with a provision in Metro Title 13 that prohibits the rollback of preexisting natural resource protections. Where streams/sloughs/wetlands intersect with a SHA to which the c zone or no ezone is applied, the Ezone mapping rules that apply to the stream/slough/wetland will override the SHA Ezone mapping rule.

Table 2: Ezone Protection Scenarios (Mapping Protocols in Detail)

	Existing Ezones	Maximum Resource Protection	Climate Resilient	Minimum Compliance
NRI High Riparian Resource	Variable: mix of c and p zone, many resources unprotected	conservation (c)	conservation (c)	conservation (c)
NRI Medium Riparian Resource	Variable: c zone or none. Many resources unprotected	conservation (c)	conservation (c)	None
NRI Low Riparian Resource	None	conservation (c) ³	None	None
Special Habitat Areas	Variable: Mix of p zone, c zone, and none	Retain protection (p)/conservation (c) where currently applied; otherwise follow riparian and wetland protocol	Retain protection (p)/conservation (c) where currently applied; otherwise follow riparian and wetland protocol	Retain protection (p)/conservation (c) where currently applied; otherwise follow riparian and wetland protocol
Streams	Variable: Mix of p zone, c zone	protection (p) + 50'	protection (p) + 25'	protection (p) + 30' c zone buffer Where no TOB mapped, assume stream width is 10'
Wetlands²	Variable: Mix of p zone, c zone	protection (p) + 50'	protection (p) + 25'	protection (p) within 150' of rivers/streams/sloughs or in floodplains, + 30' c zone buffer Others: conservation (c) +30' c zone buffer
Streams/Wetlands on Port-owned sites (except in CC9)	C zone on NRI High Riparian and p zone + 50' of p zone buffer	protection (p) + 50' conservation (c) 50-75'	protection (p) + 50'	protection (p) + 50'
Floodplain (outside of levees)¹	Variable: Mix of p zone, c zone, and none	conservation (c) 0-170' from Ordinary High Water	conservation (c) 0-170' from Ordinary High Water	conservation (c) 0-170' from Ordinary High Water
Rivers	C zone + c zone buffer	Conservation (c) within OHW + 50' c zone buffer	Conservation (c) within OHW + 50' c zone buffer	Conservation (c) within OHW + 50' c zone buffer

1. This policy is intended to meet requirements to protect the floodplain that were detailed in the FEMA BiOp.

2. Do not apply p zone to wetlands in the resource sites CC1, CC2, CC3, CC4

3. The c zone is only applied to NRI low value riparian resources if they are also mapped as forest or woodland vegetation.

Table 3: Mapping Protocols for Special Habitat Areas

Draft Rules for Special Habitat Areas (SHA)¹		
SHA#	SHA Name	Draft Ezone Proposal
CS14 West	Middle Columbia Slough West of I-205	conservation (c)
CS14 East	Middle Columbia Slough East of NE 122nd	protection (p)
CS.17.E	South Arm Complex - Little Four Corners / Prison Pond	protection (p)
CS28	Big Four Corners (north of NE Airport Way)	protection (p)
CS27	Big Four Corners (south of NE Airport Way)	protection (p) within OS base zone conservation (c) in other base zones
CS23	Broughton Beach	protection (p)
CS17.D	South Arm Complex - Johnson Lake	protection (p)
CS16.B	South Arm Complex - Buffalo Slough East	protection (p)
CS11	Blue Heron Meadows Wetland	protection (p)
CS7	Heron Lakes Golf Course Wetlands/ Force Lake and Wetlands	protection (p)
CS6	Smith and Bybee Lakes Management Area	protection (p)
CS2	Ramsey Wetland Complex	protection (p)
J	Johnson Creek	protection (p)
CS	Lower Columbia Slough	protection (p)
CS18	Subaru Wetlands	protection (p)
CS13	Peninsula Drainage Canal	protection (p)
C1	Columbia River Mainstem	conservation (c)
CS9	Bridgeton Slough	conservation (c)
CS22	Colwood Golf Course	conservation (c)
CS11	Blue Heron Meadows Wetland	protection (p)
CS7	Heron Lakes Golf Course Wetlands/ Force Lake and Wetlands	protection (p)
CS6	Smith and Bybee Lakes Management Area	protection (p)
CS13	Peninsula Drainage Canal	protection (p)
C1	Columbia River Mainstem	conservation (c)
CS9	Bridgeton Slough	conservation (c)
CS22	Colwood Golf Course	conservation (c)
CS24.J	Upland Grasslands - PIC East	conservation (c)
CS26	Cross Levee Habitat Area	conservation (c)
C19.C	Broadmoor Golf Course - South	conservation (c)
C19.B	Broadmoor Golf Course - Middle	conservation (c)
C19.A	Broadmoor Golf Course - North	conservation (c)
CS21	Elrod Slough Complex	conservation (c)
CS10	Brandwein Wetlands	conservation (c)

1. Where Special Habitat Areas (SHA) overlap with wetlands and streams, the ezones that are applied to the wetlands and streams override SHA mapping rules.

Draft Rules for Special Habitat Areas (SHA)¹		
SHA#	SHA Name	Draft Ezone Proposal
C2	T6 Floodplain and Wetland	conservation (c)
W3.H	Willamette Bluff Complex - Riverwood Woodland	conservation (c)
W3.G	Willamette Bluff Complex - Willamette Bluff South	conservation (c)
W3.F	Willamette Bluff Complex - Willamette Bluff Central	conservation (c)
W6	Forest Park	conservation (c)
CS3	West Wye/ I-5 Powerline Mitigation Site	conservation (c)
CS4	St. Johns Landfill	conservation (c)
C1,C7	Columbia River Mainstem, Interstate Bridge (I-5)	conservation (c)
C8	East Hayden Island	conservation (c)
CS9	Bridgeton Slough	conservation (c)
CS16.A	South Arm Complex - Buffalo Slough West	conservation (c)
CS17.B	South Arm Complex - Whitaker Ponds	conservation (c)
C4	South Bank Oregon Slough	conservation (c)
C3	West Hayden Island	conservation (c)
C1, C9	Columbia River Mainstem, I205 Bridge	conservation (c)
CS5	Wapato Wetlands	conservation (c)
CS8	Vanport Wetlands	conservation (c)
CS17.A	South Arm Complex - Whitaker Slough	conservation (c)

1. Where Special Habitat Areas (SHA) overlap with wetlands and streams, the ezones that are applied to the wetlands and streams override SHA mapping rules.