ARTICLE 7 – SHORELINE MODIFICATIONS POLICIES AND REGULATIONS

The policies and regulations in this Article apply to all types of shoreline modification, with specific standards defined for each shoreline environment. They are not listed in order of priority. These policies and regulations:

- Help to implement the Master Program goals in Article 3; and
- Are informed by the guiding principles in Article 1; and
- Work in concert with all the other policies and regulations contained in this Program; and
- Are based on the state shoreline guidelines (WAC 173-26).

1. Beach Access Structures

A. Policies

1. Beach access structures, as defined in Article 2, should be located, designed and maintained in a manner that minimizes adverse effects on shoreline ecology.
2. Jefferson County recognizes a balance has to be found between enabling pedestrian access to beach areas and protecting fragile shoreline ecosystems.
3. Neighboring property owners are encouraged to combine resources to collectively propose beach access structures in appropriate locations for shared use.
4. Beach access structures should not be permitted until and unless their effects on stream, lake or marine shoreline functions and processes, including any adverse impacts on adjoining lands and properties, are fully evaluated and mitigated. All proposals for structures that link upland areas with adjacent beaches shall be carefully evaluated by the criteria and regulations in this section.
5. Beach access structures may not be appropriate in some areas because of safety hazards or sensitive ecological conditions. The County should not permit these structures in areas where there are expected risks to human health and safety or adverse impacts on shoreline functions and processes. Some properties will have view-only access to the neighboring waters.
6. Beach access structures should conform to the existing topography, minimize adverse impacts on shoreline aesthetics, and minimize clearing and grading to the maximum extent feasible.
7. Beach access structures should not be allowed if there is a reasonable likelihood that they will require structural protection or armoring in the future.

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B. Shoreline Environment Regulations

1. Priority Aquatic: Public beach access structures may be permitted as a conditional use provided they are associated with a water-dependent use that includes public access to the shoreline and provided they are consistent with policies and regulations of this Program and are allowed in the adjoining upland designation. Private beach access structures accessory to single-family residential development shall be prohibited.

2. Aquatic: Public beach access structures may be permitted as a conditional use provided they are associated with a water-dependent use that includes public access to the shoreline and provided they are consistent with policies and regulations of this Program in the adjoining upland designation. Private beach access structures accessory to single-family residential development may be permitted as a conditional use when they are allowed in the adjoining upland designation.

3. Natural: Public beach access structures may be permitted as a conditional use provided they are associated with a water-dependent use that includes public access to the shoreline and provided they are consistent with policies and regulations of this Program. Private beach access structures accessory to single-family residential development shall be prohibited.

4. Conservancy: Public and private beach access structures may be permitted as a conditional use provided they are consistent the provisions of this Program.

5. Shoreline Residential: Public and private beach access structures may be permitted as a conditional use provided they are consistent the provisions of this Program.

6. High Intensity: Public and private beach access structures may be permitted as a conditional use provided they are consistent the provisions of this Program.

C. Regulations

1. Beach access structures may be permitted only when consistent with the provisions of this Program.

2. Public beach access structures shall be subject to this section and Article 6 section 3 (Public Access) of this Program.

3. When permitted, beach access structures shall be located, designed and operated to avoid critical areas and prevent a net loss of shoreline ecological functions or processes, including, but not limited to:

   i. Habitat;
   ii. Slope stability;
   iii. Sediment transport; and
   iv. Water quality.

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4. Beach access structures that require the least amount of clearing, grading, excavation, or other forms of shoreline alteration shall be preferred over structures that require substantial bank or slope modification. The County shall have the authority to require specific design standards based on the configuration of the site including existing topography, vegetation, soils, drainage and other factors.

5. When allowed, beach access structures may be located within the shoreline buffer, provided that:

    i. The width of any walkway, staircase, tower or tram shall not exceed five (5) feet; and
    ii. The structure shall not extend more than twelve (12) vertical feet above the bank or slope; and
    iii. There is no other available beach access within three hundred (300) feet of the proposed access site.

6. No portion of a beach access structure shall be constructed waterward of the ordinary high water mark unless there is no other feasible alternative.

7. When in-water or over-water construction is allowed in accordance with this section it shall be limited to a small pier or pile-supported pedestrian landing platform of twenty-five (25) square feet or less that is otherwise consistent with the provisions of this Program.

8. New residential subdivisions of more than four (4) units or lots shall include a restriction on the face of the plat prohibiting individual beach access structures. Shared access structures may be permitted in these subdivisions when consistent with the provisions of this Program.

9. Existing lawfully constructed beach access structures may be repaired or replaced in kind as a nonconforming use as consistent with other provisions of this Program.

10. Beach access structures shall be prohibited if any of the following apply:

    i. The structure would adversely impact a critical area or marine feeder bluff, or increase landslide or erosion hazards; or
    ii. The structure is likely to interfere with natural erosion and accretion processes; or
    iii. The bank slope where the structure is placed is likely to require shoreline stabilization/shoreline defense works in the future.

11. Prior to approving a permit for a beach access structure, the County shall require the project proponent to demonstrate that the project is consistent with the Program. Information to be provided by the proponent will include, but not be limited to:

    i. Existing conditions at the site related to erosion, slope stability, drainage, vegetation, and coastal processes; and

ii. Probable effects of the access structure on the stability of the site over time; and
iii. Potential effects of the access structure on shoreline processes such as net-shoreline drift, sediment transport, mass wasting, and erosion; and
iv. Methods for maintaining the structure over time that will preclude the need for a bulkhead or other type of stabilization in the future; and
v. Potential effects on fish and wildlife habitats and other shoreline ecological functions; and
vi. Measures needed to ensure/maintain slope stability, maintain coastal processes, and prevent erosion in the long term.

12. The County may require proposals for pedestrian beach access structures to include geotechnical analysis prepared by a licensed professional engineer or geologist and/or biological analysis prepared by a qualified biologist.

2. Boating Facilities: Boat Launches, Docks, Piers, Floats, Lifts, Marinas, and Mooring Buoys

A. Policies

1. Boating facilities as defined in Article 2 should be located, designed and operated with appropriate mitigation to avoid adverse effects on shoreline functions and processes and prevent conflicts with other allowed uses.

2. Boating facilities should not be located or expanded where they would:

i. Impact critical habitats; or
ii. Substantially interfere with currents and/or net-shoreline drift; or
iii. Cause significant adverse effects on aquatic habitat, biological functions, water quality, aesthetics, navigation, and/or neighboring uses.

3. Docks and piers should not be allowed where shallow depths require excessive overwater length.

4. The County should protect the natural character of the shoreline and prevent adverse ecological impacts caused by overwater structures by limiting the number of new docks/piers/floats and by controlling how and where they are designed and constructed.

5. To prevent the impacts associated with private docks, piers, floats, lifts and launch ramps and rails accessory to residential development;

i. Mooring buoys are generally preferred over docks, piers or floats; and
ii. Shared docks/piers/floats serving multiple properties are preferred over single-user docks/piers/floats serving a single property or parcel.
iii. Public boat launches are preferred over private launch facilities. Rail and track launch systems are preferred over ramps.

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6. Boating facilities associated with commercial, industrial, or port uses, residential subdivisions and multifamily housing should include public access and contribute to the public's ability to view, touch, and travel on the waters of the state in accordance with Article 6 section 3 (Public Access) of this Program.

7. The County should identify areas that are suitable for development and/or expansion of marinas and public boat launches and prevent them from being developed with non-water-dependent uses having less stringent site requirements. This should be accomplished in a timely manner.

8. Development of new marinas and public boat launch facilities should be coordinated with public access and recreation plans and should be co-located with port or other compatible water-dependent uses where feasible. Affected parties and potential partners should be included in the planning process.

9. When reviewing proposals for new or expanded marinas and public boat launches, the County should seek comment from public recreation providers, adjacent cities/counties, port districts, Washington State Parks, and the Washington State Departments of Ecology, Fish and Wildlife, Health, and Natural Resources, to ensure that local as well as regional recreation needs are addressed.

10. The County should support the use of innovative and effective methods for protecting, enhancing, and restoring shoreline ecological functions and processes during the design, development and operation of new or expanded boating facilities. Such methods may include public facility and resource planning, education, voluntary protection and enhancement projects, and incentive programs.

B. Shoreline Environment Regulations

1. Priority Aquatic:

   i. Public boat launches may be permitted as a conditional use subject to the provisions of this Program. Private boat launches are prohibited.
   ii. Docks, piers, floats and lifts serving water-dependent commercial, industrial, port or other primary uses (such as aquaculture) may be permitted subject to policies and regulations of the Program if the primary use is permitted in the adjacent upland shoreline environment.
   iii. Single-user docks, piers, floats and lifts accessory to residential or private recreational development are prohibited. Shared docks, piers and floats accessory to residential or private recreational development may be permitted subject to a conditional use permit.
   iv. Moorage used for float planes is prohibited.
   v. Marinas are prohibited.
   vi. Mooring buoys may be permitted subject to a conditional use permit.

2. Aquatic:

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i. Public and private boat launches may be permitted as a conditional use subject to policies and regulations of the Program if permitted in the adjacent upland shoreline environment.
ii. Docks, piers floats, and lifts may be permitted subject to policies and regulations of the Program if permitted in the adjacent upland shoreline environment.
iii. Marinas may be permitted subject to policies and regulations of the Program if permitted in the adjacent upland shoreline environment.
iv. Mooring buoys may be permitted subject to policies and regulations of the Program if permitted in the adjacent upland shoreline environment.
v. Moorage used for float planes may be permitted as a conditional use if permitted in the adjacent upland shoreline environment.

3. Natural:

i. Launch ramps to facilitate hand launching of small watercraft such as kayaks, small sailboats, and non-motorized watercraft may be allowed with a conditional use permit if materials and design are compatible with the site.
ii. A public dock, pier or float for recreational use may be allowed with a conditional use permit.
iii. A mooring buoy that is accessory to a water-dependent use such as aquaculture may be allowed with a conditional use permit if permitted in the adjacent upland shoreline environment.
iv. All other boating facilities, including boating facilities accessory to residential development, are prohibited.

4. Conservancy:

i. Public and private boat launches may be permitted as a conditional use subject to policies and regulations of the Program.
ii. Docks, piers, floats and lifts may be permitted as a conditional use.
iii. Marinas may be permitted as a conditional use.
iv. Mooring buoys may be permitted subject to policies and regulations of the Program.
v. Moorage used for float planes may be permitted as a conditional use.

5. Shoreline Residential:

i. Private boat launches may be permitted subject to policies and regulations of the Program. Public boat launches may be permitted as a conditional use.
ii. Residential docks, piers, floats and lifts may be permitted subject to policies and regulations of the Program. Docks, piers and floats for commercial, industrial, or port use may be permitted as a conditional use.

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iii. Marinas may be permitted as a conditional use.
iv. Mooring buoys may be permitted subject to policies and regulations of the Program.
v. Moorage used for float planes may be permitted as a conditional use.

6. High Intensity: Boating facilities may be permitted subject to policies and regulations of this Program.

C. Regulations – Boat Launches – Public

1. Boat launches may be permitted when they are located, designed and constructed in a manner that minimizes adverse impacts on coastal or fluvial processes, biological functions, aquatic and riparian habitats, water quality, navigation, and/or neighboring uses.

2. When permitted, public boat launches shall be located in areas where there is adequate water mixing and flushing action, and shall be designed so as not to retard or reduce flushing characteristics.

3. When permitted, public boat launches shall be designed and constructed using methods/technology that have been recognized and approved by state and federal resource agencies as the best currently available. Rail and track systems shall be preferred over concrete ramps or similar facilities.

4. Public boat launches on river shores shall be located downstream of accretion shoreforms, or on stable banks where no or minimal current deflections will be necessary.

5. Public boat launches shall be designed so that existing or potential public access along beaches is not blocked or made unsafe, and so that public use of the surface waters is not unduly impaired.

6. Public boat launches shall provide adequate restroom and sewage and solid waste disposal facilities in compliance with applicable health regulations.

7. Public boat launches shall be developed and maintained to support waterfront access for watercraft. In those limited instances where separate or associated uses are permitted, other than restrooms and/or sewer/septic facilities, only uses that are water-dependent and/or afford public access uses shall be approved.

8. When overwater development is proposed in association with a public boat launch facility, it may be permitted only where such use requires direct water access, and/or where such facilities will significantly increase public opportunities for water access.

9. Public boat launches shall be located and designed to prevent traffic hazards and minimize traffic impacts on nearby access streets.

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10. Public boat launch sites shall include parking spaces for boat trailers commensurate with projected demand and shall comply with the Transportation provisions of this Program.

D. Regulations – Boat Launches (Ramps and Rails) – Private

1. Private boat launches shall be allowed only when public boat launches are unavailable within a reasonable distance.

2. When permitted, private boat launches including launches accessory to residential development shall be designed and constructed using methods/technology that have been recognized and approved by state and federal resource agencies as the best currently available. Rail and track systems shall be preferred over concrete ramps or similar facilities.

3. No more than one private boat launch facility or structure shall be permitted on a single parcel or residential lot.

E. Regulations – Docks, Piers and Floats – Non-Residential

1. Docks, piers and floats, as defined in Article 2, associated with commercial, industrial or port developments should only be allowed when ecological impacts are mitigated in accordance with the Program, and:

   i. The dock/pier/float is required to accommodate a water-dependent use; and/or
   ii. The dock/pier/float provides opportunities for a substantial number of people to access the shoreline.

2. New commercial, industrial, or port docks, piers and floats shall be designed and constructed to avoid or, if that is not possible, to minimize the impacts to nearshore habitats and processes.

3. The length, width and height of non-residential docks, piers and floats shall be no greater than that required for safety and practicality for the primary use.

4. New and substantially expanded non-residential docks, piers and floats shall be constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials for any portions of the dock, pier, float, framing, or decking that come in contact with water shall be approved by applicable state agencies for use in water. Wood treated with creosote, pentachlorophenol or other similarly toxic materials is prohibited.

5. To minimize adverse effects on nearshore habitats and species caused by overwater structures that reduce ambient light levels, the following shall apply:

   i. The width of docks, piers and floats shall be the minimum necessary. Materials that will allow light to pass through the deck may be required where width exceeds four (4) feet; and

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ii. Grating to allow light passage or reflective panels to increase light refraction shall be used on walkways or gangplanks in nearshore areas; and

iii. The maximum structure height above water should be employed, consistent with safety and usability.

6. Commercial, industrial or port docks, piers and floats shall be spaced and oriented to shoreline in a manner that avoids or minimizes:

i. Hazards and obstructions to navigation, fishing, swimming and pleasure boating; and

ii. Shading of beach substrate below; and

iii. Any 'wall' effect that would block or baffle wave patterns, currents, littoral drift, or movement of aquatic life forms. A north-south orientation is generally optimal.

7. Fill waterward of OHWM shall be limited to the minimum necessary to match the upland with the elevation of the non-residential dock or pier when consistent with Article 7 section 4 (Filling and Excavation) of this Program.

8. Dredging shall be limited to the minimum necessary to allow boat access to a non-residential dock or pier when consistent with Article 7 section 3 (Dredging) of this Program.

9. Covered moorage associated with non-residential docks, piers, and floats shall be prohibited.

F. Regulations –Docks, Piers, Floats and Lifts– Accessory to Residential Development

1. Docks, piers, floats and lifts accessory to residential development/use shall only be allowed when:

i. Ecological impacts are mitigated in accordance with the Program; and

ii. The moorage platform is designed for access to private watercraft; and

iii. The cumulative effects of dock, pier, float and lift proliferation have been identified and shown to be negligible.

2. If allowed under this Program, no more than one (1) dock/pier and one (1) float and one (1) boat/ski lift may be permitted on a single lot owned for residential use or private recreational use.

3. In-water fixed platform structures supported by piles that do not abut the shoreline shall be prohibited.

4. If permitted, new docks, piers, floats, lifts accessory to residential development/use shall be:

i. Designed and constructed to avoid or, if that is not possible, to minimize shading and other impacts on nearshore habitats and processes; and

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ii. Constructed of materials that will not adversely affect water quality or aquatic plants and animals over the long term. Materials for portions of the dock, pier, float, framing and decking in contact with water shall be approved by applicable state agencies for use in water. Wood treated with creosote, pentachlorophenol or other similarly toxic materials is prohibited; and

iii. Spaced and oriented to shoreline in a manner that minimizes hazards and obstructions to navigation, fishing, swimming, and pleasure boating; and

iv. Designed to avoid the need for maintenance dredging. The moorage of a boat larger than provided for in original moorage design shall not be grounds for approval of dredging; and

v. Spaced and oriented to minimize shading and avoid a 'wall' effect that would block or baffle wave patterns, currents, littoral drift, or movement of aquatic life forms. A north-south orientation is generally optimal.

5. The length of docks and piers accessory to residential use/development shall be no greater than that required for safety and practicality for the residential use. The maximum length for residential docks or piers shall be limited to sixty (60) feet as measured horizontally from the ordinary high water mark. The Administrator may approve a different dock or pier length when needed to:

i. Avoid known eelgrass beds, forage fish habitats, or other sensitive nearshore resources; or

ii. Reach adequate depths to accommodate watercraft; or

iii. Accommodate shared use.

6. Floats accessory to residential use shall not exceed two hundred (200) square feet in area or three (3) feet in height as measured from the Mean Lower Low Water (MLLW).

7. Floats shall only be used where there is sufficient water depth to prevent grounding at low tide. The County may require the use of stoppers or other measures to ensure compliance with this standard.

8. To avoid and minimize adverse effects on nearshore habitats and species caused by overwater structures that reduce ambient light levels, the following shall apply:

i. The width of docks and floats shall be the minimum necessary. Materials that will allow light to pass through the deck may be required where width exceeds four (4) feet; and

ii. Grating to allow light passage or reflective panels to increase light refraction shall be used on walkways or gangplanks in nearshore areas; and

iii. The maximum structure height above water should be employed, consistent with safety and usability.

9. Residential developments with more than four (4) lots or dwelling units may be granted permits for community docks that are shared by at least one other owner. No more than one (1) dock/pier or float may be permitted for each three (3) adjoining waterfront lots, with necessary access easements to be recorded at the time of permitting. Single-user docks, piers and floats for individual residential lots may be permitted in existing subdivisions approved on or before January 28, 1993, only where a shared facility has not already been developed. Prior to development of a new single-user dock/pier/float for a single residential lot, the applicant shall demonstrate that:

    i. Existing facilities in the vicinity, including marinas and shared moorage, are not adequate or feasible for use; and
    ii. On marine shorelines alternative moorage, such as one or more mooring buoys or a buoy in combination with a small dock sized to accommodate a tender vessel, are not adequate or feasible.

10. Single-user moorage for private/recreational float planes may be permitted as a conditional use where construction of such moorage:

    i. Is limited to the smallest size necessary to accommodate the float plane.
    ii. Will not adversely affect shoreline functions or processes, including wildlife use.
    iii. Includes ecological restoration, in addition to mitigation, to compensate for the greater intensity of use associated with the float plane moorage.

11. Covered moorage associated with single-family residential development shall be prohibited, except that the County may allow a small covered area up to one hundred (100) square feet in size, maximum height of ten (10) feet, and with vertical walls on up to three (3) sides on the overland portion of a dock/pier only.

12. Single-user docks/piers/floats shall be located within side yard setbacks for residential development (both onshore and offshore); provided that a shared dock/pier may be located adjacent to or upon a shared side property line upon filing of an agreement by the affected property owners.

13. Fill waterward of OHWM shall be limited to the minimum necessary to match the upland with the elevation of the residential dock or pier when consistent with Article 7 section 4 (Filling and Excavation) of this Program.

14. Dredging for construction or maintenance of docks, piers and floats accessory to residential use shall be prohibited waterward of OHWM.

15. No single-user or shared dock/pier/float may be constructed to within two hundred (200) feet of OHWM on the opposite shoreline of any lake or semi-enclosed body of water such as a bay, cove, or natural channel.

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16. Boating facilities shall be marked with reflectors, or otherwise identified to prevent unnecessarily hazardous conditions for water surface users during day or night. Exterior finish shall be generally non-reflective.

17. Boating facilities shall be constructed and maintained so that no part of them creates hazardous conditions nor damages other shoreline property or natural features during flood conditions.

18. No dock, pier, float, or watercraft moored thereto shall be used for a residence.

19. Storage of fuel, oils, and other toxic materials is prohibited on residential docks, piers and floats except in portable containers that have secondary containment.

G. Regulations – Marinas

1. Marinas may be permitted on marine and river shorelines when they are consistent with this Program and when the proponent demonstrates to the County's satisfaction that all of the following conditions are met:

   i. The proposed location is the least environmentally damaging alternative; and
   ii. Potential adverse impacts on shoreline processes and ecological functions are mitigated to achieve no net loss; and
   iii. The project includes ecological restoration measures to improve baseline conditions over time; and
   iv. The area has adequate water circulation and flushing action; and
   v. The proposed location will not require dredging or excavation/filling of wetlands; and
   vi. Suitable public infrastructure is available or can be made available to support the marina.

2. Marinas shall be prohibited in all of the following locations:

   i. Lake shores; and
   ii. River point and channel bars or other accretional beaches; and
   iii. Areas of active channel migration; and
   iv. Where a flood hazard will be created or exacerbated.

3. Where marinas are permitted they shall be designed, constructed and operated according to the following:

   i. Open pile or floating breakwater designs shall be used unless the proponent demonstrates that there are specific safety considerations that warrant alternative approaches or unless rip-rap or other solid construction is shown to have fewer impacts on shoreline ecology over the short and long term.
   ii. Shoreline armoring shall be limited to the minimum necessary to protect marina infrastructure and shall consist of softshore bio-

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stabilization unless such stabilization is demonstrated by a geotechnical analysis to be infeasible or inadequate to protect the site.

iii. Floating structures shall be designed to prevent grounding on tidelands. Floats shall only be used where there is sufficient water depth to prevent grounding at low tide. The County may require the use of stoppers or other measures to ensure compliance with this standard.

iv. Piers and other structures shall be located, sized and designed to minimize shading of nearshore aquatic habitats and species.

v. Solid structures shall be designed to provide fish passage through and along the shallow water fringe.

vi. Floating piers shall be required in rivers unless the proponent can demonstrate that fixed piers will cause substantially less impact on geo-hydraulic processes.

vii. Marinas shall be sited to prevent restrictions in the use of commercial and recreational shellfish beds and in compliance with Washington Department of Health "Environmental Health Guidelines for Marina Development and Operation."

viii. Marina development shall generally be required to include public access amenities. Consistent with Article 6 section 3 (Public Access) of this Program, public access siting and design shall be determined based on what is appropriate to a given location and the needs/desires of the surrounding community. Public access shall be designed to be environmentally sound, aesthetically compatible with adjacent uses, and safe for users.

ix. Live-aboard vessels may occupy up to twenty (20) percent of the slips at a marina. Marinas that accommodate live-aboards shall provide and maintain adequate facilities and programs to address waste disposal and sanitary disposal.

x. New or expanded marina development may include fill waterward of the ordinary high water mark only when necessary for the water-dependent portions of the marina facility. Such fill activities shall conform to Article 7 section 4 (Filling and Excavation) of this Program and this section. Filling solely for the creation of marina parking areas shall be prohibited.

xi. If new or expanded marina facilities adversely affect net shoreline drift or other coastal processes to the detriment of nearby beaches or habitats, the County may require the marina operator to replenish the substrate in these areas periodically or take other measures to offset adverse impacts.

4. New or expanded development appurtenant to marinas shall be designed and constructed to avoid and, where avoidance is not possible, minimize impacts on

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shoreline functions and processes. Facilities shall be clustered and located in the least environmentally damaging portion of the site to reduce clearing and grading impacts.

5. To meet the requirements in 7.2.F.4 above, the following standards shall apply to new or expanded development appurtenant to marinas:

   i. Accessory uses at marinas shall be limited to water-oriented uses and uses that provide physical or visual shoreline access for substantial numbers of the general public. Accessory development includes, but is not limited to, parking, open air storage, waste storage and treatment, stormwater management facilities, utility and upland transportation development.
   ii. Water-oriented accessory uses reasonably related to marina operation may be located over water or near the water's edge by conditional use permit if an overwater or water's-edge location is essential to the operation of the use and if opportunities are provided for substantial numbers of people to access the shoreline.
   iii. Parking shall be located away from the water's edge and landward of shoreline buffers prescribed by this Program unless no feasible alternative location exists.
   iv. Parking areas shall meet County stormwater management standards and shall, where feasible, incorporate low impact development practices such as pervious surfaces and bioswales.
   v. Dry moorage and other storage areas shall be landscaped with native vegetation to provide a visual and noise buffer for adjoining uses.
   vi. Pump-out, holding, and/or waste treatment facilities and services shall be provided at all marinas. Pump-out facilities shall be conveniently located and sited to ensure easy access, prevent lengthy queues and allow full compliance with waste disposal regulations. Vessel-mounted pump-out services and hard-plumbed stations at each slip shall be preferred over portable pump-out equipment.
   vii. Marinas shall provide adequate restroom and sewage disposal facilities in compliance with applicable health regulations. Restrooms shall be available twenty-four (24) hours a day for use by any patron of the marina facility; the need for restrooms shall be determined based on the number of slips and percentage of live-aboard vessels within the marina.
   viii. Garbage and recycling receptacles shall be provided and maintained by the marina operator at several locations convenient to users.
   ix. Marina operators shall post all regulations pertaining to handling and disposal of waste, sewage, fuel, and oil or toxic materials where all users may easily read them.

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x. Boat washing facilities shall be provided to minimize transfer of invasive aquatic species between water bodies.

6. When reviewing proposals for new or expanded marina facilities, the County shall require the proponent to prepare and implement appropriate technical studies and plans that are not already required via another regulatory review process. Examples of studies and plans that may be required include, but are not limited to:

i. A Maintenance Plan for maintaining pump-out and waste/sewage disposal facilities and services.
ii. A Spill Response Plan for oil and other spilled products. Compliance with federal or state law may fulfill this requirement.
iii. An Operational Plan that, at a minimum, describes procedures for fuel handling and storage; measures, including signage, for informing marina users of applicable regulations; measures for collecting garbage and recyclables; measures and equipment for ensuring public safety.
iv. A visual assessment of views from surrounding residential properties, public viewpoints, and the view of the shoreline from the water surface.
v. An assessment of existing water-dependent uses in the vicinity including but not limited to, navigation, fishing, shellfish production and harvest, swimming, beach walking, and picnicking and shall document potential impacts and mitigating measures. The County shall evaluate impacts on these resources and impose specific conditions to mitigate impacts as necessary.

H. Regulations – Mooring Buoys

1. Mooring buoys may be permitted provided that they are consistent with this Program and:

i. They do not impede the ability of other landowners to access private property; and
ii. They do not pose a hazard to or obstruct navigation or fishing; and
iii. They do not contribute to water quality or habitat degradation; and
iv. They do not pose a threat to shellfish beds.

2. The installation and use of mooring buoys in marine waters shall be consistent with all applicable state laws, including state Department of Natural Resources and Department of Health standards. Mooring buoys on state-owned aquatic lands shall not be used for residential (living on the boat) or commercial purposes.

3. Mooring buoys shall be located to:

i. Avoid eelgrass beds and other valuable aquatic and nearshore habitat areas; and
ii. Prevent obstruction to navigation.

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4. Mooring buoys shall use neutral buoyancy rope, mid-line float, helical anchors, or other state-approved designs that have minimal adverse effects on aquatic ecosystem and fish.
5. Mooring buoys shall not be allowed on lake shorelines of the state.
6. Mooring buoys shall be clearly marked and labeled with the owner's name and contact information and permit number(s).
7. The County shall plan for and coordinate with other agencies to control the placement and number of mooring buoys within bays and other areas to protect water quality and/or habitat and ensure that transit channels are maintained. Under no circumstances shall mooring buoy density exceed four (4) buoys per acre.

3. Dredging

A. Policies

1. Dredging, as defined in Article 2, and disposal of dredge material should only be allowed when alternatives are infeasible and when the dredging/dredge disposal is:
   i. Necessary to support an existing legal use or a proposed water-dependent use or essential public infrastructure/facility; or
   ii. Part of a clean-up program required under the Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act; or
   iii. Part of an approved ecological restoration or enhancement project; or
   iv. Part of an approved beach nourishment project; or
   v. Required to provide public access for a substantial number of people; or
   vi. Required to provide water-oriented public recreation for a substantial number of people.
2. When required to support an allowed use or development, dredging/dredge disposal should be the minimum needed to accommodate the allowed use or development for a reasonably foreseeable period of time.
3. When allowed, dredging and disposal operations should be planned, timed and implemented to minimize:
   i. Adverse impacts to shoreline ecology; and
   ii. Adverse impacts to in-water and adjacent upland uses; and
   iii. Interference with navigation.
4. Dredging and dredge disposal should be consistent and coordinated with appropriate local, state and federal regulations to minimize duplication during the review process.
5. Dredging and dredge disposal should not occur where they would interfere with existing or potential ecological restoration activities.

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6. Dredging and dredge disposal should occur where they will provide ecological benefits.

B. Shoreline Environment Regulations

1. Priority Aquatic: Dredging and dredge disposal may be permitted subject to a conditional use permit if allowed in the adjacent upland environment.
2. Aquatic: Dredging and dredge disposal may be permitted subject to a conditional use permit if allowed in the adjacent upland environment.
3. Natural: Dredging and dredge disposal are prohibited except dredging and dredge disposal may be permitted as an essential element of an approved shoreline restoration project/program.
4. Conservancy: Dredging and dredge disposal may be permitted subject to a conditional use permit.
5. Shoreline Residential: Dredging and dredge disposal may be permitted subject to a conditional use permit.
6. High Intensity: Dredging may be permitted subject to the policies and regulations of this Program. Dredge disposal may be allowed with a conditional use permit.

C. Regulations – Dredging

1. Proponents of new development shall locate and design such development to avoid or, if avoidance is not possible, to minimize the need for new dredging and maintenance dredging.
2. The County may permit dredging only when the project proponent demonstrates the activity is consistent with this Program and that there are no feasible alternatives to dredging.
3. Dredging shall only be allowed when necessary to support the following uses and developments:
   i. Approved harbors, marinas, ports, and water-dependent industries;
   ii. Development or maintenance of essential public infrastructure and facilities;
   iii. Environmental clean-up activities required by the Model Toxics Control Act or Comprehensive Environmental Response, Compensation, and Liability Act;
   iv. Underground utility installation requiring trenches when boring, directional drilling, and other installation methods are not feasible;
   v. Maintenance dredging for the purpose of restoring a lawfully established use or development;
   vi. Maintenance dredging for the purpose of restoring previously permitted or authorized hydraulic capacity of a stream or river;

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vii. Maintenance of existing irrigation reservoirs, drains, canals, or ditches;
viii. Establishing, expanding, relocating or reconfiguring navigation channels and basins where necessary to assure the safety and efficiency of existing navigational uses;
ix. Ecological restoration and enhancement projects benefiting water quality and/or fish and wildlife habitat; or
x. Public access and public water-oriented recreational developments/uses, including construction of public piers and docks that benefit substantial numbers of people.

4. The County may permit dredging for flood management purposes only when the project proponent demonstrates that:

i. The dredging is a required component of a County-approved comprehensive flood management plan, or
ii. The dredging has a long-term benefit to public health and safety and will not cause a net loss of ecological functions and processes.

5. When conducting reviews of dredging proposals, the County shall first consider how the proposed activity has been regulated by other agencies, note same as a reference, and then establish what further information is needed for local review. The County may require information to ensure:

i. The project is designed, located, and timed to mitigate impacts on legally established neighboring uses and developments; and
ii. Appropriate measures are taken to ensure the activity will not interfere with fishing or shellfishing; and
iii. Appropriate measures are taken to minimize adverse effects on recreation, public access, and navigation; and
iv. The activity shall not adversely impact natural processes such as channel migration, marine bluff erosion and/or net-shoreline drift; and
v. Appropriate best management practices are employed to prevent water quality impacts or other forms of environmental degradation; and
vi. Upstream and upgradient sediment sources that create the need for dredging have been investigated and where feasible, mitigated; and
vii. Appropriate measures are employed to protect public safety and prevent adverse impacts on other approved shoreline uses; and
viii. The proposed activity complies with applicable federal, state, and other local regulations.

6. Dredging for the primary purpose of obtaining material for landfill, upland construction, or beach nourishment shall be prohibited.

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D. Regulations – Dredge Disposal

1. The County may permit disposal of dredge material only when the project proponent demonstrates the activity is consistent with this Program and that there are no feasible alternatives to dredge disposal.

2. When dredge material is deposited on land it shall be considered fill and subject to all applicable fill regulations.

3. All unconfined, open water dredge disposal activities shall comply with the Puget Sound Dredged Disposal Analysis (PSDDA) criteria and guidelines and other applicable local, state and federal regulations.

4. When consistent with this Program, disposal of dredged materials in water areas other than PSDDA sites may only be allowed for the following reasons:

   i. To restore or enhance habitat; or
   ii. To reestablish substrates for fish and shellfish resources; or
   iii. To nourish beaches that are starved for sediment; or
   iv. To remediate contaminated sediments.

5. Proposals for dredged material disposal shall be evaluated for their potential to cause adverse environmental impacts. Dredged material disposal shall be permitted only when the proponent demonstrates all of the following:

   i. The proposed action will not cause significant and/or ongoing damage to water quality, fish, shellfish and/or other biological resources; and
   ii. The proposed action will not adversely alter natural drainage, water circulation, sediment transport, currents, or tidal flows or significantly reduce floodwater storage capacities; and
   iii. The proposed action includes all feasible mitigation measures to protect marine, estuarine, freshwater and terrestrial species and habitats.

4. Filling and Excavation

A. Policies

1. Filling, as defined in Article 2, should only be allowed waterward of the ordinary high water mark when alternatives are infeasible and when the filling is:

   i. Necessary to support an approved water-dependent use or essential public infrastructure/facility; or
   ii. Part of an approved ecological restoration or enhancement project; or
   iii. Part of an approved aquaculture operation when the fill is required to improve production; or
   iv. Part of an approved beach nourishment project; or
   v. Required to provide public access for a substantial number of people; or

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vi. Required to provide water-oriented public recreation for a substantial number of people.

2. Filling and excavation should not be allowed where structural shoreline stabilization would be required to maintain the materials placed or excavated.

3. When allowed, filling and excavation should be conducted so that water quality, habitat, hydrology, natural erosion rates, and runoff/drainage patterns are not adversely affected.

B. Shoreline Environment Regulations

1. Priority Aquatic: Filling may be permitted subject to a conditional use permit if allowed in the adjacent upland environment.

2. Aquatic: Filling may be permitted subject to a conditional use permit if allowed in the adjacent upland environment.

3. Natural: Filling and excavation is prohibited, except filling and excavation may be permitted as an essential element of an approved shoreline restoration project/program.

4. Conservancy: Filling and excavation may be permitted subject to the policies and regulations of this Program and a conditional use permit.

5. Shoreline Residential: Filling and excavation may be permitted subject to the policies and regulations of this Program.

6. High Intensity: Filling and excavation may be permitted subject to the policies and regulations of this Program.

C. Regulations

1. Filling and/or excavation shall only be allowed as part of an approved shoreline use and/or development activity and shall be subject to the requirements of the primary use/development.

2. Excavation below the ordinary high water mark shall be considered dredging and shall be subject to Article 7 section 3 (Dredging) of this Program.

3. When allowed, filling and/or excavation shall be located, designed, and carried out in a manner that:

i. Minimizes adverse impacts on the shoreline environment; and
ii. Blends in physically and visually with natural topography, so as not to interfere with appropriate use, impede public access, or degrade the aesthetic qualities of the shoreline; and
iii. Does not require shoreline armoring or stabilization to protect materials placed unless it is part of an approved shoreline restoration project and

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shoreline armoring or stabilization measures are needed to keep the material in place.

4. Fill materials placed within shoreline jurisdiction shall be from an approved source and shall consist of clean sand, gravel, soil, rock or similar material. The use of contaminated material or construction debris shall be prohibited.

5. Fill placed waterward of the ordinary high water mark shall only be permitted when alternatives are infeasible and when the filling/excavation is necessary to support one or more of the following:

    i. Approved marinas, ports, and other water-dependent industries where upland alternatives or structural solutions including pile or pier supports are infeasible.
    ii. Development or maintenance of essential public infrastructure and facilities.
    iii. Environmental clean-up activities required by MTCA and CERCLA.
    iv. Maintenance of a lawfully established use or development.
    v. Ecological restoration and enhancement projects benefiting water quality and/or fish and wildlife habitat.
    vi. Public access and public water-oriented recreation projects benefiting substantial numbers of people.
    vii. Part of an approved shoreline stabilization, flood control or in-stream structure project when consistent with this Program.

6. Filling in areas of special flood hazard shall conform to the Flood Damage Prevention provisions of JCC Chapter 15.15.

7. The following information shall be required for all proposals involving fill or excavation unless the County determines that issues are adequately addressed via another regulatory review process:

    i. A description of the proposed use of the fill area; and
    ii. A description of the fill material, including its source, and physical, chemical and biological characteristics; and
    iii. A description of the method of placement and compaction; and
    iv. A description of the location of the fill relative to natural and/or existing drainage patterns; and
    v. A description and map of the fill area and depth relative to the ordinary high water mark (OHWM); and
    vi. A description of proposed means to control erosion and stabilize the fill; and
    vii. A temporary erosion and sediment control (TESC) plan; and
    viii. A description of proposed surface runoff control measures.

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5. Flood Control Structures

A. Policies

1. The County should prevent the need for flood control works by limiting new development in flood-prone areas.

2. New or expanded development or uses in the shoreline, including subdivision of land, that would likely require flood control structures within a stream, channel migration zone, or floodway should be prohibited.

3. Construction of new flood control structures should only be allowed where there is a documented need to protect an existing structure and mitigation is applied, consistent with this Program. New development should be designed and located to preclude the need for such flood control structures.

4. When evaluating the need for flood control structures such as traditional levees and/or dams, opportunities to remove or relocate existing developments and structures out of flood-prone areas should be pursued to the maximum extent feasible. Alternative measures, such as overflow corridors and setback levees, that may have less adverse impact on shoreline ecology should be considered before structural flood control measures can be approved.

5. Probable effects on ecological functions and processes should be fully evaluated for consistency with this Program before flood control structures are permitted.

6. Flood control structures are a necessary and appropriate means of protecting existing development only when all of the following are met:

   i. The primary use being protected is consistent with this Program; and
   ii. Non-structural flood hazard reduction measures are infeasible; and
   iii. Where such structures can be developed in a manner that is compatible with multiple use of streams; and
   iv. Where shoreline resources such as fish and wildlife habitat and recreation are protected in the long term.

7. When proven necessary, flood control structures should be located, designed, and maintained in a manner that:

   i. Minimizes adverse effects on shoreline ecology; and
   ii. Is compatible with navigation and recreation, especially in shorelines of statewide significance, provided that public safety and ecological protection are fully addressed; and
   iii. Incorporates native vegetation to enhance ecological functions, creates a more natural appearance, improves ecological processes, and provides more flexibility for long-term shoreline management.
   iv. Non-regulatory methods to protect, enhance, and restore shoreline ecological functions and processes and other shoreline resources should

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be encouraged as an alternative to flood control structures. Non-regulatory methods may include public facility and resource planning, land or easement acquisition, education, voluntary protection and enhancement projects, or incentive programs.

8. The County should continue to develop long-term, comprehensive flood hazard management plans in cooperation with other applicable agencies and persons to prevent flood damage, maintain the natural hydraulic capacity of streams and floodplains, and conserve or restore valuable, limited resources such as fish, water, soil, and recreation and scenic areas.

9. Planning and design of flood control structures should be consistent with and incorporate elements from adopted watershed management plans, restoration plans and/or surface water management plans.

B. Shoreline Environment Regulations

1. Priority Aquatic: Flood control structures may be permitted subject to the policies and regulations of this Program and a conditional use permit if allowed in the adjacent upland environment.

2. Aquatic: Flood control structures may be permitted subject to the policies and regulations of this Program and a conditional use permit if allowed in the adjacent upland environment.

3. Natural: Flood control structures are prohibited.

4. Conservancy: Flood control structures may be permitted subject to the policies and regulations of this Program and a conditional use permit.

5. Shoreline Residential: Flood control structures may be allowed subject to the policies and regulations of this Program and a conditional use permit.

6. High Intensity: Flood control structures may be permitted subject to the policies and regulations of this Program and a conditional use permit.

C. Regulations

1. Flood control structures shall be permitted only when there is credible engineering and scientific evidence that:

   i. They are necessary to protect existing, lawfully established development; and
   ii. They are consistent with JCC Chapter 15.15, JCC Chapter 18.30 and the County Comprehensive Plan; and
   iii. Non-structural flood hazard reduction measures are infeasible; and
   iv. Proposed measures are consistent with an adopted comprehensive flood hazard management plan if available.

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2. When permitted, flood control structures shall be:
   i. Constructed and maintained in a manner that does not degrade the quality of affected waters or the habitat value associated with the in-stream and riparian area; and
   ii. Placed landward of the OHWM except for weirs and current deflectors whose primary purpose is to protect public bridges and roads; and
   iii. Placed landward of associated wetlands and designated habitat conservation areas, except for structures whose primary purpose is to improve ecological functions; and
   iv. Designed based on engineering and scientific analyses that provide the highest degree of protection to shoreline ecological functions or processes; and
   v. Designed to allow for normal ground water movement and surface runoff. Natural in-stream features such as snags, uprooted trees, or stumps should be left in place unless they are actually causing bank erosion or higher flood stages; and
   vi. Designed to allow streams to maintain point bars and associated aquatic habitat through normal accretion so that the stream can maintain normal meander progression and maintain most of its natural storage capacity.
3. When permitted, dikes and levees shall be limited to that height required to protect adjacent lands from the predictable annual flood unless it can be demonstrated through hydraulic modeling that a larger height will not adversely impact shoreline ecological functions and processes.
4. Flood control works are prohibited on estuarine shores, on point and channel bars, and in salmon and trout spawning areas, except for the purpose of fish or wildlife habitat enhancement or restoration.
5. Flood control structures and stream channelization projects that damage fish and wildlife resources, recreation or aesthetic resources, or create high flood stages and velocities shall be prohibited.
6. Use of solid waste such as motor vehicles, derelict vessels, appliances, or demolition debris; construction of flood control works is prohibited.
7. Flood control structures shall not adversely affect valuable recreation resources and aesthetic values such as point and channel bars, islands, and braided banks.
8. The County shall require flood control structures to be professionally engineered and designed prior to final approval. The design shall be consistent with the Department of Fish and Wildlife Aquatic Habitat Guidelines and other applicable guidance and regulatory requirements.
9. No flood control structure shall be installed or constructed without the developer having obtained all applicable federal, state, and local permits and approvals,

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including but not limited to a Hydraulic Project Approval (HPA) from the Department of Fish and Wildlife.

10. Removal of beaver dams to control or limit flooding shall be allowed provided that the project proponent coordinates with the Department of Fish and Wildlife and obtains all necessary permits and approvals from the state.

11. To determine that the provisions of this section are fully addressed, the County may require one or more technical studies/reports at the time of permit application for flood control structures unless the County determines that issues are adequately addressed via another regulatory review process. Technical reports required pursuant to this section shall address the following:

    i. An analysis of the flood frequency, duration and severity and expected health and safety risks as a rationale and justification for the proposed structure.
    ii. A hydraulic analysis prepared by a licensed professional engineer that describes anticipated effects of the project on stream hydraulics, including potential increases in base flood elevation, changes in stream velocity, and the potential for redirection of the normal flow of the affected stream.
    iii. A biological resource inventory and analysis prepared by a qualified professional biologist that describes the anticipated effects of the project on fish and wildlife resources.
    iv. Proposed provisions for accommodating public access to and along the affected shoreline, as well as any proposed on-site recreational features.
    v. A description of any proposed plans to remove vegetation and revegetate the site following construction.

12. To ensure compliance with the no net loss provisions of this Program, the County may require the proponent to prepare a mitigation plan that describes measures for protecting shoreline and in-stream resources during construction and operation of a flood control structure. The required mitigation shall be commensurate with the value and type of resource or system lost. Mitigation activities shall be monitored by the proponent to determine the effectiveness of the mitigation plan. In instances where the existing mitigation measures are found to be ineffective, the proponent shall take corrective action that satisfies the objectives of the mitigation plan.

6. In-stream Structures

A. Policies

1. Large-scale in-stream structures such as hydroelectric dams and related facilities are discouraged in Jefferson County. Such facilities should not be permitted

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except in the rare instance where there is clear evidence that the benefits to County residents outweigh any potential adverse ecological impacts.

2. In-stream structures should be approved only when associated with and necessary for an ecological restoration project, a fish passage project, or an allowed shoreline use/development such as a utility or industrial facility.

3. When necessary, in-stream structures should be located, designed, operated and maintained in a manner that minimizes adverse effects on the stream functions and processes.

4. Proposals for new in-stream structures should be evaluated for their potential adverse effects on the physical, hydrological, and biological characteristics as well as effects on species that inhabit the stream or riparian area.

5. When necessary, in-stream structures should be planned and designed to be compatible with navigation and recreation, especially in shorelines of statewide significance, provided that public safety and ecological protection are fully addressed.

B. Shoreline Environment Regulations

1. Priority Aquatic: In-stream structures may be allowed subject to the policies and regulations of this Program and a conditional use permit if allowed in the adjacent upland environment.

2. Aquatic: In-stream structures may be allowed subject to the policies and regulations of this Program and a conditional use permit if allowed in the adjacent upland environment.

3. Natural: In-stream structures are prohibited, except that in-stream structures (such as large woody debris) whose primary purpose is restoration of shoreline ecological conditions may be permitted subject to the provisions of this Program.

4. Conservancy: In-stream structures may be allowed subject to the policies and regulations of this Program and a conditional use permit.

5. Shoreline Residential: In-stream structures may be allowed subject to the policies and regulations of this Program and a conditional use permit.

6. High Intensity: In-stream structures may be allowed subject to the policies and regulations of this Program and a conditional use permit.

C. Regulations

1. Dams and associated power generating facilities shall not be permitted except in the rare instance where there is clear evidence that the benefits to County residents outweigh any potential adverse ecological impacts. The criteria for approving such facilities will depend on the specific location including its

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particular physical, cultural, and ecological conditions. Prior to approving or denying such facilities, the County shall consult citizens and appropriate agencies to evaluate in-stream structure proposals.

2. In-stream structures whose primary purpose is flood control shall be subject to Article 7 section 5 (Flood Control Structures) and this section. In-stream structures whose purpose is power generation shall be subject to the policies and regulations for Article 8 section 5 (Industrial Use) and this section.

3. When permitted, in-stream structures and their support facilities shall be:

    i. Constructed and maintained in a manner that does not degrade the quality of affected waters or the habitat value associated with the in-stream and riparian area; and
    ii. Located and designed based on reach analysis to avoid the need for structural shoreline armoring.

4. All in-water diversion structures shall be designed to permit the natural transport of bedload materials. All debris, overburden and other waste materials from construction shall be disposed of in such a manner that prevents their entry into a water body.

5. In-stream structures shall not impede upstream or downstream migration of anadromous fish.

6. Small-scale power generating microturbines may be placed in streams provided they do not create impoundments and there are no adverse effects on shoreline functions and processes, including but not limited to, stream flow, habitat structure, temperature, and/or water quality. The County shall take appropriate measures and precautions to prevent the proliferation of small- scale power generating apparatus as necessary to prevent cumulative adverse impacts.

7. The County shall require any proposed in-stream structure to be professionally engineered and designed prior to final approval.

8. No in-stream structure shall be installed without the developer having obtained all applicable federal, state, and local permits and approvals, including but not limited to a Hydraulic Project Approval (HPA) from the State Department of Fish and Wildlife.

9. The County shall require the proponent of any in-stream structure proposal to provide the following information prior to final approval unless the County determines that the issues are adequately addressed via another regulatory review process:

    i. A site suitability analysis that provides the rationale and justification for the proposed structure. The analysis shall include a description and analysis of alternative sites, and a thorough discussion of the environmental impacts of each; and

ii. A hydraulic analysis prepared by a licensed professional engineer that describes anticipated effects of the project on stream hydraulics, including potential increases in base flood elevation, changes in stream velocity, and the potential for redirection of the normal flow of the affected stream; and

iii. A biological resource inventory and analysis prepared by a qualified professional biologist that describes the anticipated effects of the project on fish and wildlife resources; and

iv. For hydropower facilities, the proposed location and design of powerhouses, penstocks, accessory structures and access and service roads; and

v. Proposed provisions for accommodating public access to and along the affected shoreline, as well as any proposed on-site recreational features; and

vi. A description of any plans to remove vegetation and/or revegetate the site following construction; and proposed mitigation plan that describes, in detail, provisions for protecting in-stream resources during construction and operation, and measures to compensate for impacts that resources that cannot be avoided.

vii. A description of sites proposed for the depositing of debris, overburden, and other waste materials generated during construction.

7. Structural Shoreline Armoring and Shoreline Stabilization

A. Policies

1. Because protecting ecological functions is a primary goal of the Shoreline Management Act, the County should take active measures to preserve natural unaltered shorelines and prevent the proliferation of bulkheads and other forms of shoreline armoring.

2. Proponents of new shoreline use and development, including preferred uses and uses exempt from permits, should plan, design, locate, construct and maintain the use/development to avoid the need for structural shoreline armoring works using all methods available.

3. Non-structural stabilization measures including relocating structures, increasing buffers, enhancing vegetation, managing drainage and runoff and other measures are preferred over structural shoreline armoring.

4. Structural shoreline armoring should only be permitted when necessary to support a primary structure associated with an approved shoreline use/development, public transportation infrastructure, and/or essential public facilities when other alternatives are infeasible.

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5. Where beach erosion threatens an existing use or development, proposals for new structural shoreline armoring should evaluate a range of options and designs. On a reach-specific basis, causes of erosion as well as effects should be evaluated. Beach management issues such as sediment conveyance, geohydraulic processes, and ecological relationships all should be considered in arriving at a design to minimize disturbance.

6. Shoreline stabilization and shoreline armoring for the purpose of leveling or extending property or creating or preserving residential lawns, yards or landscaping should not be allowed.

7. When structural shoreline armoring is determined necessary to protect public infrastructure and primary structures, it should be located, designed, and maintained in a manner that minimizes adverse effects on shoreline ecology, including effects on the project site, adjacent properties, and sediment transport to downdrift areas.

8. Before approving shoreline armoring structures, the County should require the proponent to identify, address and mitigate probable effects on shoreline processes and functions.

9. Shoreline armoring structures should be located and designed based on an understanding of long-term physical shoreline processes. The structural shoreline armoring should fit the physical character and hydraulic energy of a specific shoreline reach, which may differ substantially from adjacent reaches.

10. Vertical concrete or rock walls should be avoided whenever possible and only be used to protect shorelines as a last resort and only when extreme measures are required.

11. Structural shoreline armoring should not interfere with existing or future public access to public shorelines nor with other appropriate shoreline uses such as navigation, seafood harvest, or recreation.

12. When seeking approval for new structural shoreline armoring, the project proponent should include public access that is consistent with the Article 6 section 3 (Public Access) of this Program.

13. Proponents of new structural shoreline armoring should coordinate with other affected property owners and public agencies to address ecological and geo-hydraulic processes, sediment conveyance and beach management issues for the whole drift sector (net shoreline-drift cell) or shoreline reach where feasible.

14. Where feasible, any failing, harmful, unnecessary, or ineffective structural shoreline armoring should be removed, and shoreline ecological functions and processes should be restored using non-structural methods.

15. In addition to conforming to the regulations in this Program, non-regulatory methods to protect, enhance, and restore shoreline ecological functions and other

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shoreline resources should be encouraged. Non-regulatory methods may include public facility and resource planning, technical assistance, education, voluntary enhancement and restoration projects, land acquisition and restoration, or other incentive programs.

B. Shoreline Environment Regulations

1. Priority Aquatic: Shoreline stabilization may be permitted subject to the provisions of this Program. New structural shoreline armoring is prohibited.

2. Aquatic: Shoreline stabilization may be permitted subject to the provisions of this Program. Structural shoreline armoring to protect existing public transportation infrastructure and existing essential public facilities may be allowed as a conditional use if allowed in the adjacent upland environment. Structural shoreline armoring to protect new residential developments is prohibited.

3. Natural: Shoreline stabilization may be permitted subject to the provisions of this Program. Structural shoreline armoring to protect existing public transportation infrastructure and existing essential public facilities may be allowed as a conditional use. Structural shoreline armoring is prohibited.

4. Conservancy: Shoreline stabilization may be permitted subject to the provisions of this Program. Shoreline armoring structures may be permitted as a conditional use.

5. Shoreline Residential: Shoreline stabilization may be permitted subject to the provisions of this Program. Shoreline armoring structures may be permitted as a conditional use.

6. High Intensity: Shoreline stabilization may be permitted subject to the provisions of this Program. Shoreline armoring structures may be permitted as a conditional use.

C. Regulations – Existing Structural Shoreline Armoring

1. Existing structural shoreline armoring, as defined in Article 2, may be replaced in kind if there is a demonstrated need to protect public transportation infrastructure, essential public facilities, and primary structures from erosion caused by currents, tidal action, or waves and all of the following apply:

   i. The replacement structure is designed, located, sized, and constructed to assure no net loss of ecological functions.
   ii. The replacement structure performs the same stabilization function of the existing structure and does not require additions to or increases in size.
   iii. The replacement structure shall not encroach waterward of the ordinary high water mark or existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or

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environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.

2. Removal of older structures is required as new ones are put in place. Exceptions may be made by the Administrator only in cases where removal would cause more ecological disturbance than leaving the remnant structure in place.

D. Regulations – Subdivisions and Existing Lots without Structures

1. Land subdivisions shall be designed to assure that future development or use of the established lots will not require structural shoreline armoring.

2. Use of a bulkhead, revetment or similar shoreline armoring to protect a platted lot where no primary use or structure presently exists shall be prohibited. Where such shoreline armoring already exists, property owners are strongly encouraged to remove it.

3. Structural shoreline armoring for the sole purpose of leveling or extending property or creating or preserving residential lawns, yards, or landscaping shall be prohibited. Where such shoreline armoring already exists, property owners are strongly encouraged to remove it.

E. Regulations – New or Expanded Shoreline Armoring, When Allowed

1. Structural shoreline armoring shall be prohibited in or adjacent to lakes and other low energy environments such as bays, and accreting marine shores. Where such shoreline armoring already exists, property owners are strongly encouraged to remove it.

2. New structural shoreline armoring may be permitted and existing structural shoreline armoring may be expanded only when one or more of the following apply:

   i. When necessary to support a project whose primary purpose is enhancing or restoring ecological functions.
   ii. As part of an effort to remediate hazardous substances pursuant to RCW 70.105.
   iii. When necessary to protect public transportation infrastructure or essential public facilities and other options are infeasible.
   iv. When necessary to protect a water-oriented use or an existing, lawfully established, primary structure, including a residence that is in imminent danger of loss or substantial damage from erosion caused by tidal action, currents, or waves.

3. Proposals for new or expanded structural shoreline armoring allowed under 7.7.E.2. above shall clearly demonstrate all of the following before a permit can be issued:

i. The erosion is not being caused by upland conditions, such as the loss of vegetation or poor drainage.
ii. The structural shoreline armoring design is the least environmentally damaging alternative.
iii. The shoreline armoring complies with the flood damage prevention regulations in JCC Chapter 18.30.070.
iv. Adverse impacts are fully mitigated according to the prescribed mitigation sequence such that there is no net loss of shoreline ecological functions or processes.
v. Alternatives to structural shoreline armoring including vegetative shoreline stabilization, flexible/natural materials and methods, beach nourishment and other forms of bioengineering are determined to be infeasible or insufficient.

4. When evaluating the need for new or expanded structural shoreline armoring, the Administrator shall require the applicant to examine and implement alternatives to structural shoreline armoring in the following order of preference:

i. No action (allow the shoreline to retreat naturally).
ii. Increased building setbacks and/or relocated structures.
iii. Use of flexible/natural materials and methods, vegetation, beach nourishment, protective berms, or bioengineered shoreline stabilization.

5. The County shall require applicants for new or expanded structural shoreline armoring to provide credible evidence of erosion as the basis for documenting that the primary structure is in imminent danger from shoreline erosion caused by tidal action, currents, or waves. The evidence shall:

i. Demonstrate that the erosion is not due to landslides, sloughing or other forms of shoreline erosion unrelated to water action at the toe of the slope; and
ii. Include an assessment of on-site drainage and vegetation characteristics and their effects on slope stability.

F. Regulations –New or Expanded Shoreline Armoring, Design Standards

1. New or expanded shoreline armoring shall be designed by a state licensed professional geotechnical engineer and/or engineering geologist and constructed according to applicable U.S. Army Corps of Engineers requirements and/or state Department of Fish and Wildlife Aquatic Habitat Guidelines.

2. The size of structural shoreline armoring shall be limited to the minimum necessary to protect the primary use or structure that it is intended to protect.

3. When shoreline armoring is permitted, is shall be constructed of erosion resistant, environmentally safe and durable materials that are easy to maintain.

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4. Shoreline armoring shall be designed and constructed with gravel backfill and weep holes so that natural downward movement of surface or ground water may continue without ponding or saturation that could compromise the surrounding soil stability.

5. All forms of structural shoreline armoring shall be constructed and maintained in a manner that does not degrade the quality of affected waters. The County may require setbacks, buffers, and/or other measures to achieve these objectives.

6. Shoreline defense structures shall not be constructed with waste materials such as demolition debris, derelict vessels, tires, concrete or any other materials which might have adverse toxic or visual impacts on shoreline areas.

7. Gabions are prohibited as a means of stabilizing shorelines because of their limited durability and the potential hazard to shoreline users and the shoreline environment.

8. Proposals, other than single-family residential developments of more than four (4) lots, that involve new or expanded shoreline armoring shall incorporate public access features consistent with Article 6 section 3 (Public Access) of this Program.

G. Regulations – Bulkheads

1. Bulkheads shall comply with the regulations noted in 7.7.B through F and this section.

2. Bulkheads shall meet all of the following criteria:

   i. They shall be located generally parallel to the shoreline. Adequate bank toe protection shall be provided to ensure bulkhead stability without relying on additional rip-rap; and
   ii. They shall be located so as to tie in flush with existing bulkheads on adjoining properties, except when adjoining bulkheads do not comply with the design or location requirements set forth in this Program.

H. Regulations – Revetments

1. Revetments shall comply with the regulations noted in 7.7.B through F and this section.

2. Revetments shall meet all of the following criteria:

   i. Revetments shall be placed landward of associated wetlands; and
   ii. Revetments shall be located sufficiently landward of the stream channel to allow streams to maintain point bars and associated aquatic habitat through normal accretion; and
   iii. Revetments shall be prohibited on estuarine shores, in wetlands, on point and channel bars, and in salmon and trout spawning areas.

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3. Revetments or similar structures that have already cut off point bars from the stream shall be relocated if feasible.

4. When requesting a permit for a revetment along a stream or river, the applicant shall provide a geotechnical analysis of stream geomorphology both upstream and downstream of the proposed revetment site to assess the physical character and hydraulic energy potential of the specific stream reach and adjacent upstream or downstream reaches. The purpose of such analysis is to assure that the physical integrity of the stream corridor is maintained, that stream processes are not adversely affected, and that the revetment will not cause significant damage to other properties or shoreline functions and processes.

I. Regulations – Breakwaters, Jetties, and Seawalls

1. Breakwaters, jetties, and seawalls shall comply with the regulations noted in 7.7.B through F and this section.

2. Breakwaters, jetties, and seawalls shall only be allowed when shown to be necessary:

   i. For purposes of navigation, or fisheries or habitat enhancement; or
   ii. To protect from strong wave action public water-dependent uses such as a harbor, marina, or port that are located seaward of the existing shoreline; or
   iii. When adverse impacts on water circulation, sediment transport, fish and wildlife migration, shellfish, and aquatic vegetation can be effectively mitigated.

3. Open-pile, floating, portable, or submerged breakwaters, or several smaller discontinuous structures that are anchored in place, shall be preferred over fixed breakwaters.

J. Regulations – Application Requirements

1. To verify that the provisions of this section are fully addressed, the County may require information to support a permit application for any type of shoreline stabilization. Application information required pursuant to this section shall address the urgency and risks associated with the specific site characteristics and shall include:

   i. A scaled site plan showing: 1) existing site topography and 2) the location of existing and proposed shoreline stabilization, shoreline armoring structures, and any fill including dimensions indicating distances to the OHWM; and
   ii. A description of the processes affecting the site and surrounding areas, including but not limited to: tidal action and/or waves; slope instability

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or mass wasting; littoral drift; channel migration; and soil erosion, deposition, or accretion; and

iii. A description of alternatives to structural approaches, and a thorough discussion of the environmental impacts of each alternative; and

iv. A description of any proposed vegetation removal and a plan to revegetate the site following construction; and

v. A hydraulic analysis prepared by a licensed professional engineer that describes anticipated effects of the project on water and wave elevations and velocities; and

vi. A biological resource inventory and analysis prepared by a qualified professional biologist that describes the anticipated effects of the project on fish and wildlife resources; and

vii. A description of opportunities for providing public access to and along the affected shoreline, as well as any proposed on-site recreational features if applicable; and

viii. A description of any waste and debris disposal sites for materials generated during construction; and

ix. Any other information that may be required to demonstrate compliance with the review criteria referenced in this section.

8. Restoration

A. Policies

1. Protection of existing resources is the best way to ensure the long-term health and well-being of Jefferson County shorelines. Restoration should be used to complement the protection strategies required by this Program to achieve the greatest overall ecological benefit.

2. This Program recognizes the importance of restoring shoreline ecological functions and processes. Jefferson County supports cooperative restoration efforts by strategically organizing programs between local, state, and federal public agencies, tribes, non-profit organizations, and landowners to improve shorelines with impaired ecological functions and/or processes.

3. Restoration actions should restore shoreline ecological functions and processes as well as shoreline features and should be targeted toward meeting the needs of sensitive and/or regionally important plant, fish and wildlife species.

4. Restoration should be integrated with and should support other natural resource management efforts in Jefferson County and in the greater Puget Sound region.

5. Priority should be given to restoration actions that meet the goals and objectives contained in Article 3 section 6 (Restoration and Enhancement) of this Program.

6. When prioritizing restoration actions, the County should give highest priority to measures that have the greatest chance of reestablishing ecosystem processes and creating self-sustaining habitats.

B. Shoreline Environment Regulations

1. Priority Aquatic: Restoration may be permitted subject to provisions of this Program.
2. Aquatic: Restoration may be permitted subject to provisions of this Program.
3. Natural: Restoration may be permitted subject to provisions of this Program.
4. Conservancy: Restoration may be permitted subject to provisions of this Program.
5. Shoreline Residential: Restoration may be permitted subject to provisions of this Program.
6. High Intensity: Restoration may be permitted subject to provisions of this Program.

C. Regulations

1. Restoration shall be carried out in accordance with an approved restoration plan and in accordance with the policies and regulations of this Program.

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