Ballast Water Exchange: Concerns and Legal Theory

Summary:
Reversal of the Portland-Montreal Pipeline, and corresponding tanker loading and export from Casco Bay, is a new business operation that would vastly increase the amount of ballast water discharge into the Bay. Ballast water is a significant risk for the introduction of invasive species globally and locally, emphasized by the importance and vulnerability of Maine's lobster fishery and other fisheries. Gaps and inadequacies of federal and state regulation and enforcement compromise the ability to produce the desired results of existing protocols dealing with ballast water exchange. Recent and historic court decisions have helped support the actions by City of South Portland to prevent export operations of bulk liquid at this scale within the scope of the City's zoning ordinances and could continue to do so.

Scope:
Over 1.6 billion gallons of crude oil were unloaded from tankers and conveyed through the Portland Pipeline in 2012 alone as it operated at an estimated 20% capacity (1). Ballast water is taken in after bulk liquids are unloaded to maintain trim and operability of the marine tank vessel, and this water is discharged at the site of loading operations with extant hull designs that dominate the global tanker fleet. Conventional Suezmax tankers entering the port could regularly discharge 15 million gallons of ballast water (2) into Casco Bay. Current regulations require open water exchanges of ballast water 200 miles offshore as a way to prevent invasive species from hitching a ride as stowaways from one coastal location to another, but such exchanges leave 5% unchanged water under current compliance standards (3)– and compliance is never assured (4). Such new regulation may yet be years in finalization and may or may not incorporate oceanographic current data and modeling that show that such factors as seasonality and changing currents in the Gulf of Maine are more significant factors than distance from shore alone (5).

Presently, the US Coast Guard, Department of Agriculture, and EPA are contemplating new regulatory guidelines and protocols regarding ballast water exchange (6). These revisions were prompted in general by growing concern over the vulnerability of coastal and inland navigable waters to invasive species as global trade expands. Some species of are particular concern for the Gulf of Maine and Casco Bay, including the Asian crab (Hemigraspus sangineous), which was introduced in New Jersey in 1988 in adult or larval form likely from ballast water exchange, and red algae, which was recently suspected of being introduced through ballast water (7). South Portland is well placed to exercise its home rule authority for land use by straightforwardly prohibiting bulk liquids export operations from its waterfront facilities as a means to prevent increased increased ballast water discharge capacity and consequently increased risk of exposure to invasive species.

Legal Theory:
The Supreme Court case Maine v. Taylor (1986) recognized the important role of states in regulating the protection of their natural waters and argued against federal preemption under dormant Commerce Clause. Details of that case were that Taylor challenged the State of Maine's authority to prevent him from importing golden shiner baitfish, which is natively grown in the state during the regular season, from sources outside of the state in the winter season. Oral arguments in that case emphasized support for the state's strict standards even if there is disagreement within the scientific community and among scientific experts as to the degree of threat that the imported strain poses as a vector for exotic parasites and diseases. DoJ Solicitor General Ganzfried cited Hughes v Oklahoma and sustained the right of a state to "implement prophylactic measures when the effect on the state's ecology would be very serious and there is substantial scientific basis for the state's concern" (8). (But unlike Hughes, the Maine v Taylor question was one of the danger imposed on indigenous wildlife in its natural habitat, not the presumption that states own all wildlife and can therefore restrict its export.)

An additional consideration in the Maine v Taylor 8-1 decision that set limits on the Commerce Clause, which applied to Hughes in support rather than opposition of federal pre-emption, was the disruption to commerce in the face of nondiscriminatory alternatives to state regulation. It is important to note that petroleum export has never been a Maine business and that crude oil export has never been a part of PMPL's 71-year-old business plan. It would be difficult to argue, as in Hughes, that any ordinance language prohibiting loading operations that involve ballast water discharge is a disruption of existing commerce.

The question of ballast water discharge regulation in the face of non-commerce related federal pre-emption appeared in the US District Court for Northern California in Northwest Environmental Advocates v EPA, in which more stringent state standards were upheld by the court against more lax federal EPA regulations (9). This case prompted Congress to instruct the federal agencies to institute more stringent regulation on ballast water discharge at the federal level, but those new standards have yet to be fully implemented (10).

Meanwhile, in a second court case, the US Court of Appeals Sixth Circuit set aside in Fednav, Ltd. v Chester (2007) the right of the State of Michigan to regulate ballast water to a stricter standard where Fednav Ltd. was engaged in interstate shipping, leaving the question of ultimate federal jurisdiction over such regulation open to later judgement. Nevertheless the decision held that neither field pre-emption nor conflict preemption applied. Moreover, in an analysis by Howe (11), the Sixth Circuit "...specifically recognized that Congress contemplated a regulatory future in which states may provide gap-fillers when federal regulations fail to sufficiently protect state interests" [emphasis added].

The Maine Revised Statutes currently lack specific language regarding regulation of ballast waters. Discharge of ballast water at the Aframax or Suezmax tanker scale is a new situation that Maine confronts with pipeline reversal and tanker loading plans.
However, in the absence of such statutory language, 38 MRS Ch 3 §439-A states that,

In addition to the ordinances required by this chapter, municipalities may adopt zoning
and land use controls applicable to other bodies of water as may be required to protect
the public health, safety and general welfare and further the purposes of this article.

This provision may duly enable the City of South Portland to institute protection
against new sources of ballast water discharge that threaten indigenous coastal
wildlife in the absence of existing regulation and may draw additional strength
from the fact that, unlike Fednav, such regulation does not place an additional
burden on existing business operations.

NOTES
(1) See attached annotated ledger from PMPL for throughput volume for 2012 and 2011;
fractional capacity is taken from the Canadian National Energy Board Audit of Year 2010-2011,
which states that, "Lack of supply and reduced throughput account for 80 per cent of the total
planned and unplanned shutdown hours. Unplanned shutdown hours made up 1.5 per cent of
the total shutdown hours."

(2, 3) GEF-UNDP-IMO GloBallast Partnerships Programme and GESAMP
IMO/FAO/UNESCO-IOC/
UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine
Environmental Protection, 2011. Establishing Equivalency in the Performance Testing and
Compliance Monitoring of Emerging Alternative Ballast Water Management Systems
GESAMP, GloBallast Monographs No. 20, GESAMP Reports and Studies No. 82.

(4) For example, the Aframax tanker Overseas Shirley was docked at Pier 2 for crude oil
unloading in 2009 after being cited in 2006 for "habitual criminal discharge of sludge into the
sea" with an estimated 40,600 gallons were "intentionally dumped through a bypass hose". Not
all ships and shipping companies are this cavalier, but the Overseas Shipholding Group, which
delivered 4 other tankers to pier 2 in 2009, paid $37 million in fines by the Department of Justice
for 33 felony counts of illegal dumping and falsification of shipping records. (See

(5) Brickman, D., 2006. Risk assessment model for dispersion of ballast water organisms in
shelf seas. Canadian Journal of Fisheries and Aquatic Science 63, pp. 2748-2759.

(6) See p. 11 of the Final 2013 VGP Fact Sheet, U.S. Environmental Protection Agency 2013
Final Issuance of National Pollutant Discharge Elimination System (NPDES) Vessel General
Permit (VGP) for Discharges Incidental to the Normal Operation of Vessels
(www.epa.gov/npdes/pubs/vgp_fact_sheet2013.pdf)

the Marine Environment
(http://www.gulfofmaine.org/state-of-the-gulf/docs/marine-invasive-species.pdf)

(9) HR 2838-31 was signed into law Dec 20, 2012. Of note, sec. 722 of HR 2838-31 requires the commandant of the Coast Guard to assess the impacts of increased tanker traffic involved in Canada’s oil sands export in and around US territorial waters. That report should be completed though it was not accessible at the time of writing this summary.

(10) see footnote 6 and also: http://cfpub.epa.gov/npdes/home.cfm?program_id=350

(11) Howe, J.G., Fednav, Ltd. v. Chester: Ballast water and the battle to balance state and federal regulatory interests. 15 Ocean and Coastal Law Journal 381.