Lower Basin Waste Consolidation Areas Siting Criteria: EPA Responsiveness Summary

November 2020

The Coeur d'Alene Trust is starting to look for places to site Waste Consolidation Areas, under EPA's direction. WCAs are places where contaminated soil and sediment are stored. The waste material mostly comes from nearby cleanup sites. When WCAs are full, they are capped with clean material. WCAs are engineered and managed to contain the contamination safely over time. This reduces exposure and helps protect people and wildlife.

More cleanup projects are coming to the Lower Basin. The Lower Basin refers to the Lower Coeur d'Alene River Basin. It is the area along the Coeur d'Alene River valley, stretching from Enaville to Harrison. Cleanups will take place in select areas here over the next many years. The cleanup projects will help protect people's health by removing soil and sediment contaminated with heavy metals like lead and arsenic. Several areas are needed to safely consolidate and store that waste.

EPA's goal is to have one or more Lower Basin WCAs ready by 2024. The WCAs will be placed close to cleanup projects, to reduce cost and roadway congestion. Please see the article in our July 2020 Basin Bulletin newsletter for details: https://go.usa.gov/xfWEP.

In late July 2020, we checked in with you about the list of considerations below. We asked what you think of these criteria, if they are still relevant, and if there are other issues to consider. The public input period ran from July 27 through September 30, 2020. We received 31 comments from 8 people, which we carefully reviewed and considered. We received input from local community members, the Sierra Club, the Coeur d'Alene Tribe, and the Kootenai Environmental Alliance. Below, you'll find the public's input and EPA's responses.

In 2009, local communities helped develop the criteria below for selecting waste repository locations. The criteria are like a checklist of important things to consider when choosing locations.

- Impacts to wetlands
- Impacts to surface water, fish, and wildlife
- Impacts on floodplain
- Proximity to faults and landslide areas
- Impacts to people living or working nearby (residences and schools along truck haul routes)
- Impacts to businesses along truck haul routes
- Trucking costs
- Potential for economic redevelopment once repository construction is complete
- Storage capacity

Comments on criteria for siting Waste Consolidation Areas:

Regarding the criteria that are important in siting these Waste Consolidation Areas, the effects on wildlife, wetlands, floodplains, residents, and students are still very important. The potential for redevelopment does not seem to be as big of an issue, as properties are selling in this area at an unprecedented rate.

WCAs should be sited as close to the major contamination areas as possible to avoid spreading contamination in transport, and congestion for local transportation.

The 2009 criteria appear viable and applicable now as then.

The WCA effort is timely.

Can an exclusion area map be prepared that will show PRELIMINARY EXCLUSION AREAS that do NOT meet the 2009 criteria for consideration?

- *areas that are not flat*
- *areas clearly inadequate in size or access*
- *areas with residential or commercial interests*
- *areas with special ecological considerations such as the blue heron rookery by black lake*
- *areas within the 100-year flood plain that would be washed out or inundated by inevitable flooding in excess of the 100-year floods*
- *designated recreational sites such as the CDA Rails to Trails Bicycle Corridor, and dedicated/designated State Waterfowl Management Area Lands.*

Kootenai Environmental Alliance fully supports the criteria developed for selecting waste repository locations which include; Impacts to wetlands, Impacts to surface water, fish, and wildlife, Impacts on floodplain, Proximity to faults and landslide areas, Impacts to people living or working nearby (residences and schools along truck haul routes), Impacts to businesses along truck haul routes, Trucking costs, and Potential for economic redevelopment once repository construction is complete.

KEA would like to further add to the criteria 'Potential for economic redevelopment once repository construction is complete' that types of allowed development and land use restrictions be considered. In addition, please allow for considerations for site(s) accessibility and total waste stream capacity.

All of the criteria that was compiled in 2009 still is relevant with possibly the exception of impact to businesses (along Highway 3 anyway).

Response:

Thank you for your input. We will give full consideration to meeting the community criteria when siting Waste Consolidation Areas in the Lower Coeur d'Alene River Basin. It's important to note that, in addition to weighing what is important to the community, there are also many technical considerations. It may not be possible to meet all of the community criteria, due to property availability, property access, technical criteria, and other limitations.

When finding a location for a WCA, EPA will rule out certain areas. Even so, EPA is opting not to create an exclusion map. Rather, we will be clear that WCAs will not be placed in locations with special ecological considerations, that are designated recreational sites, or that are inadequate in size or access. Delineating distinct exclusion areas may be confusing especially when we may not meet all the criteria established as mentioned above.

The development opportunities of each WCA will be unique and will be evaluated on a site by site basis. The factors that could influence a site's redevelopment potential include ownership, access restraints, material properties, and capping design elements. While the development opportunities and future use of WCAs will be considered during design, this will not be a factor

used in siting WCAs. Some of the elements that support future use will depend on the remedial action designs that deliver waste to the WCA, and may not be known during site selection.

Comment on size and number of Waste Consolidation Areas:

Locate one or two larger WCAs in the Lower Basin, rather than several smaller ones. This would follow the model of the repositories in the Upper Basin, and be more efficient, save engineering costs, and have less environmental impact.

Response:

EPA will take this suggestion under consideration. We have not yet made a decision on the size and number of WCAs. Being able to minimize transport distances will save cost and reduce the impact to the environment. Keeping the WCAs smaller will reduce the visual impact. We're still evaluating the projects that may generate waste and the volumes of waste that will come from cleanup activities in the Lower Basin, which will drive the size and number of WCAs needed to take in and safely contain the contaminants. Cleanup projects have not yet started in the Lower Basin. The WCAs will be designed and sited to serve specific geographic areas. It's feasible that one WCA may take in waste materials from more than one cleanup project.

Comments on where to locate WCAs:

Given the extreme flooding that routinely occurs in the Lower Basin, EPA should be looking at alternatives that do not simply dig up the pollution to consolidate it in WCAs within such a vast floodplain. Any siting of a WCA should be in the uplands far from any flooding events. The WCA's also needs to be sighted away from any groundwater/surface water sources.

As EPA and the Restoration Partnership Trustees are aware, agricultural fields that have been enrolled in conservation easements for future remediation and restoration efforts should not be considered locations for WCAs unless there is a landowner agreement in place.

Has EPA reached out to landowners outside of the 100-year floodplain (in the high and dry) as potential locations for WCAs? If so, would the CDA Work Trust be able to purchase land for a WCA much like they did in EFK Nine-mile Creek? If so, who would be responsible for the O&M on these WCAs? For example, if there are Wildlife Management Areas (Public Land managed by Idaho Fish and Game (IDFG)), that would be suitable for placement of WCAs, would IDFG be amenable for placement of WCAs, would IDFG take on and conduct O&M into perpetuity?

I have a good answer for a spot to locate this site, but since the whole South Fork of the Coeur d'Alene River Basin is a drainage, I can't think where it would make any sense for a consolidation area anywhere along the area mentioned.

Response:

EPA is committed to placing WCAs in locations that minimize impacts to local communities and wildlife. We are aware of the potential for flooding in the Lower Basin. The WCAs will be carefully engineered and managed so they can safely contain contaminants during flood events. WCAs will be designed to minimize the potential for metals leaching to groundwater and surface water. WCAs will only be sited within the 100-year floodplain if they can be secured and maintained to prevent contaminated solids from migrating off site, during operations and after closure. We are committed to regularly monitoring the WCAs. Monitoring of the WCAs will be performed on a regular basis to evaluate the effectiveness of the design and construction.

In EPA's 2002 cleanup decision for the Coeur d'Alene Basin (Bunker Hill Superfund Site Operable Unit 3) we evaluated a range of cleanup options and technologies. We decided that consolidating and capping historical mining wastes in secure repositories and waste consolidation areas was the best option in most cases. As we begin the Lower Basin pilot projects, we will evaluate other cleanup options and technologies.

As projects are developed, the Coeur d'Alene Trust will evaluate properties in the floodplain and uplands that will meet the needs of a project and meet as many siting criteria factors as possible. Depending on the location of a project, the opportunities for WCA locations will vary. Ideally the Coeur d'Alene Trust would purchase land to operate and maintain WCAs. For transportation purposes, WCAs should be accessible from existing roads or the river. EPA will not rule out siting WCAs in upland areas if a suitable site is identified and available.

We will not consider agricultural fields that have been enrolled in conservation easements as locations for WCAs. At these sites, the work may include regrading, consolidation and capping, but the design will be site-specific with the goal of remediating and restoring these properties to protect wildlife, improve water quality, and create functioning wetland feeding habitat. The Trust will consider properties outside the 100-year floodplain when siting WCAs.

Comments on WCA design and security:

Will design of the WCAs take into account information that will be in EPA's 5th Five Year Review?

WCA's have been a "hot button" for those people living near such areas. At least one WCAs (Woodland Park) was incorrectly sighted and designed, and has been a source of zinc contamination for years. Another, the WCA on the Cataldo flats has been a point of contention with some of the locals because of its location. The Tribe believes EPA will be met with strong opposition locating a WCA anywhere within the floodplain of the Lower Basin.

This seems to be a daunting task. It makes sense to want to remove the contaminated material, but moving it from one spot to another, only to have it run into the river eventually doesn't make any sense. I suspect the whole river bottom is still contaminated already from the past.

Response:

The Bunker Hill Superfund Site Five-Year Review is a regular check-up that looks at cleanup remedies in place to ensure they continue to protect people's health and the environment. The Five-Year Review final report will make recommendations for any remedy improvements that are necessary. The Five-Year Review may include lessons learned from other constructed and monitored WCAs across the site. Recommendations identified in the Five-Year Review will be taken into consideration when designing new WCAs.

EPA monitors the Coeur d'Alene Trust-operated repositories on a regular basis and evaluates the functionality of the repositories annually. We use performance monitoring results to guide operations and management of the repositories.

Before it was acquired by EPA, the Silver Valley Natural Resource Trustees (SVNRT) Repository was constructed in the 1990s, without EPA involvement in the response action selection. Based on monitoring and analysis since its construction, the EPA recognized the ineffectiveness of the SVNRT repository. We are in the process of relocating its contents to the newly engineered Canyon Complex Repository.

Please note that there is a difference between repositories and WCAs. A repository is a large regional site where waste materials from a variety of different sources and programs (e.g., Institutional Cleanup Program, remedial actions, Basin Property Remediation Program) are consolidated into an engineered facility designed to minimize release of contaminants and reduce the impact to human health and the environment. A repository typically remains open for a long period of time before being capped. A repository is not necessarily located close to the waste sources.

Waste consolidation areas are sites where waste materials from specific remedial actions are consolidated. WCAs are engineered and designed to minimize release of contaminants and reduce the impact to people's health and the environment. A WCA may vary in size based on the project it is supporting. A WCA is open for a shorter time frame and is capped earlier than repositories. A WCA is sited as close to the anticipated waste source(s) as possible.

EPA understands that people have concerns about repositories and WCAs. Construction of these facilities can impact local communities in many ways, potentially raising concerns about traffic, noise, view scape changes, waste materials, and so on. EPA believes local people should have a say in how these decisions are made. This is why we are taking steps to inform people of our activities, get public input, and ensure community values are factored into our decision making.

These cleanup actions are not simply moving contamination from one place to another. The cleanup is removing contamination from areas where it presents a risk to people's health and the environment. Then, that waste is consolidated into an area with a smaller footprint, where it is secured and isolated to protect people and wildlife from exposure.

Comment on protections and monitoring to ensure stability:

Will protections for the new WCAs be similar to those used at other actual repositories in the Coeur d'Alene Basin?

- *There should be at least one-foot-thick clean caps at repositories as is done in the Upper Basin.*
- *There should be regular monitoring of water quality and weekly inspections of the repositories.*
- *Surface water samples should be collected in the vicinity of any new repository, upgradient and cross-gradient of the repository, even if it is not near a creek or river.*
- *Testing should include the usual surface water analytes: As, Cd, Cu, Hg, Mn , Pb, Sb, and Zn as well as physical parameters (e.g. temperature, pH) and hardness/alkalinity constituents to support calculation of site-specific AWQC.*

This information should be made easily available to the public.

Response:

EPA is committed to a robust monitoring program to ensure WCAs protect people's health and the environment into the future. Protections for the new WCAs will be similar to those at other CDA Basin waste repositories and WCAs. We will determine each WCA's contaminants of concern based on the profile of the consolidated site waste. Monitoring parameters will depend on baseline water monitoring results.

Comments on cleanup alternatives and technologies:

When you start to design the Lower Basin cleanups, do not dredge the river or dig up the embankments. The river has healed itself over the past few decades, and dredging would release debris and sediment that can't be filtered out. This would harm fish and have negative effects on the fishing/tourism-based economy in our small communities, which live season to season.

EPA must provide the most robust investigation of cleanup alternatives that will protect to the highest degree possible Silver Valley residents, wildlife, waters, and lands.

EPA, as a matter of priority, should be involved in the development of innovative technologies that could neutralize the toxins in the environment or extract them from the metals "in situ." It is incumbent on government not simply to move the toxins around and cap them. There must be a permanent solution.

Over time, deposits of contaminated materials are left in the bends in the Coeur d'Alene River. We trust that these areas will be dredged on a regular basis, at least every eight to ten years. The toxic soil from dredging must be deposited in as secure a repository as possible.

EPA needs to make containing the spread of toxins in the Lower Basin a priority. There is relatively little flow in the Lower Basin, resulting in significant and large wetland areas, so the problem is particularly troublesome in this area.

Given the extreme flooding that routinely occurs in the Lower Basin, EPA should be looking at alternatives that do not simply dig up the pollution to consolidate it in WCAs within such a vast floodplain. Any siting of a WCA should be in the uplands far from any flooding events. The WCA's also needs to be sighted away from any groundwater/ surface water sources.

EPA should consider sub-aqueous disposal of contamination. So rather than expose such contaminants to oxidation and reduction, the sediments are conveyed via the pipeline to previously contaminated lateral lakes. Once the upper portion of the river is cleaned up, the lateral lake that was used as a subaqueous WCA would need to be capped. This approach could be used year after year in an upstream to downstream approach and therefore, would eliminate the need for several massive WCAs that would otherwise be needed for riverbed contamination.

Response:

Thank you for your input on cleanup alternatives and technologies. In EPA's 2002 cleanup decision for the Coeur d'Alene Basin Cleanup Project (Bunker Hill Superfund Site Operable Unit 3) we evaluated and compared a range of cleanup options and technologies. EPA will also continue to evaluate technologies through pilot projects in the Lower Basin. We determined, through careful analysis and weighing a number of criteria, that consolidating and capping historical mining wastes into secure on-site repositories and waste consolidation areas was the best option for some sites. Moving metals-contaminated materials from many locations throughout the Lower Basin to consolidate and cap them in securely engineered repositories and WCAs strategically isolates and consolidates highly contaminated riverbed sediments that are likely to be eroded. This action will minimize potential exposures for people and wildlife and reduce impacts on the environment.

As cleanup projects are developed, properties in the floodplain and uplands will be evaluated. These properties may meet the needs of the cleanup project(s) and many siting factors.

WCAs will be designed to minimize impacts to the environment, including groundwater and surface water.

The concept of sub-aqueous disposal warrants further consideration as cleanup actions in the Lower Basin are selected and the waste characteristics better defined.

Comments on public outreach:

EPA should do much more to inform all citizens in the Basin, some who may have only recently moved here, about the health impacts of living in lead-contaminated communities. The area has been contaminated for years and people need to be reminded that it is important to their health to pay more attention to what EPA proposes to do.

WCA's have been a "hot button" for those people living near such areas. At least one WCAs (Woodland Park) was incorrectly sighted and designed, and has been a source of zinc contamination for years. Another, the WCA on the Cataldo flats has been a point of contention with some of the locals because of its location. The Tribe believes EPA will be met with strong opposition locating a WCA anywhere within the floodplain of the Lower Basin.

Response:

Thank you for your comment on EPA's community engagement, or public outreach, program. We welcome comments at any time on ways to improve our program. Please contact Debra Sherbina, Community Involvement Coordinator at sherbina.debra@epa.gov or 800-424-4372, extension 0247 with your comments, ideas, and concerns. We consider it our responsibility to give communities and partners timely, factual information about project activities, and early, meaningful opportunities to have input into EPA's decision-making process.

We work closely with our partners – Idaho Department of Environmental Quality, the Panhandle Health District, the Coeur d'Alene Tribe, the Basin Environmental Improvement Project Commission, and others – to ensure our community engagement program is robust and meets the local communities' needs. We issue a triannual newsletter, the *Basin Bulletin*, which gives up-to-date information on project activities and opportunities to get involved. We get information out about the cleanup project through local newspaper public notices, direct mailings and emails, social media, and project webpage updates. Recently, we worked with our partners to distribute a packet that included information about how to reduce contaminant exposure. The packet was distributed to over 200 property owners and multiple realtors. Also, EPA recently issued an updated public health document titled *Healthy Living in the Silver Valley and Coeur d'Alene Basin*, which overviews the contamination issue, ways to reduce exposure, cleanup information, and other resources. We expect this brochure to reach thousands of local people, including many who have recently moved to the Basin. In collaboration with our partners, we are also updating and increasing public health signage throughout the area.

Thank you for your comment about potentially receiving opposition from community members when siting these Lower Basin WCAs. We continue to be committed to disseminating early and accurate information to the community, which we hope will alleviate some concerns. We remain committed to maintaining open lines of communication with local communities. Reach out to us at any time with questions or concerns.

Comment on trust responsibility to Coeur d'Alene Tribe:

Based on EPA's planning concepts for the Lower Basin, the Tribe does not support a "patchwork approach" to addressing the pollution in this area. Especially since, in 2002, our Tribal Council

issued a moratorium on gathering in the Lower Basin due to the high levels of contamination. EPA has a trust responsibility to make sure that its actions will lead to clean up that allows the Tribe and its members to return to these areas to once again exercise their cultural, spiritual and subsistence practices.

Response:

EPA is committed to honoring its trust responsibility to the Coeur d'Alene Tribe. Metals contamination from historical mining and milling practices is widespread in the Lower Basin. Cleanup will take many years. We are dedicated to a protective cleanup that will allow the Tribe and its members to return to Lower Basin areas to once again exercise their cultural, spiritual, and subsistence practices.

EPA agrees that a "patchwork approach" is undesirable. EPA implements adaptive management principles and evaluates the sequencing of projects each year with the goal of providing as much benefit to the community and the environment as possible, while being effective and efficient. It will take time to arrive at remedial technologies and designs for cleanup work in the Lower Basin. EPA will continue to use the adaptive management strategy to focus on key locations and may, as such, appear to be patchwork in nature. Work is continuing in the Upper Basin, but large source areas have been remediated or are in the construction stages.

Comment on protecting historic and culturally significant resources:

Tribal staff has worked with EPA and their consultant, Historical Research Analyst (HRA) in the drafting of the Lower Basin Historic Properties Management Plan of which will be very useful moving forward to assist in the protection of historic and culturally significant resources during remedy and restoration in the Lower Basin. Therefore, Consultation with EPA and the Tribal Historic Preservation Officer will need to continue in the future therefore this letter providing input on WCA's does not waive the need for early and ongoing Consultation into the future for Lower Basin remedial activities.

Response:

EPA is committed to protecting historic and culturally significant resources as we move forward with cleanup projects in the Lower Basin. We will be adhering to the Historic Properties Management Plan (HPMP) as we implement projects in the Lower Basin.

Comments on EPA's cleanup:

EPA should continue to conduct remedial actions in an upstream to downstream manner, to reduce the threat of recontamination.

As noted on pg. 3 of 11 of the 'Framework for a Strategic Plan for the Lower Basin' (see attached), EPA states that they will not select new remedies for the Lower Basin through the strategic planning process which concerns the Tribe as we have been participating in the process and new remedies might be warranted outside of the 2002 ROD. Once again, the Tribe believes sub-aqueous capping of contaminated sediments in lateral lakes should be considered where appropriate.

Identification of WCA's are not listed in the OU3 2002 ROD. Does this warrant EPA to conduct and Explanation of Significant Differences (ESD) or ROD amendment?

If EPA considers the reference to Repositories in the OU3 ROD as being synonymous with WCA's then that should be better fleshed out and explained to the public as they are similar but different in how they accept waste and future O&M responsibilities.

Response:

EPA will continue to evaluate the prioritization of remedial actions in the Lower Basin as the enhanced conceptual site model is updated. The goal of sequencing work is to provide as much benefit to the community and the environment as possible, while being effective and efficient. Prioritizing work upstream to downstream is a factor considered in evaluation of work sequencing; however, it will not be the only factor. For example, the agricultural to wetland conversion at Gray's Meadow, which is near the downstream end of the Lower Basin, has been prioritized to provide clean feeding habitat as it has a low recontamination potential. The Gray's Meadow project scored highly when EPA, the CDA Tribe, the State, and other stakeholders evaluated it, considering a number of criteria.

As noted, the "Framework for a Strategic Plan for the Lower Basin" states that new remedies will not be selected for the Lower Basin through the strategic planning process. However, this document also states that "as understanding of Lower Basin systems and effectiveness of remedial actions evolves, EPA may identify additional actions not explicitly called out in the Record of Decision". EPA will use the Adaptive Management Project Management Plan (PMP) process to continually evaluate the prioritization and approach to cleanup in the Lower Basin. If EPA determines that additional actions are selected, the appropriate ESD or RODA process will be evaluated and conducted in accordance with CERCLA.

WCAs are constructed similarly to repositories, with the same intention of securely encapsulating mining related waste and protecting people's health and the environment. The main difference is that repositories accept waste materials from a variety of different sources and programs, whereas WCAs accept waste materials from specific remedial actions.

Comment on WCA operations and maintenance:

Has EPA reached out to landowners outside of the 100-year floodplain (in the high and dry) as potential locations for WCAs? If so, would the CDA Work Trust be able to purchase land for a WCA much like they did in EFK Nine-mile Creek? If so, who would be responsible for the O&M on these WCAs? For example, if there are Wildlife Management Areas (Public Land managed by Idaho Fish and Game (IDFG)), that would be suitable for placement of WCAs, would IDFG be amenable for placement of WCAs, would IDFG take on and conduct O&M into perpetuity?

Response:

As cleanup projects are developed, properties within and outside the 100-year floodplain will be evaluated that may meet the needs of the cleanup project(s) and meet as many WCA siting factors as possible. The Coeur d'Alene Trust may purchase land to accommodate WCAs and would be responsible for operations and maintenance. EPA has not yet considered using public land for WCAs, and O&M responsibilities would be considered at that time.

Comment on adaptive management:

KEA fully supports thoughtful planning driven by current science, data analysis and community input which incorporates adaptive management techniques based on the best available science.

Response:

In planning our cleanup activities, EPA is committed to using current science and continually acquiring new data for analysis to guide project planning and feedback on implemented projects. EPA will also incorporate meaningful community input. These are substantial parts of the Adaptive Management Process adopted by EPA on the CDA Basin site and nationally. EPA will use our *Adaptive Management PMP* to guide projects in the Lower Basin. The plan aids in many aspects of project management and builds off many years of experience at the Bunker Hill Superfund Site. It directs our use of new information we've learned about the site to help guide our cleanup projects. EPA will use adaptive management principles to lead decisions on starting and carrying out projects.

Comment on Kootenai Environmental Alliance's land use goals for Kootenai County:

Inherent within KEA's mission to conserve, protect and restore the environment are the following general land use goals for Kootenai County which we encourage the Hearing Examiner, Planning Commission and Planning Department to contemplate as you decide on this proposal:

- *The promotion of the health, safety and general welfare of the people of CdA Basin.*
- *Balancing development and growth with natural resource protection and preservation.*
- *The conservation and restoration of lakes, forestland, streams, wetlands and riparian areas within the CdA Basin.*
- *The conservation and protection of native flora, and fauna of the Pacific Northwest.*

Response:

Thank you for your input. EPA's siting of WCAs in the Lower Coeur d'Alene River Basin is aligned with the land use goals for Kootenai County.