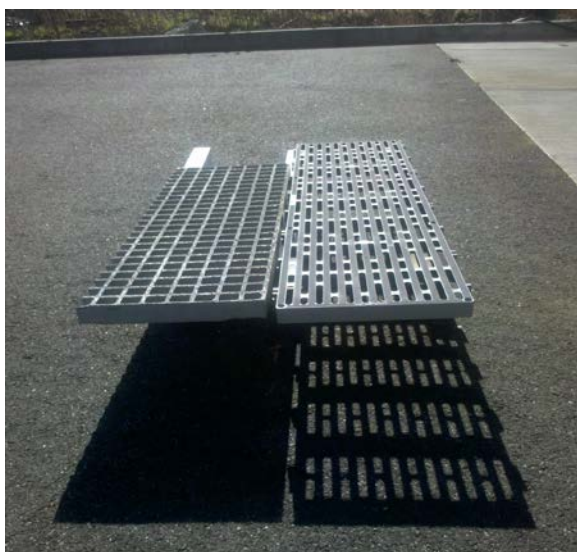




Do open space requirements for deck grating allow adequate light to reach state-owned-aquatic-land benthic habitat?



A portion of light enters the water column through deck grating and other over water structures.



Different types of deck structures create different amounts of shade on state owned aquatic lands.

An investigation was conducted to quantify and compare light attenuated (weakened or decreased) by overwater structures constructed of different decking types that are currently found on state owned aquatic lands and available from various vendors. Experiments were designed to evaluate the effect the following have on light attenuation: decking types; deck elevation above the water surface; and orientation of the decking material open spaces.

Light sensors were submerged in water, below and beside five different deck types, each in a separate tank, and compared with light reaching unobstructed sensors in a control tank. Decking types differed in the percentage of open space, the shape of the open spaces and the vertical thickness of the decking material. These experiments resulted in learning the following about light availability through different types of deck grating:

- **The most important factor for maximizing light beneath a deck is elevating the deck above the water surface, rather than the amount of open space or the orientation of the spaces.**
- **For most required deck types, insufficient light is reaching beneath the structures to meet threshold value for eelgrass survival.**
- **Fish behavior is being altered by deck structures for all or some portion of the day because all deck types blocked adequate light required for undisturbed fish behavior of Puget Sound.**