# TECHNICAL MEMORANDUM

DCG WATERSHED

Date: December 8, 2023
To: Kitsap County Department of Community Development
From: Alexandra Plumb; Dan Nickel
Project Name: Kitsap County CAO Update
Project Number: 211214

## Subject: WDFW Riparian Management Guidance

DCG/Watershed recently prepared a Best Available Science Summary Report and a Consistency and Gap Analysis Report to support the update of Kitsap County's Critical Areas Ordinance (CAO). Building upon and supplementing the County's existing record of best available science (BAS), the BAS Summary Report highlights recent additional BAS since the County's last update of the CAO. The Consistency and Gap Analysis Report identifies where the BAS presented in the BAS Summary Report indicates that amendments to the County's CAO may be necessary.

Regarding fish and wildlife habitat conservation areas (FWHCAs), the Consistency and Gap Analysis Report indicated that two of the recommendations would be further addressed in a technical memo. These recommendations were:

- *Consistency and Gap Analysis Recommendation #2: Consider the designation of fish and wildlife habitat conservation areas based on recent WDFW riparian management guidance.*
- *Consistency and Gap Analysis Recommendation #5: Consider the approach to riparian protection based on recent WDFW riparian management guidance.*

The purpose of this technical memo is to further address these two recommendations in the context of the most recent guidance from the Washington Department of Fish and Wildlife (WDFW).

## Summary of Recent WDFW Riparian Management Guidance

WDFW recently released the following two publications related to riparian ecosystems. The latter is the "recent WDFW riparian management guidance" mentioned in the two Consistency and Gap Analysis Report recommendations identified above. These publications include the following:

- *Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications* (Volume 1) (Quinn et al. 2020)
- *Riparian Ecosystems, Volume 2: Management Recommendations* (Volume 2) (Rentz et al. 2020)

Volume 1 is intended to be a source of BAS for understanding how riparian areas and surrounding watersheds affect ecological functions and aquatic habitats. Using the scientific foundation established in Volume 1, Volume 2 sets forth land use guidance for local governments and other organizations to conserve watershed processes and riparian ecosystems in support of aquatic species and their habitats. As noted by WDFW, "*the guidance presented in Volume 2 is not in and of itself 'best available science.' Rather, it represents the recommendations of WDFW as to how a local government could include the best available science in policies, plans, and regulations to protect riparian ecosystems and their associated aquatic habitats*".

Volume 2 identifies WDFW's eight key recommendations for riparian management as follows:

1. Designate riparian ecosystems as critical areas;
2. Include watershed-scale management considerations;
3. Use reference points to locate the inner edge of the riparian management zone (RMZ);
4. Include CMZs in delineation of the RMZ;
5. Establish RMZ widths based on site-specific conditions;
6. Apply the recommended RMZ delineation steps to all streams, regardless of if they are fish-bearing;
7. Establish monitoring and adaptive management frameworks; and
8. Consider needs of relevant terrestrial species.

WDFW's recommendations 1, 5, and 6 would represent a considerable shift in the County's overarching approach to the designation and protection of FWHCAs; therefore, these three WDFW recommendations and their potential application in Kitsap County are discussed in the sections below.

### WDFW Recommendation 1

WDFW recognizes riparian ecosystems as a priority habitat for fish and wildlife and recommends that local jurisdictions designate them as FWHCAs, a type of critical area. WDFW defines the bounds of the riparian ecosystem as the riparian management zone (RMZ). Volume 2 defines the RMZ as "*the area that has the potential to provide full riparian functions*."

Kitsap County, like most jurisdictions in Washington, currently designates streams as FWHCAs, a type of critical area. The County protects streams using dimensional buffer standards; however, under this approach, the buffers themselves are not specifically designated as FWHCAs.

Therefore, if the County were to implement this WDFW recommendation, the County would shift from only considering streams as FWHCAs to considering entire RMZs as FWHCAs. WAC 365-190-130 describes fish and wildlife habitat conservation areas as "*land management for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. Fish and wildlife habitat conservation areas do not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company. This does not mean maintaining all individuals of all species at all times, but it does mean not degrading or reducing populations or habitats so that they are no longer viable over the long term. Counties and cities should engage in cooperative planning and coordination to help assure long term population viability.*"

Further, WAC 365-190-130 requires that the following fish and wildlife habitat conservation areas must be considered for classification and designation including:

> (a) Areas where endangered, threatened, and sensitive species have a primary association;
>
> (b) Habitats and species of local importance, as determined locally;
>
> (c) Commercial and recreational shellfish areas;
>
> (d) Kelp and eelgrass beds; herring, smelt, and other forage fish spawning areas;
>
> (e) Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat;
>
> (f) Waters of the state;
>
> (g) Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity; and

> (h) State natural area preserves, natural resource conservation areas, and state wildlife areas.

This definition does not include the requirement to designate a RMZ as a fish and wildlife habitat conservation area but does require the protection of riparian ecosystems. The County could consider retaining stream buffers in alignment with the WAC definition but should consider increasing protections to better align with BAS. RCW 36.70A.172 (1)[1] describes that "*In designating and protecting critical areas under this chapter, counties and cities shall include the best available science in developing policies and development regulations to protect the functions and values of critical areas. In addition, counties and cities shall give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries."* The WDFW guidance has been reviewed and considered in the development of the recommendations described below.

### WDFW Recommendations 5 & 6

WDFW recommends protecting riparian ecosystems by establishing site-specific RMZ widths for all streams in the County. Their recommended approach to establishing site-specific RMZ widths is organized around a site-potential tree height at 200 years ($SPTH_{200}$) framework.

"$SPTH_{200}$" refers to the "the average maximum height of the tallest dominant trees (200 years or more) for a given site class." The phrase "200 years or more" is in reference to the approximate minimum age of old-growth forests, which reflects an underlying assumption that old-growth forest conditions are needed for full riparian ecosystem functions. Regarding use of the $SPTH_{200}$ framework, Volume 2 states:

> *The scientific literature review (see Volume 1) informs WDFW's position that protecting the area within one $SPTH_{200}$ from the edge of a stream channel maintains full riparian ecosystem functions for all aquatic species, including salmon, and promotes healthy, intact riparian ecosystems. This recommendation provides the greatest level of certainty that land use activities do not impair functions and values of riparian ecosystems.*

Based on the guidance in Volume 2, in forested ecoregions like Kitsap County, establishing site-specific RMZ widths essentially consists of the following two steps:

1. **Use $SPTH_{200}$ if it is at least 100 feet.** To aid with site-specific RMZ delineation, WDFW offers an internet-based mapping tool that indicates recommended widths for RMZs statewide based on $SPTH_{200}$.

[1] Also consistent with the recommendations of WAC 365-195-925.

2. **Overlay 100-foot pollution removal delineation.** In cases where $SPTH_{200}$ is less than 100 feet, WDFW recommends a minimum RMZ of 100 feet, as this provides the width necessary for 95% pollution removal target for most pollutants and approximately 80% of surface nitrogen. The mapping tool mentioned immediately above also indicates where a 100-foot pollution removal RMZ should be applied.

# Existing Protections

## Washington Department of Natural Resources' Forest Practice Board Stream Typing

Kitsap County's current approach to protecting streams is not site-specific. As is currently typical for most Washington jurisdictions and consistent with previous WDFW riparian management recommendations, the County uses the Washington Department of Natural Resources Forest Practice Board water typing system set forth in WAC 222-16-030 to classify streams as Type F, Np or Ns waters (KCC 19.300.310.B.1).

## Existing Buffer Widths

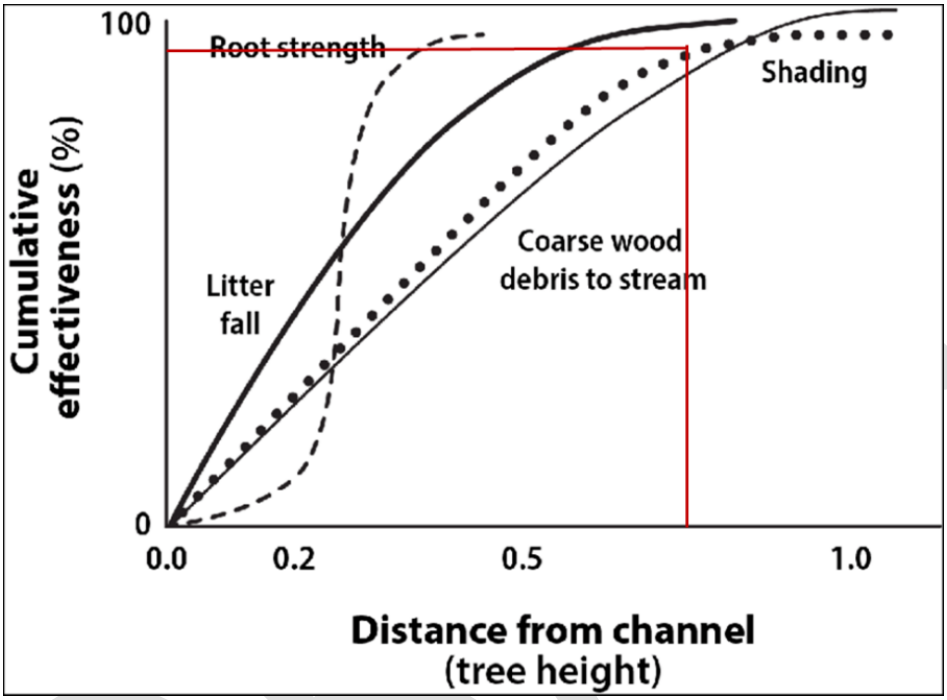
Based on water type, the code (KCC Table 19.300.315) specifies the applicable buffer width and setback, as shown in Table 1:

Table 1. Existing County stream buffers and setbacks by water type

| Water Type | Buffer Width | Minimum Building Setback |
|---|---|---|
| F | 150 feet | 15 feet beyond buffer |
| Np | 50 feet | 15 feet beyond buffer |
| Ns | 50 feet | 15 feet beyond buffer |

Therefore, if the County were to implement these two WDFW recommendations, the County would shift from applying a defined buffer width and setback to streams based on water type to establishing site-specific RMZ widths for all streams. The intent of critical area policies and regulations are to ensure no net loss of ecological functions and values in compliance with WAC 365-196-830. The requirement for no net loss serves as a benchmark to evaluate BAS and identify gaps in existing development regulations to determine if updates are needed. The County must also give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries pursuant to WAC 365-195-925.

Figure 1 provides a graphical representation of the Forest Ecosystem Management Assessment Team[2] (FEMAT) curves, similar to those included in WDFW's recommendations for establishing the bounds of RMZs (Quinn et al. 2020). The curves show the percentage of full function for riparian habitat attributes with increasing distance from a stream channel. The "FEMAT Curves" are a generalized conceptual model describing contributions of four key riparian ecosystem functions to aquatic ecosystems as the distance from a stream channel increases.




Source: *FEMAT 1993*

Figure 1. FEMAT Curves

*Note: "Tree height" refers to average height of the tallest dominant tree (200 years old or greater), referred to as site potential tree height (SPTH).*

Rentz et al. (2020) includes this graphic to justify recommending one full SPTH200 for the width of a RMZ to attain "full" riparian function. An examination of the graphed habitat functions shown in the red intersection lines demonstrates where most of the four referenced functions level off before reaching one full SPTH200 from the channel, indicating that a large portion of

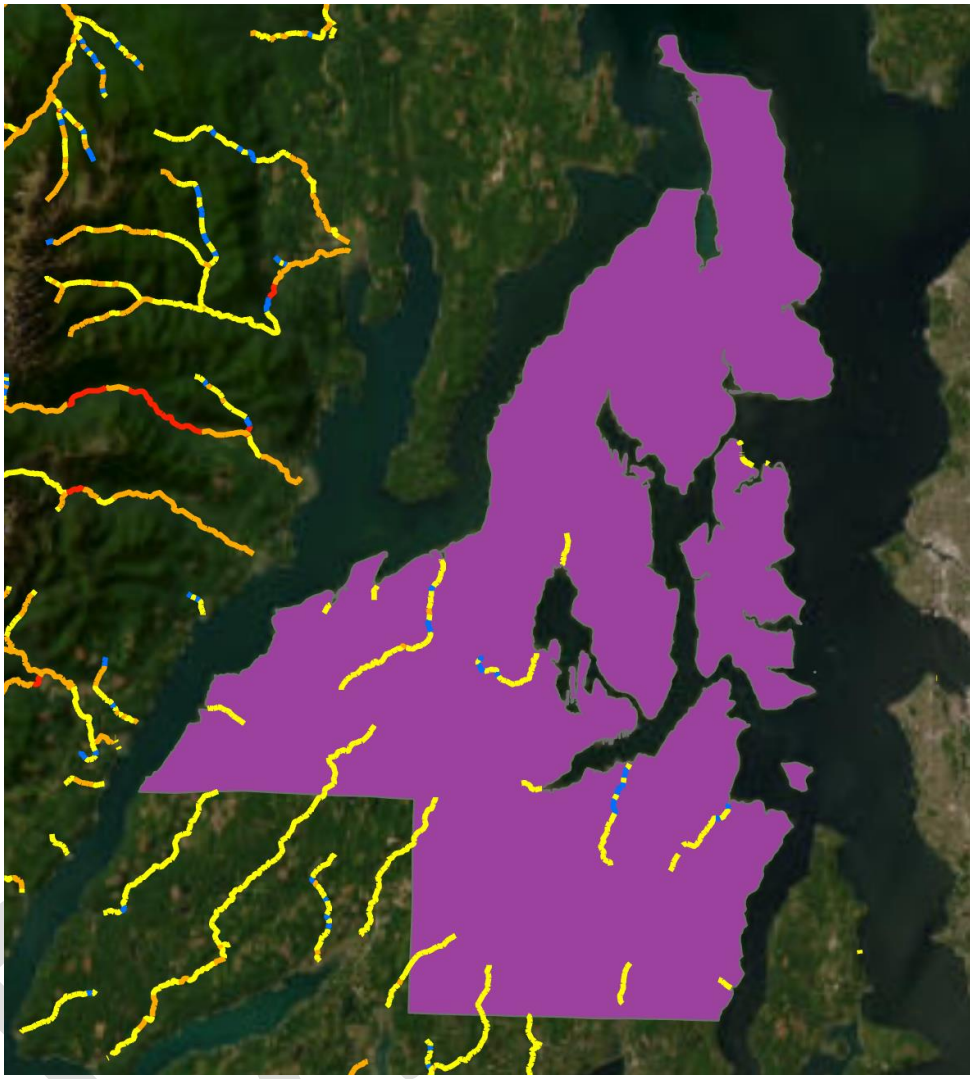
[2] "*In 1993, a group of experts (Forest Ecosystem Management Assessment Team [FEMAT]) was convened to develop a conceptual model to determine how to protect riparian areas in forested landscapes. This model has come to be known as the FEMAT curves (FEMAT 1993). Though this model is over 25 years old, it continues to be one of the most useful conceptual models informing riparian management (Rentz et al. 2020).*"

cumulative effectiveness may be achieved at roughly 75% $SPTH_{200}$. Exceptions to this include coarse wood recruitment, but only a slight improvement of cumulative effectiveness is shown beyond approximately 0.75 $SPTH_{200}$. Where old-growth conditions no longer exist within a buffer or RMZ, up to 200 years would be needed for this added small percentage of habitat benefit to accrue. Figure 1 indicates that the majority of RMZ function is experienced at 70-80% of SPTH200, with only slight improvements beyond that. Most of the cumulative effectiveness can be achieved with a width of no less than 75% of one full $SPTH_{200}$, as is shown on the FEMAT curves, though arguably, some additional small gains for aquatic habitat would be realized even beyond 100% $SPTH_{200}$. It should also be noted that some functions never achieve 100% cumulative effectiveness, such as shading, as illustrated on Figure 1. This also assumes that all referenced functions can achieve 100% effectiveness based on the site-specific conditions and be maintained in these conditions for 200 years. This approximation indicates that ideal conditions would exist on every site instead of current conditions. As referenced in WAC 365-196-830(4), "*development regulations must preserve the **existing** functions and values of critical areas*."

Overall, the highest rates of return on aquatic habitat function generally occur at and near the streambank and diminish from there with distance. However, it is acknowledged that the FEMAT curves only evaluate four ecological functions for the benefit of aquatic species. The WDFW guidance references that RMZs can also provide habitat for many terrestrial wildlife species including movement corridors and that regulations should consider their protection, as well as aquatic habitat. Since riparian protections benefit both aquatic and terrestrial wildlife species, concentrating protections around riparian areas may be an efficient use of resources (Rentz et al. 2020).

In WDFW's Riparian Management guidance, it is recommended to provide reference to mapped CMZs in the FWHCA section to ensure that these areas are adequately protected. A high-level screening for the CMZs within unincorporated Kitsap County was completed in accordance with the recommendations of the *Screening Tools for Identifying Migrating Stream Channels in Western Washington* prepared by the Department of Ecology (Publication 15-06-003) identified several CMZs as shown in Figure 2 below. When a CMZ is present, the riparian protection area should be measured from the edge of the CMZ instead of from the OHWM. This will improve protection of riparian functions and values and will result in larger riparian management zones adjacent to CMZs. However, the County currently has this requirement in KCC 19.300.315.A.6, which states, "*In areas where channel migration zones can be identified the buffer distance shall be measured from the edge of the channel migration zone.). Building setbacks for geologically hazardous areas may also apply (Chapter 19.400), if determined necessary."* The County may consider determining when it is warranted to provide screening-level information and

indicate when a site-specific assessment is needed by a licensed geologist or qualified professional.



*Note: Potential CMZs are delineated in yellow, orange, and blue lines.*

Figure 2. Potential CMZs based on the Department of Ecology Channel Migration Potential Tool (CHAMP).

## Application of WDFW Mapping Tool to Kitsap County

As previously noted, WDFW offers an online mapping tool to aid with determining site-specific RMZ widths. We performed an informal, limited review of the application of this mapping tool to Kitsap County to gain a general understanding of how use of the tool could affect riparian protected areas.

The mapping tool was used at a variety of sample locations in Kitsap County. The determinant tree species for $SPTH_{200}$ was typically Douglas-fir, and less frequently red alder. The sampling found the ranges of values for $SPTH_{200}$ shown below in Table 2.

Table 2. Ranges of sample $SPTH_{200}$ values in Kitsap County

| Tree Species | $SPTH_{200}$ Range |
|---|---|
| Douglas-fir | 144-235 feet |
| Red alder | 102-105 feet |

As indicated above, the County currently applies a 150-foot buffer to fish-bearing streams (Water Type F) and a 50-foot buffer to non-fish-bearing streams (Water Type Np, Ns). Accordingly, based on the sampling results, the mapping tool may frequently indicate an RMZ width that is significantly larger than the current buffer standards with a maximum value of 235 feet, particularly for streams that are currently designated as non-fish-bearing. Significantly larger RMZ widths applied throughout County jurisdiction would be expected to substantially increase the amount of land in the County that would include regulated riparian areas.

## Guidance Implementation

Volume 2 provides a variety of riparian management recommendations; however, specific implementation guidance is not provided. For example, WDFW does not provide model code language for consideration by local jurisdictions. Therefore, each local jurisdiction must determine how the recommendations might translate into its regulatory program.

### Other Jurisdictions

Because this is the first periodic update cycle under the Growth Management Act since the WDFW riparian management guidance was published, there are very limited number of other jurisdictions to look to for examples of how the guidance is being applied in practice. Only two other jurisdictions are known to have incorporated the guidance into their regulatory programs: the City of Anacortes and Clark County.

The City of Anacortes appears to closely follow the guidance. The City designates the entire RMZ as a critical area (AMC 19.70.330.A). The width of the RMZ is the height of the tallest 200-year-old site-potential tree ($SPTH_{200}$) or 100 feet, whichever is greater (AMC 19.70.330.A.1). Activities that may impact an RMZ must provide a critical areas report prepared by a qualified professional describing the functions and values of the RMZ, and the report must include the findings of the WDFW mapping tool (AMC 19.70.330.A.3).

In contrast, Clark County has tailored the guidance for local application.[3] Clark County has designated the entire "riparian habitat area" as a critical area (CCC 40.445.020.C.1.b). However, Clark County does not establish fully site-specific RMZ widths, has retained the water typing system set forth in WAC 222-16-030, and does not elect to use the WDFW mapping tool to determine RMZ widths.

Instead, Clark County, using a locally developed methodology for application of the $SPTH_{200}$ framework, sets forth specific riparian habitat area widths based on site class (defined in WAC 222-16-010) and water type (defined in WAC 222-16-030), as shown below in Table 3. The County has developed its own interactive map to aid with implementation.

Table 3. Clark County riparian habitat areas (CCC Table 40.445.020-4)

| Site Class | Type S & F Waters | Type Np Waters | Type Ns Waters |
|---|---|---|---|
| II | 235 feet | 155 feet | 100 feet |
| III | 205 feet | 135 feet | 100 feet |
| IV | 165 feet | 105 feet | 100 feet |
| V | 150 feet | 100 feet | 100 feet |

Based on a supporting memo, it appears that Clark County selected this overall approach to reduce the number of applicable riparian habitat area widths. Notably, the County found that its locally developed methodology for application of the $SPTH_{200}$ framework "g*reatly expands the widths of riparian habitat adjacent to non-fish bearing waters, which raises concerns about impacts to affected landowners, increase in the number of affected landowners, and the County's ability to meet other goals of the Growth Management Act*. (Clark County 2023)" The County found that implementation of their locally developed methodology for application of the $SPTH_{200}$ framework would subject an additional 58,109 acres to regulation as riparian habitat areas. Therefore, the County reduced the riparian habitat area widths (citing application of a reduction provision in the then-existing CAO) for non-fish bearing waters below the widths indicated by their locally developed methodology for application of the $SPTH_{200}$ framework.

## Options for Consideration

To address the BAS recommendations described in the WDFW riparian management guidance, the following options referenced below could be considered by the County for implementation in the CAO:

[3] Clark County locally adopted their updated CAO in March 2023 (Ordinance No. 2023-03-01). However, whether the updated CAO is in effect is unclear based on available information. The updated CAO has not yet been codified.

## Option 1: Retain Existing Values

The current Kitsap County buffer widths described in KCC 19.300.315 (see Table 1) are at or below the range of $SPTH_{200}$ in most cases. The WDFW guidance recommends a minimum buffer width of 100' for 95% removal of most pollutants and approximately 80% of surface nitrogen. By retaining existing buffer widths, this may be considered a deviation from BAS by WDFW. Departures from BAS must provide a record that is consistent with the criteria described in WAC 365-195-915(c).

## Option 2: $SPTH_{200}$ Model

The County could consider adopting one of the following approaches for incorporating the WDFW $SPTH_{200}$ model to align with the methodology described in Volume 2:

- Utilize the WDFW $SPTH_{200}$ online tool to determine the riparian protection area width or;
- Create their own GIS layer at a parcel-by-parcel scale using the WDFW $SPTH_{200}$ base data.

WDFW's online GIS-based mapping tool provides 200-year SPTH values statewide largely based on ecosystem type and soil data. The online tool contains designated SPTH values for forested ecoregions and selected urban areas based on the National Resource Conservation Service (NRCS) soil polygons. The WDFW $SPTH_{200}$ Mapping Tool utilizes NRCS soil data to determine SPTH values from 1966 that was collected on a regional basis. However, portions of the soil data and associated SPTH information are missing in some areas of the County. The WDFW guidance does not currently include implementation guidance to support parcel-specific applications.

The $SPTH_{200}$ values, using the WDFW $SPTH_{200}$ online tool, vary between 102-235 feet depending on the location within the County and the predominant tree species. For a predictive approach and consistent application, the County could consider incorporating their own stream layer that evaluates the parcel-level $SPTH_{200}$ to reduce variability across a single parcel, provide a more accessible resource for applicants, and aid in implementation for County staff. It is noted that there are certain areas that lack $SPTH_{200}$ data that will need to be determined in consultation with WDFW.

## Option 3. Predictive Model

The County could consider incorporating a hybrid approach that would retain the current stream typing system but would increase values to better align with BAS. This approach would

incorporate values that would meet or exceed the WDFW recommended minimum 100' buffer to ensure adequate pollution removal but would include a set $SPTH_{200}$ supported value for Type F waters. The riparian protection areas vary by stream classification to allow for predictable and consistent implementation at the permit application level.

Incorporating the recommendations above, in conjunction with the proposed riparian protection area widths, will support County's compliance with no net loss requirements for existing riparian ecological functions and values pursuant to WAC 365-196-830(4).

Alternatively, the County could also consider calculating alternative riparian protection area widths based on the soil site classes defined in WAC 222, Forest Practices Board, consistent with Clark County. Alternative riparian protection area widths could be extrapolated from the 50-year site index range ($SPTH_{50}$) to determine SPTH200 values. Riparian protection areas under this approach would be variable based on both the type of stream and soil site class. This approach would result in variable riparian protection area widths based on soil site class that would likely exceed the 100' riparian protection area for non-fish perennial (Np streams) waters. Either of the hybrid alternative options would allow for the County to maintain existing reduction in riparian protection areas for non-fish waters, but would incorporate the minimum 100' foot pollution removal buffer for all stream types as recommended by WDFW.

### *Recommendation*

For increased consistency with the WDFW guidance, and to provide equivalent or greater riparian protections, it is recommended that the County consider incorporating larger riparian protection area widths.

The County could consider increasing their Type N stream buffer width from 50' to 100' to align with BAS. Such buffer increases would meet the WDFW recommended minimum 100' buffer to ensure adequate pollution removal for all stream types. For Type F waters, the County could consider incorporating an established set buffer width for Type F waters in close alignment with $SPTH_{200}$ values for Kitsap County. To help assess an appropriate value for Type F streams, a county-wide GIS analysis was conducted using the $SPTH_{200}$ values from the WDFW online tool and the Kitsap County stream layer to compare the potential predictive model values to BAS-based $SPTH_{200}$ protections for riparian areas. This analysis removed all incorporated cities, Type S waters, military lands, publicly owned forest lands, or National Parks to improve accuracy of the data.

Based on an example of this GIS analysis shown in Appendix A, a 200' riparian protection area width would meet or exceed $SPTH_{200}$ values approximately 72% of the time for Type F waters.

This approach will significantly increase dimensional buffer standards for fish and non-fish bearing waters but will allow the County flexibility in improving conformance with WDFW's guidance. Riparian protection areas that vary by stream classification allow for predictable and consistent implementation at the permit application level. When coupled with the additional recommendations below, this approach will support County's compliance with no net loss requirements for riparian ecological functions and values.

## Other Recommendations:

To assist in the implementation of the updated guidance, WDFW released a Riparian Management Zone (RMZ) Checklist for CAOs in April 2023 with an addendum in August 2023. The RMZ checklist is intended to be a voluntary technical assistance tool that is supplemented with the Department of Commerce's CAO Checklist.[4] To align with the recommendations contained within the RMZ Checklist, improvements can be made to the existing critical areas regulations to better protect the functions and values of riparian ecosystems.

To reduce unnecessary habitat impacts within riparian ecosystems, it is recommended to provide improved regulations for mitigation sequencing. As described in WAC 365-196-830, "*Avoidance is the most effective way to protect critical areas".* Applicants should be required to demonstrate that mitigation sequencing was used in each project proposal that may impact habitat functions within the riparian protection area, including that avoidance was considered. It is also recommended that the County limit clearing, filling, and grading activities within riparian areas in KCC 19.300.315, unless they are directly related to restoration, as these activities can negatively impact riparian ecosystems (Rentz et al. 2020).

To align with the WDFW guidance, it is recommended that the County incorporate specific Habitat Management Plan requirements as suggested in *Riparian Ecosystems, Volume 2: Management Recommendations* (Rentz et al. 2020). WDFW recommends that when an activity is proposed in a RMZ or could affect riparian or aquatic functions, a Habitat Management Plan should be required. For consistency with the guidance in *WDFW Riparian Ecosystems, Volume 2: Management Recommendations*, the Habitat Management Plant requirements in KCC 19.700.720 should include the following:

- Identification of all critical areas within and adjacent to the project site, including ecosystem functions that need to be protected.

[4] Washington Department of Commerce Growth Management Critical Areas dated December 2022.

- A description of the project proponent's mitigation sequencing, including detailed measures to avoid impacts and minimize unavoidable impacts. Examples could include clustering of development, conservation easements, and seasonal construction restrictions.
- Measurable standards and expectations to monitor compliance and defined triggers for requiring more actions, i.e., performance standards. Examples of measurable standards could include extent of vegetative cover, composition of riparian tree species and maximum invasive plant cover. The Habitat Management Plan is recommended to also identify the frequency of visits to monitor the site and specify who is responsible for preparing, reviewing, and submitting monitoring reports.
- If necessary, the report could include a cost estimate for monitoring and the project proponent could post a bond for this amount or more to allow for overages.
- Require that the Habitat Management Plan be prepared by a qualified professional biologist, botanist, or ecologist.

KCC 19.100.125 could be revised to strengthen the emergency exemption provision to require landowners to outline that landowners may be required to modify, mitigate, or remove any emergency repair work. To align with the recommendations included in the WDFW RMZ Checklist, KCC 19.100.130.B could be revised to incorporate additional criteria for hazard tree removal including the following requirements:

- Require that the method of hazard tree removal not adversely affect riparian ecosystem functions to the extent practicable;
- Encourage the creation of snags (Priority Habitat features) rather than complete tree removal; and
- Involve an avoidance and minimization of damage to remaining trees and vegetation within the RMZ,

The County could also consider including a purpose statement in KCC 19.100.105.B to retain and restore riparian ecosystems to maximize riparian function overtime to emphasize the necessary protections.[5] Further, the County may consider developing a streamlined review process for riparian restoration/enhancement projects to comply with the RMZ Checklist. Potential options could include incorporation of an exemption provision or allowing for

[5] WDFW August 2023 RMZ Checklist Addendum

abbreviated habitat management plan requirements for projects that are solely for the benefit of riparian restoration or enhancement.

Lastly, in accordance with the WDFW guidance, the County could consider incorporating regulations for replacing or removing existing infrastructure in riparian ecosystems. Examples contained within the WDFW guidance include:

- Mapping the area to pinpoint the best sites to restore – consider connectivity and adjacency to other Priority Habitats;
- Improving aquatic connectivity by replacing culverts and removing barriers to movement;
- Revegetating the area with native plants and consider improvements for wildlife by integrating structures necessary for nesting, breeding, and foraging;
- As infrastructure is remodeled or replaced, incorporating additional setbacks from streams;
- Controlling access to limit soil compaction;
- Avoiding operating equipment near the stream to reduce sedimentation and soil compaction; and
- Avoiding using chemicals which are not approved for use in the particular area by Ecology.

# References

*Anacortes Municipal Code.* **https://anacortes.municipal.codes/**

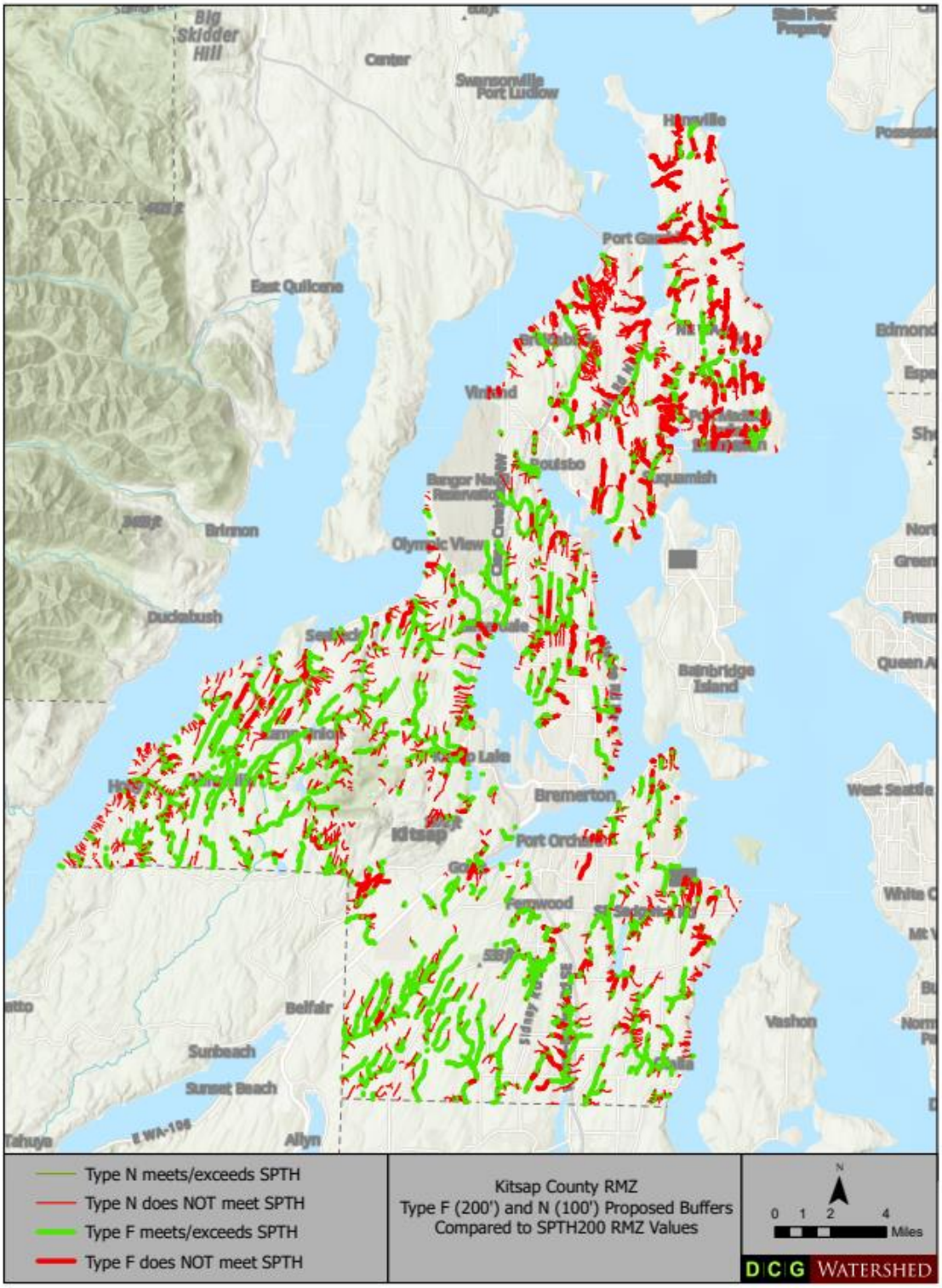
Clark County. (2023) *Designating Riparian Habitat Areas Using WAC 222 Site Class and 200-year Site Potential Tree Height*. **https://clark.wa.gov/sites/default/files/media/document/2023-02/Designating%20Riparian%20Habitat%20Areas%20%28CPZ2022-00010%29.pdf**

Clark County. (2023). Ordinance No. 2023-03-01. **https://clark.wa.gov/sites/default/files/media/document/2023-03/2023-03-01.pdf**

Quinn, T., Wilhere, G.F. & Krueger, K.L. (2020). *Riparian Ecosystems, Volume 1: Science synthesis and management implications*. Habitat Program, Washington State Department of Fish and Wildlife. **https://wdfw.wa.gov/publications/01987**

Rentz, R., Windrope, A., Folkerts, K., & Azerrad, J. (2020). *Riparian Ecosystems, Volume 2: Management Recommendations.* Washington Department of Fish and Wildlife. **https://wdfw.wa.gov/publications/01988**

# Appendix A


Big Skidder Hill
Center
Swansonville
Port Ludlow
Hansville
East Quilcene
Brinnon
Olympic View
Ducabush
Bainbridge Island
Bremerton
Port Orchard
Kitsap
Fernwood
Belfair
Sunbeach
Sunset Beach
Tahuya
Allyn
Vashon
Type N meets/exceeds SPTH
Type N does NOT meet SPTH
Type F meets/exceeds SPTH
Type F does NOT meet SPTH
Kitsap County RMZ
Type F (200') and N (100') Proposed Buffers
Compared to SPTH200 RMZ Values
N
0 1 2 4
Miles
DCG WATERSHED