

Evaluating the Suitability of Dredged Material for Placement and Beneficial Use Alternatives - Testing Manual for Beneficial Use Determination

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Updated from Richard A. Price's 2014 GLDT annual meeting presentation

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Goals for new testing manual

- One-Stop, Web-based Guidance
- Standardized risk-based testing methods
- Consistency in interpretation
- Updated regulatory guidance applicable to Great Lakes States
- Regional, cost-effective approach to unique sediment management needs of the Great Lakes

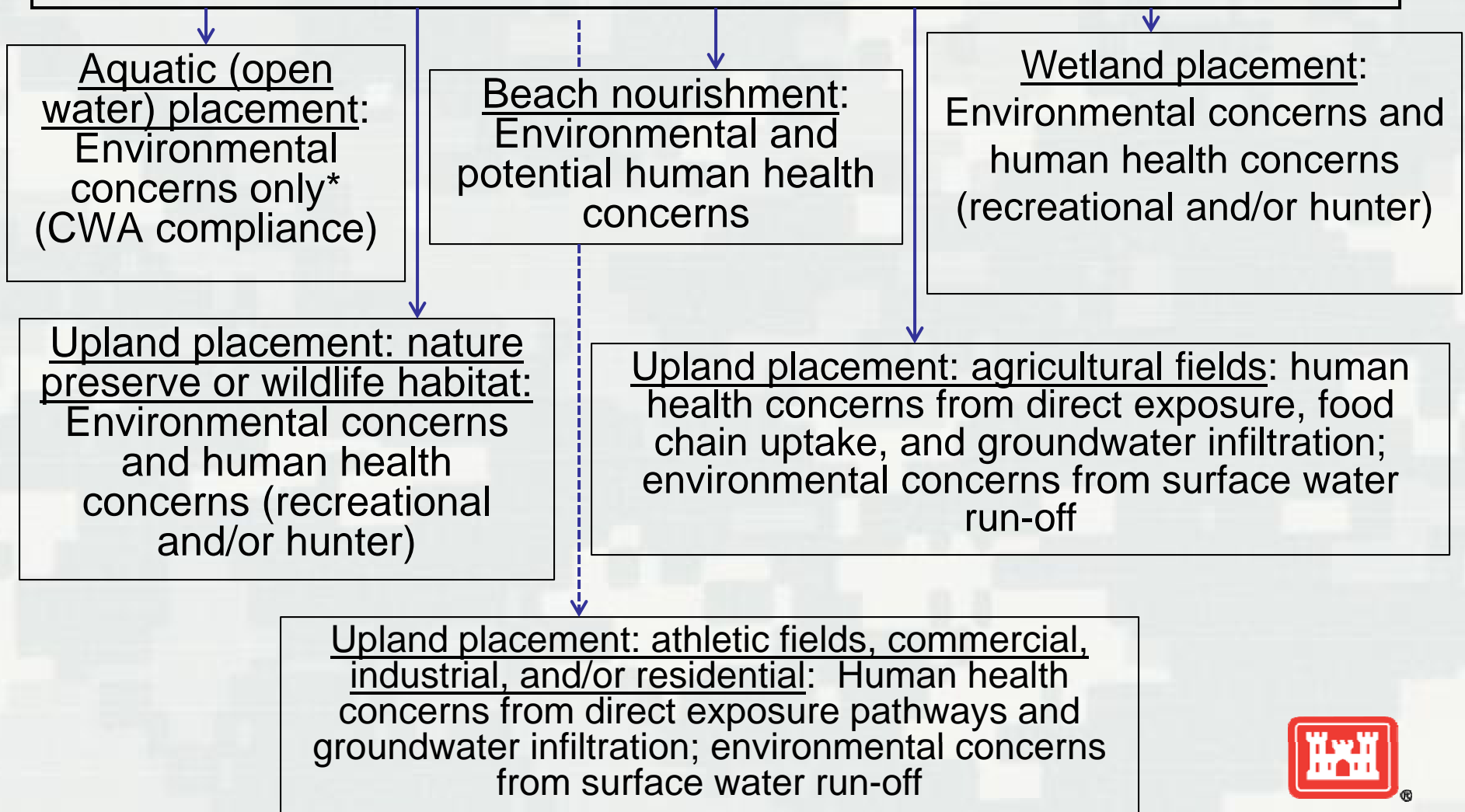


Key components for new manual

- Incorporate previous testing guidance but focus on Great Lakes and unconfined aquatic and upland placements
- Expand sections providing treatment options for beneficial use placements
- Incorporate Engineering with Nature principles
- Use risk assessment framework



Beneficial Use Placement Options and Endpoints (environmental and/or human health)



Comparison of generic risk-based soil concentrations developed by the Great Lake States for protection of human health

State	Cancer risk limit	Follows USEPA toxicity criteria hierarchy?	Modifies USEPA RSL exposure values?	Includes specific guidance for recreational scenario?	Includes food pathways (agricultural or unrestricted scenario)?	Includes background values for metals and PAHs?	Year of last update	Expected next update
New York	1E-06	No	Yes	No	Yes	Yes, metals, PAHs	2006	NA
Pennsylvania	1E-05	Yes	Yes	No	No	No	2011	Periodic
Ohio	1E-05	Yes	Yes	Yes	No	Yes, metals	2014	Periodic
Michigan	1E-05	Yes	Yes	Yes	No	Yes, metals	2013	Periodic
Indiana	1E-05	Yes	Yes	Yes	No	No	2015	Yearly
Illinois	1E-06	Yes	No	No	No	Yes, metals, PAHs	2013	Periodic
Wisconsin	1E-06	Yes	No	Yes	No	Yes, metals	2015	6 months
Minnesota	1E-05	No	Yes	Yes	No	Pending, metals	1998	2016



Comparison of select metal soil background values and direct contact risk-based screening/clean-up values in the Great Lake states

State	Metal background values (mg/kg)						Risk value (mg/kg)	
	Arsenic	Cadmium	Copper	Lead	Mercury	Zinc	benzo(a)pyrene <i>Residential</i>	benzo(a)pyrene <i>Industrial</i>
New York	13	2.5	33	63	0.18	109	1	1.1
Pennsylvania	NA	NA	NA	NA	NA	NA	0.57	11
Ohio Cuyahoga / Lucas County	24 / 9.7, 2.42	0.834 / NA	NA	51.7 / 17, 12.2	0.097 / 0.045	NA	1.1	7.7
Michigan	5.8	1.2	32	21	0.13	47	2	8
Indiana	NA	NA	NA	NA	NA	NA	0.21	2.9
Illinois metropolitan / non-metro	13.0 / 11.3	0.6 / 0.5	19.6 / 20	36 / 20.9	0.06 / 0.05	92 / 60.2	0.09	0.8
Wisconsin	8.3	1.07	35.4	51.6	NA	150	0.015	0.211
Minnesota	NA	NA	NA	NA	NA	NA	2 (0.61)	3 (12)

