

## **EPA Screening of Public Ideas for Lower Basin Pilot Projects**

### **July 1, 2013**

**Thank you!** We sincerely appreciate the response to EPA's request for input on pilot projects in the Lower Basin. Your suggestions and insights were very helpful and carefully considered, and are helping to shape cleanup work that will protect people's health and the environment. This document gives a summary of the pilot project ideas submitted and those selected for further development.

#### **46 Project Ideas Submitted**

Following two public forums on March 20, 2013, EPA received 46 project ideas from 24 individuals. Ideas covered a wide range of approaches and showed creativity and a shared desire to reduce risks to people and wildlife. The types of proposals submitted are summarized below:

Reducing risks by:

- Treating riverbanks to prevent direct exposure or further releases to the river, and removing or restoring contaminated beaches
- Paving, graveling or elevating roadways to reduce contaminated dust (EPA forwarded these suggestions to its existing cleanup programs such as the Basin Unpaved Roads Remediation Program and the Basin Property Remediation Program to see if they qualify)
- Capping beaches, roads, wetlands and similar exposure points
- Isolating contaminated soil by inverting it in place, bring cleaner soil to the surface
- Using soil treatments (such as wood waste, phosphorus, or fungi) to remove or reduce uptake of heavy metals by wildlife

Controlling sources of contamination by:

- Dredging "hot spots" in the river bed, and thereby evaluating dredging techniques, including options for placement in repositories
- Capping the river bed to isolate contaminated sediment
- Reducing movement of contaminated sediment within the river with sediment traps of various types
- Reducing risks of recontamination by blocking contaminant-laden floodwater from entering wetland areas
- Diverting the river to allow removal of contaminated material

Management practices, such as:

- Discouraging people and waterfowl from using areas where exposure might occur
- Reducing activities (such as boat wakes) that contribute to releases of contaminants
- Education and study of remedial actions

## **The Evaluation Process**

EPA compiled these proposals and sorted them into categories based on objectives, technologies and approaches. Similar proposals were grouped and consolidated into 7 categories for evaluation. The proposals were then compared to EPA's objectives for the pilot projects (as outlined in the public forum invitation in March 2013). From this process, a short-list of 4 conceptual types of projects (some combining several elements from different proposals) was submitted to EPA management for discussion and review.

Several factors from this project review process are worth noting:

- While some priority pilot projects can be conducted with little additional data, others need more information to be done safely and effectively. Therefore, some projects have been flagged for data collection in 2013 to allow reconsideration in 2014 on the basis of new data. Narrowing the list of possible pilot projects helps refine the type and amount of data needed to make these projects successful.
- Many of the ideas for controlling sources of contamination in the river bed are sound concepts. Ongoing data collection and completion of modeling tools will enhance EPA's ability to evaluate these ideas within the next year or so. For example, hot spot removal or isolation by dredging or capping will be more easily tested when we have enough information to target specific locations. EPA will continue to evaluate the feasibility of some of these techniques in the short term and reconsider these projects again in 2014.

Additional pilot projects are being considered, and data needs are being identified to support their consideration and evaluation. Projects under consideration include field tests to evaluate methods for removing contaminated sediments, thin-layer capping, amendments, or changing the vegetation to attract or deter waterfowl. We plan to continue identifying and evaluating promising approaches for remediation in the Lower Basin.

## **Project Selection**

EPA has determined that two types of pilot projects are ready to be carried forward to design. These include (1) a riverbank and beach remediation project, for the purpose of reducing risks to people, and (2) a water level management project to deter waterfowl from feeding in highly contaminated areas while reducing flood-borne contamination in feeding areas. Some details of these project types are provided below:

### Riverbank and Beach Remediation

- Objectives are to reduce potential exposure to people from contaminated material in banks and beaches where recreational use is common. This will be achieved by developing methods of isolating contaminated bank or beach material beneath clean and stable soil. The project will be done in a manner that supports recreational use and ecological habitat, is cost effective and is attractive. We recognize that beach remediation may be challenging because of the potential

for erosion or deposition from flooding, but locations and designs will be sought to test these potential concerns.

- EPA plans to monitor bank and beach stability and metals concentrations to document stability and reduced risk over time.
- Specific locations are being considered and one or more sites may be selected this summer.
- Design and planning will occur over the winter, and construction is planned in 2014.
- The location of riverbank and beach remediation will be selected as a demonstration project so that other landowners could look to this project as a model for property cleanup and stabilization work.

#### Water Level Management Using Hydraulic Controls

- Objectives are to use hydraulic controls to deter waterfowl use of highly contaminated areas during migration seasons, and to reduce the amount of contamination deposited by floods. This will be achieved by temporarily retaining freshwater runoff in a wetland to create deeper water. Higher water levels are intended to both discourage bird use and help prevent flood water from bringing more contamination into habitat areas.
- EPA plans to monitor waterfowl usage and feeding patterns, water levels, sediment deposition rates and related factors.
- Specific locations are being evaluated, and one or more sites are expected to be selected in 2013. We will coordinate the selection of locations and technologies with the Restoration Partnership (<http://restorationpartnership.org/>).
- Design and planning will begin in 2013 with construction planned for 2014.

EPA appreciates your interest in and input to the Lower Basin Pilot Project effort. We will continue to provide you with updates.

Website: <http://yosemite.epa.gov/r10/cleanup.nsf/sites/bh>

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