Waterfront Protection Coalition

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Environmental Key Issues regarding the Proposed Dock Management Plan (DMP)

Insufficient and inappropriate Science as the base for a DMP

It appears that the science used to develop the initial stance for a DMP was that dock shading is detrimental to the marine environment. The initial DMP imposed dock width and light transparency guidelines to minimize shadowing by the structures. The original science is cited by the government to come from Fish-Stream Crossing Guidebook as per an FOI done in 2015. These policies through the DMP ended up encouraging very small float widths (safety hazard) and the addition of light transparency requirements to attempt to mitigate the impacts of shading. In 2018 the light transparency guidelines were actually re-enforced again by the MC Wright study and seems to be sourced from the Environmental and Aesthetic Impacts of Small Docks and Piers study (meant to mitigate impacts of Vegetation on Saltwater marshes in Maryland) that focused on piers and walkways (not floats). The rocky coastline and weather systems of British Columbia are very different from the marshes of Maryland.

Salt Marsh in Maryland versus Rocky terrain of the Sunshine Coast foreshore

- The environmental scientific data relied upon for the draft DMP is insufficient and only collected in a few locations in Pender Harbour (Oct 2017 after initial winter die-off) and lacks scientific rigor.
- Key sensitive habitats were not adequately quantified for Pender Harbour and scientific information is absent for the remainder of the shíshálh swiya including the freshwater lakes and other coastal regions.
- No biophysical justification was provided for the proposed delineation of zones in Pender Harbour. Environmental criteria were not developed or identified to establish sensitive areas that would require restrictions or mitigation (i.e. salt marshes, tidal lagoons, mud flats, eelgrass beds).
- To provide perspective and inform management options a full evaluation of the significance of other anthropogenic influences such as septic drainage and sedimentation vs those of docks and boathouses is needed.

- Managing complex ocean and freshwater ecosystems by regulating a single stressor such as docks ignores interaction among many natural and human-sourced processes, and violates fundamental ecological principles.
- Failing to recognize the significance of water depth beyond the 20-foot mean lower low water (MLLW) overlooks the fact that light penetration mitigation is unnecessary at such depths for docks and boathouses for sensitive vegetation such as eelgrass.
- The effects of permitted fisheries and invasive species on herring stocks and eelgrass meadows respectively have not been properly studied.

Key Environmental management concepts have not been implemented

- Net Environmental Benefit Analysis (NEBA), more harm than good, mitigation and offsets are not included or influence decisions regarding dock and boathouse restrictions or removals in the draft DMP.
- Significant Adverse Effect (SAE) and Adverse Effect (AE) should be used to help quantify environmental effects and appropriate responses.
- Over-reliance on the “precautionary principle” in the absence of science leads to unwarranted and punitive restrictions.

The significance of light penetration is overstated and does not consider the effects of climate change

- Water depth is not factored in for light penetration requirements. Site specific environmental data should be used to confirm if a dock/boathouse is in depth greater than 20’ mean lower low water (MLLW), if it is, light penetration mitigation is unnecessary at such depths for docks and boathouses.
- Key sensitive habitat such as eelgrass beds is the only area where light penetration requirements should be considered.
- Light penetration data from the southern USA and marsh environments is not appropriate for broad application to dock restrictions in BC.
- Applying light penetration requirements for all docks and boathouses is impractical and with little resulting benefits.
- Shading provided by docks and boathouses has a positive effect for many species providing varied habitat and cover/ protection from predators etc.
- The significance of shade needs to be factored into mitigating the effects of climate change both now and in the future.

Docks and Boathouses Can Support Biodiversity:

- The environmental benefits provided by the presence of docks and boathouses is not even mentioned. The artificial reef effect of these structures is significant, enhances habitat, and provides more good than harm.
- By offering these habitats, docks and boathouses facilitate areas for feeding, breeding, and shelter for numerous marine species, including fish and invertebrates.
- The biodiversity supported by docks and boathouses contributes to a richer and more vibrant marine ecosystem.

Unintended consequences of the proposed DMP

- Evaluate the Impacts associated with the disposal of non-compliant docks and boathouses (dock removal impacts, derelict docks?)
- Environmental effects of vessel anchoring and beaching as will be required in the absence of docks
- Assess the more harm than good created by the application of the DMP
- Need to fully understand the full lifecycle implications of the use of alternative materials such as plastics.

Environmental Solutions for the DMP

- Existing facilities, if they are not posing a Significant Adverse Effect (SAE) should be grandfathered. The use of NEBA and assessment of more harm than good for existing facilities will more fully evaluate and assess the true environmental implications of both the structure and the removal of the structure. For the majority of locations more harm will be created by removing a dock or boathouse than the perceived benefit (net loss of habitat and biodiversity).
- Light penetration requirements should only be considered where sensitive habitats such as eelgrass exist and not broadly applied.

- Requirements need to take into account climate change, and the artificial reefs and associated habitats docks have created. Removing these habitats is actually destructive to the environment with nowhere to dispose of most of these materials.
- Creative ideas like LED's under docks could help support vegetative growth where appropriate.
- A decision tree could be developed to help guide the process.

Conclusion

In conclusion, the current environmental data informing the Dock Management Plan (DMP) is outdated and insufficient, particularly for key habitats in the shíshálh swiya region. The lack of biophysical justification for zoning in Pender Harbour, absence of scientific basis for freshwater restrictions, and the disregard of the influence of water depth and substrate types, lead to unnecessary and unrealistic proposed management regulation. Positive environmental benefits of docks and boathouses, such as habitat creation and shading, weren't considered as a way to enhance biodiversity.

To address these issues, integrating environmental management concepts like Net Environmental Benefit Analysis (NEBA), more harm than good assessments, and mitigative strategies are crucial. Recognizing the implications of climate change and practical solutions such as shading, should be incorporated into the decision-making processes. Grandfathering existing facilities, unless posing a Significant Adverse Effect, and conducting NEBA assessments can prevent a net loss of habitat and biodiversity, and avoid unintended consequences, emphasizing the need for a more environmentally holistic approach to Dock Management.

The WPC Science Committee comprises biologists, zoologists, engineers (including maritime), environmental scientists, and professionals specializing in dock and marine construction. This group has compiled a selection of suggested approaches and modifications to the DMP in Appendix A below. This list is not exhaustive but serves as a starting point.

Appendix A - Suggested Modifications to the DMP

Concerns	Unintended consequence of the DMP	WPC Suggested Solution	Community Solutions
Longer Tenures ***(Grandfathering)***	Anchoring and derelict docks and boathouses Environmental Waste Habitat destruction Socio-Economic & Financial impacts	Permit existing structures to ensure full life cycle and avoid unnecessary disposal pressures and waste.	Grant programs and community education to promote upgrades.
Size restrictions	Anchoring and derelict docks and boathouses Socio-Economic & Financial impacts Unintended waste Unsafe Widths	Site-specific considerations based on location and number and type of vessels being moored.	Additional Marina approvals.
Shading of Docks	Climate change considerations, loss of shading Financial impacts/waste	Site-specific solutions for new construction where appropriate, such as grating and LED lighting.	Offset program (eelgrass seeding)
Zones	The creation of zones with no scientific basis Access issues for private property owners	Net environmental benefit analysis: environmental mitigation strategies in sensitive areas.	Transparency
Anchoring	Bottom scouring Increased noise pollution Navigational hazards	Permit larger docks, boathouses and marinas to accommodate vessel moorage requirements.	
Harvesting	Neglecting identified causes of shellfish closures	Focus on septic and commercial fishing mitigation strategies to ensure a holistic approach.	Offset Programs Infrastructure upgrades
Grounding	Docks moving further into navigable channels	Allow site-specific exceptions based on topography.	
Building Material	Creation of waste with remediation activities (styrofoam, creosote)	New construction utilizing steel or concrete pilings and encapsulated foam building materials.	