

ENVIRONMENTAL EVALUATION AND MANAGEMENT OF DREDGED MATERIAL FOR BENEFICIAL USE: A DRAFT REGIONAL MANUAL FOR THE GREAT LAKES

AKA “DRAFT REGIONAL BENEFICIAL USE TESTING MANUAL”

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Great Lakes Dredging Team Annual Meeting

Buffalo NY

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“The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.”



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Environmental Evaluation and Management of Dredged Material for Beneficial Use: A Draft Regional Manual for the Great Lakes

- ✓ Objective is to support beneficial use of dredged material by developing a standard and agreed upon set of ground rules for evaluating the environmental suitability of dredged material for beneficial uses.
- ✓ Recognizing that beneficial use of dredged material projects support regional remediation and restoration efforts throughout the Great Lakes



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Draft manual time line

- October 2016: Initial draft released to GLDT
- 2017: Responses to comments and discussions with GLDT (on all sections/topics except Section 5 - aquatic placement)
- March 2019: Revised document and responses to comments on Section 5 provided to GLDT

What is a reasonable timeframe to collaborate on final revisions?



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Next Steps:

- Requesting GLDT review and feedback on all document revisions.
- Collaborate on final revisions
 - Major comments / revisions in Sections 4 (risk-based approach) and 5 (aquatic pathway evaluations)
 - State-based guidance and policies are in Appendix B: Can we harmonize with federal agency approach?



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Summary of most significant previous comments and March 2019 revisions



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Risk based approach (Section 4)

- ❖ Concern regarding statements that “ecological and human health risks should be weighed in light of project benefits”
- Section 4 provides a framework for characterizing risks and benefits (consistent with USEPA guidance)
- Conceptual site models identify exposure pathways
- Tiered approach used to focus resources on exposures contributing to risks and/or associated with uncertainties
- Supports options for managing risks and uncertainties (elaborated on in Section 7)



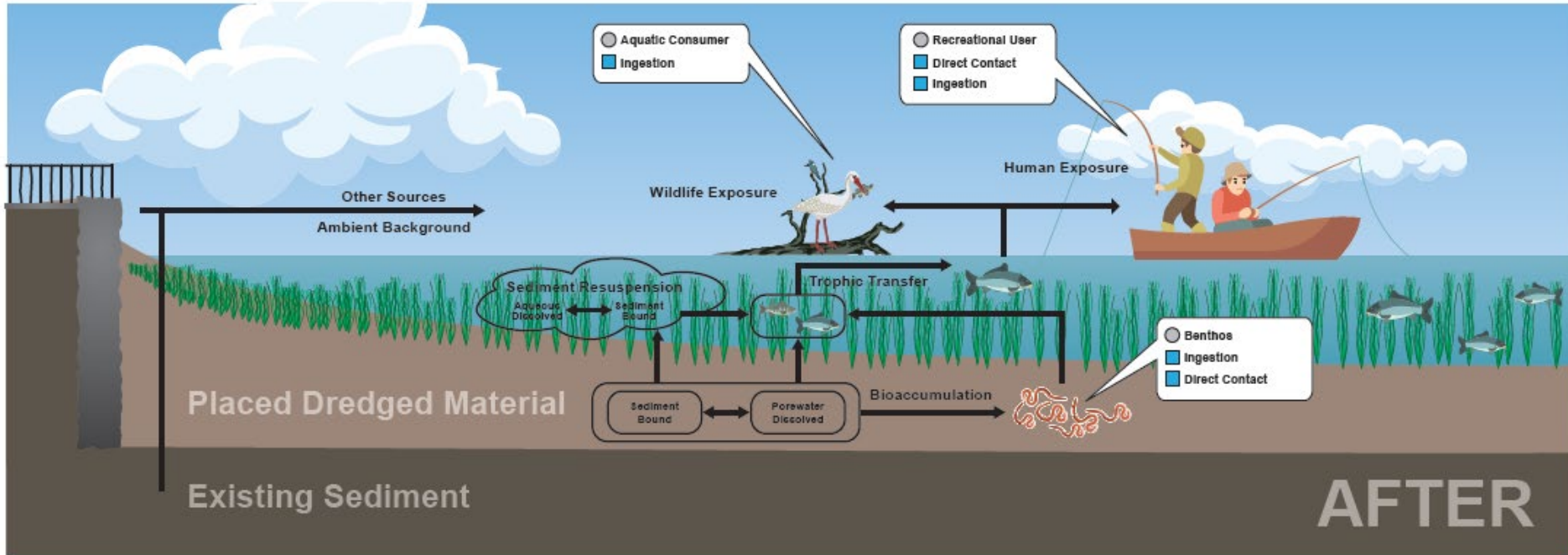
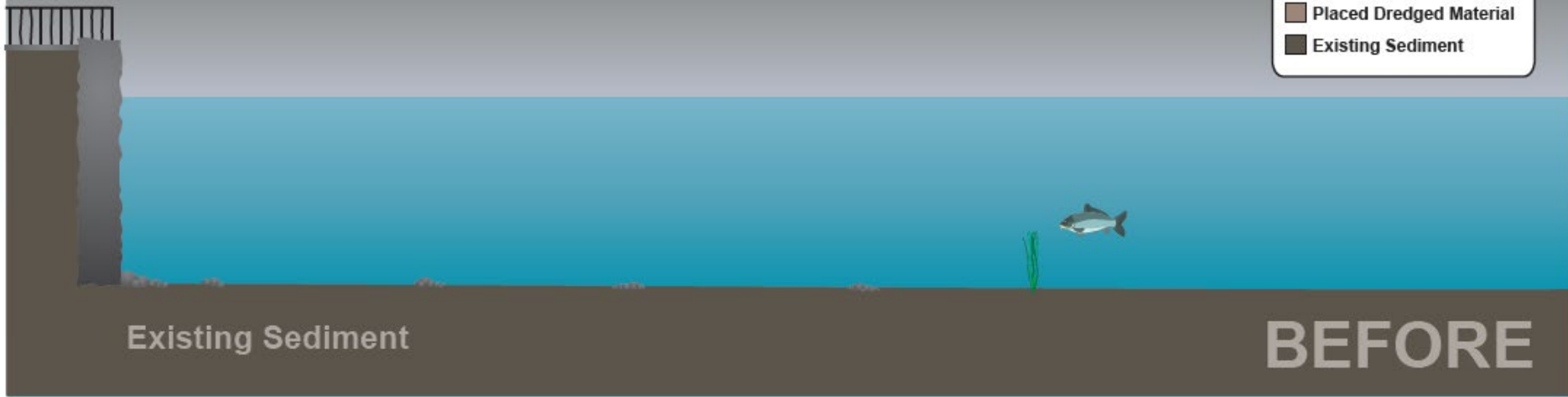
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Aquatic Placement

LEGEND

- Receptors
- Exposure Routes
- Placed Dredged Material
- Existing Sediment



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Figure 4-2. Generalized Conceptual Model for Dredging Operations at Beneficial Use Aquatic Placement Sites.

Upland Nature Preserve

LEGEND

- Receptors
- Exposure Routes

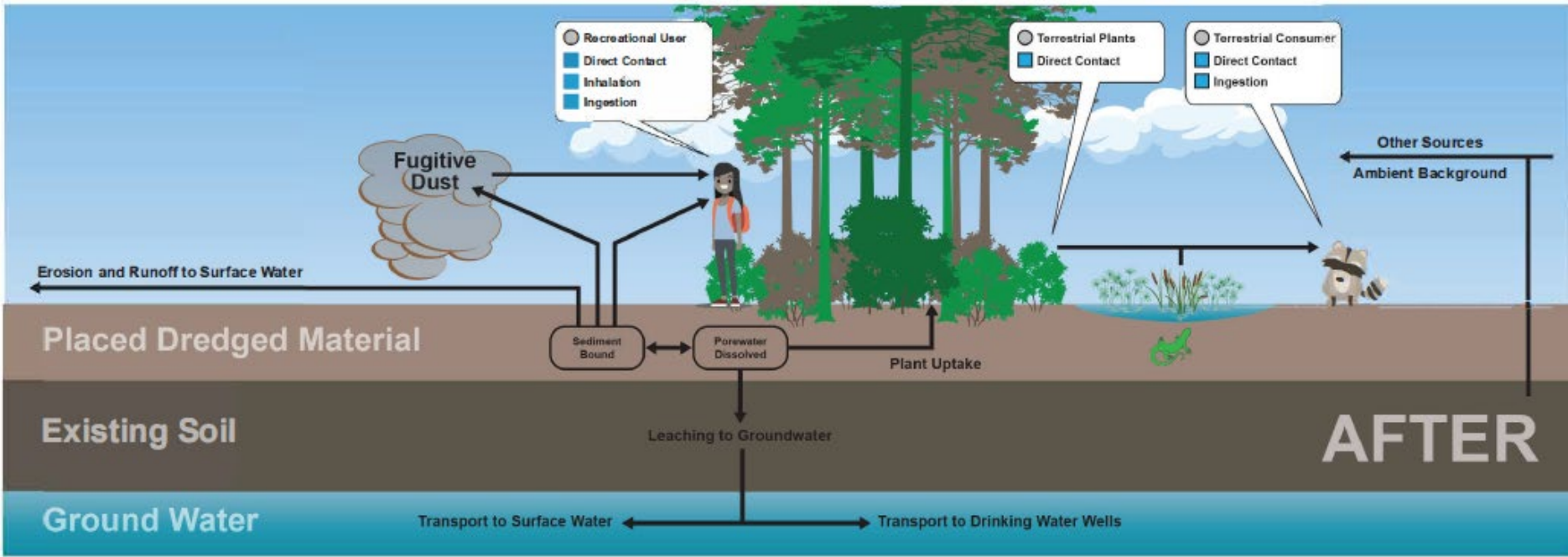


Figure 4-3. Generalized Conceptual Model for Dredging Operations at Beneficial Use Upland Placement Nature Preserve Sites.



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Agricultural Field

LEGEND

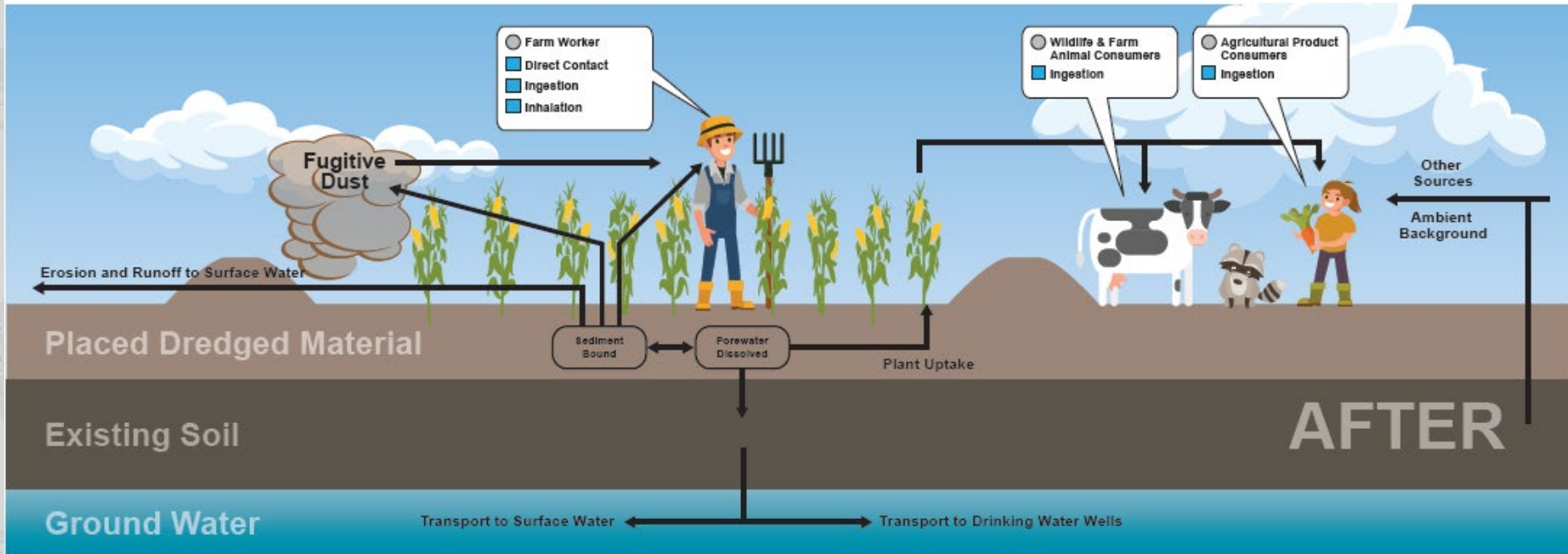
- Receptors
- Exposure Routes
- Placed Dredged Material
- Existing Soil



BEFORE

Existing Soil

Ground Water



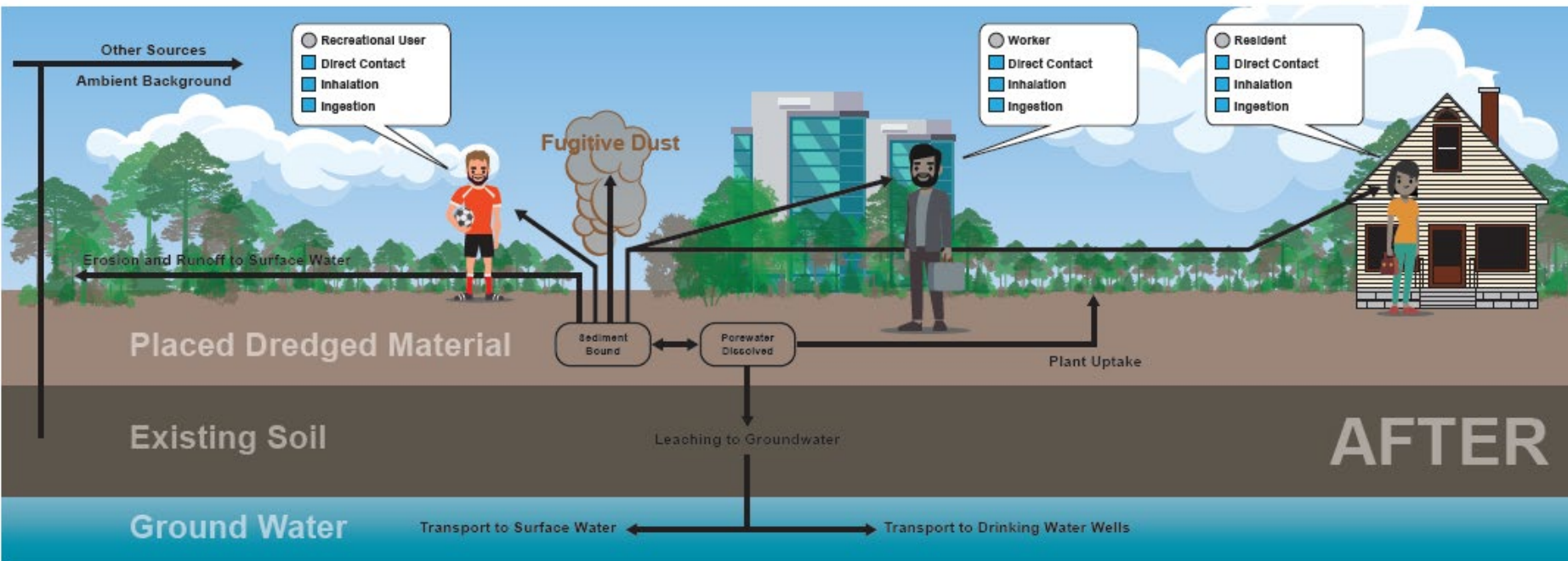
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Figure 4-4. Generalized Conceptual Model for Dredging Operations at Beneficial Use Upland Placement Agricultural Field Sites.

Upland Brownfield Placement



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Figure 4-5. Generalized Conceptual Model for Dredging Operations at Beneficial Use Aquatic Placement Commercial, Residential, or Athletic Field Sites.

Aquatic pathway evaluations (Section 5)

- ❖ Concern regarding presentation of evaluations that had not been included in *Inland* or *Great Lakes Testing Manuals* (1998), especially regarding interpretation of bioaccumulation bioassays
- Sediment evaluation guidance directed at compliance with CWA Section 404(b)(1) Guidelines
 - Follows *Inland* and *Great Lakes Testing Manuals* (1998)
- 2016 draft included some quantitative approaches to inform the interpretation of bioaccumulation bioassays
- 2019 revisions did not include the above approaches



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New agency reviewers:

Minnesota Pollution Control Agency –
human health risk assessor

USGS –
Columbia Environmental Research Center



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