WHAT THIS FIGURE SHOWS

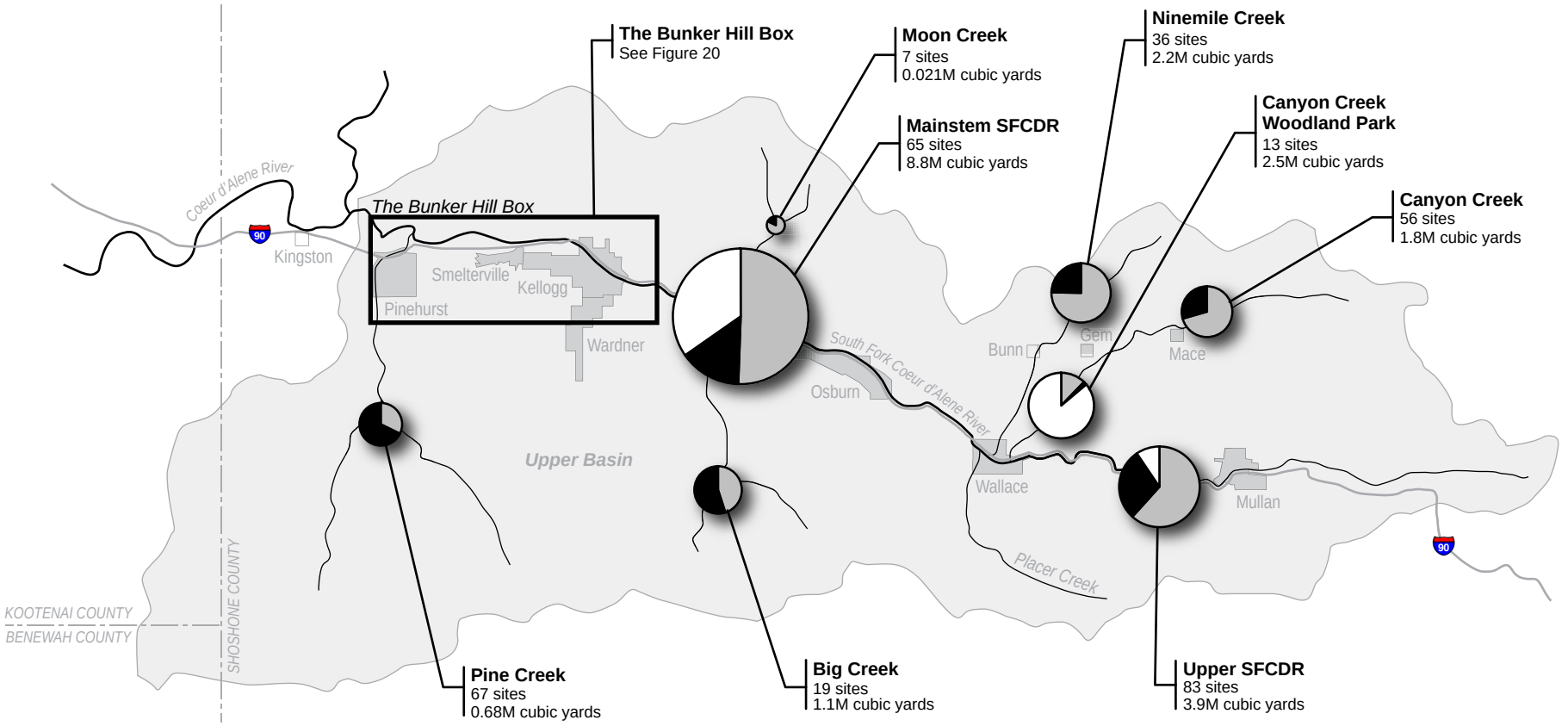
For the main and upper parts of the South Fork Coeur d'Alene River and major creeks, this figure shows the number of individual locations where remedial actions have been planned and the amount of material, such as contaminated tailings, waste rock, and floodplain sediments, that would be cleaned up. The "pie charts" for each portion of the river and creeks show the general breakdown of the proposed actions. The volume (cubic yards) listed for each watershed includes all material addressed by the Preferred Alternative.

The bigger the pie chart, the more contaminated materials are planned to be addressed.

Cap – Includes engineered or soil covers, or regrading and planting.

Excavation – Includes removing materials and either consolidating locally or transporting to a separate repository.

Hydraulic Isolation – Includes preventing contaminated water (seeps, adit drainage, or groundwater) from entering the river and creeks.



Key to Pie Charts

- Cap
- Excavation
- Hydraulic Isolation

Note:

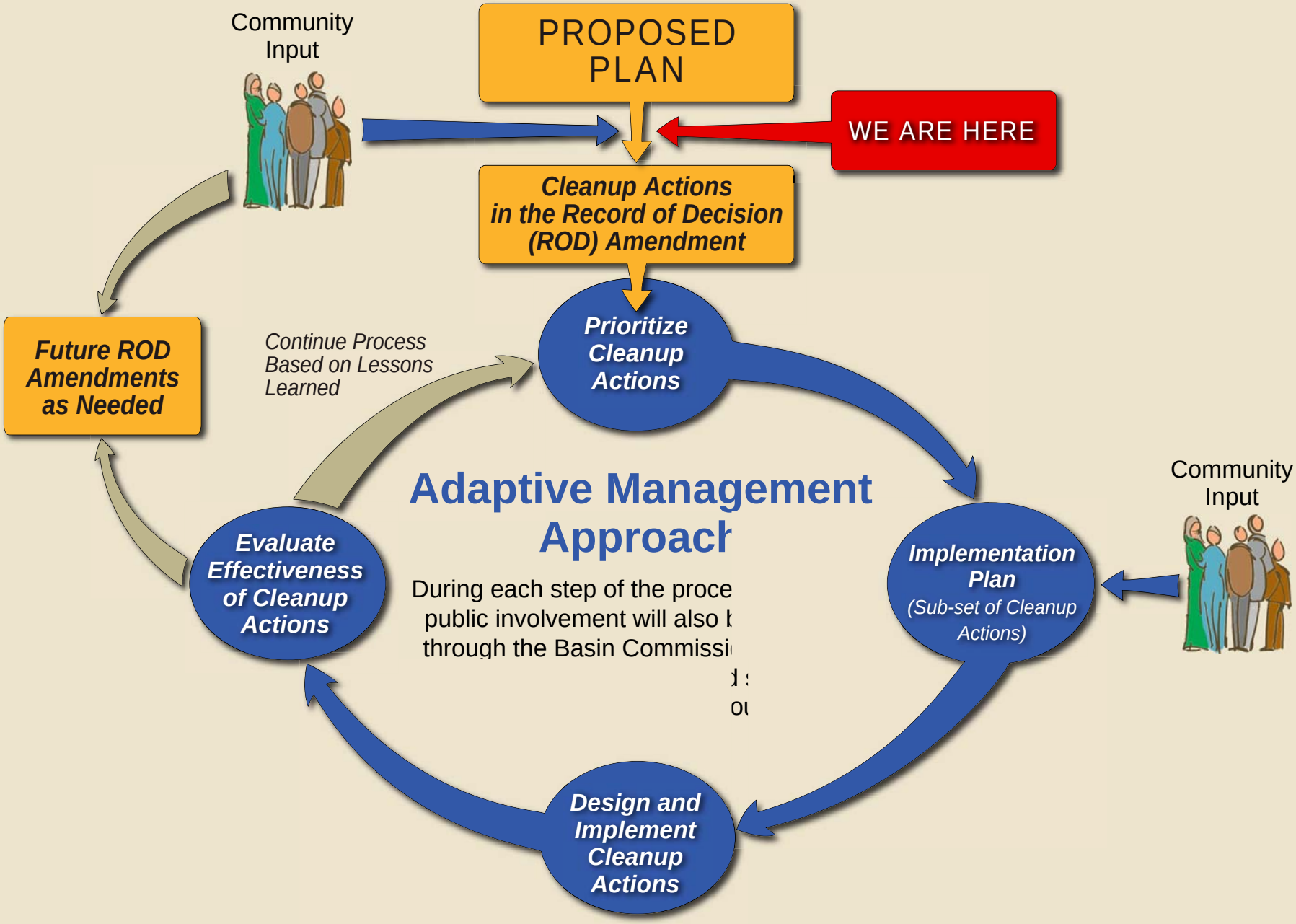
SFCDR = South Fork Coeur d'Alene River

N

0 1 2 4 Miles

Figure 18
Preferred Remedial Alternative: Source Control Actions by Watershed in the Upper Basin
Upper Basin Proposed Plan

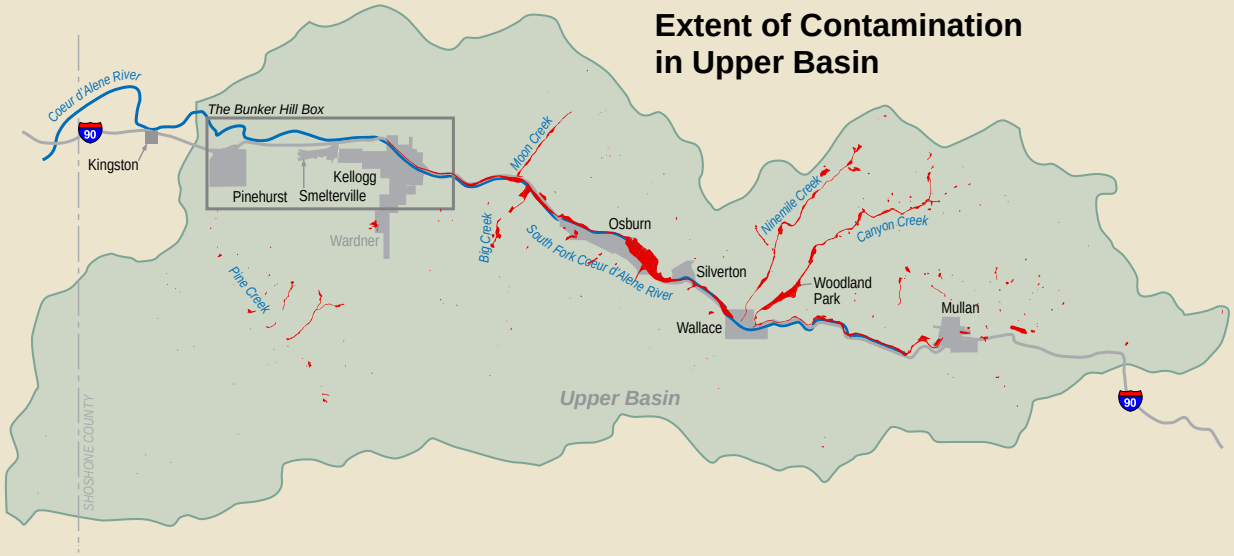
Adaptive Management Approach in the Upper Basin

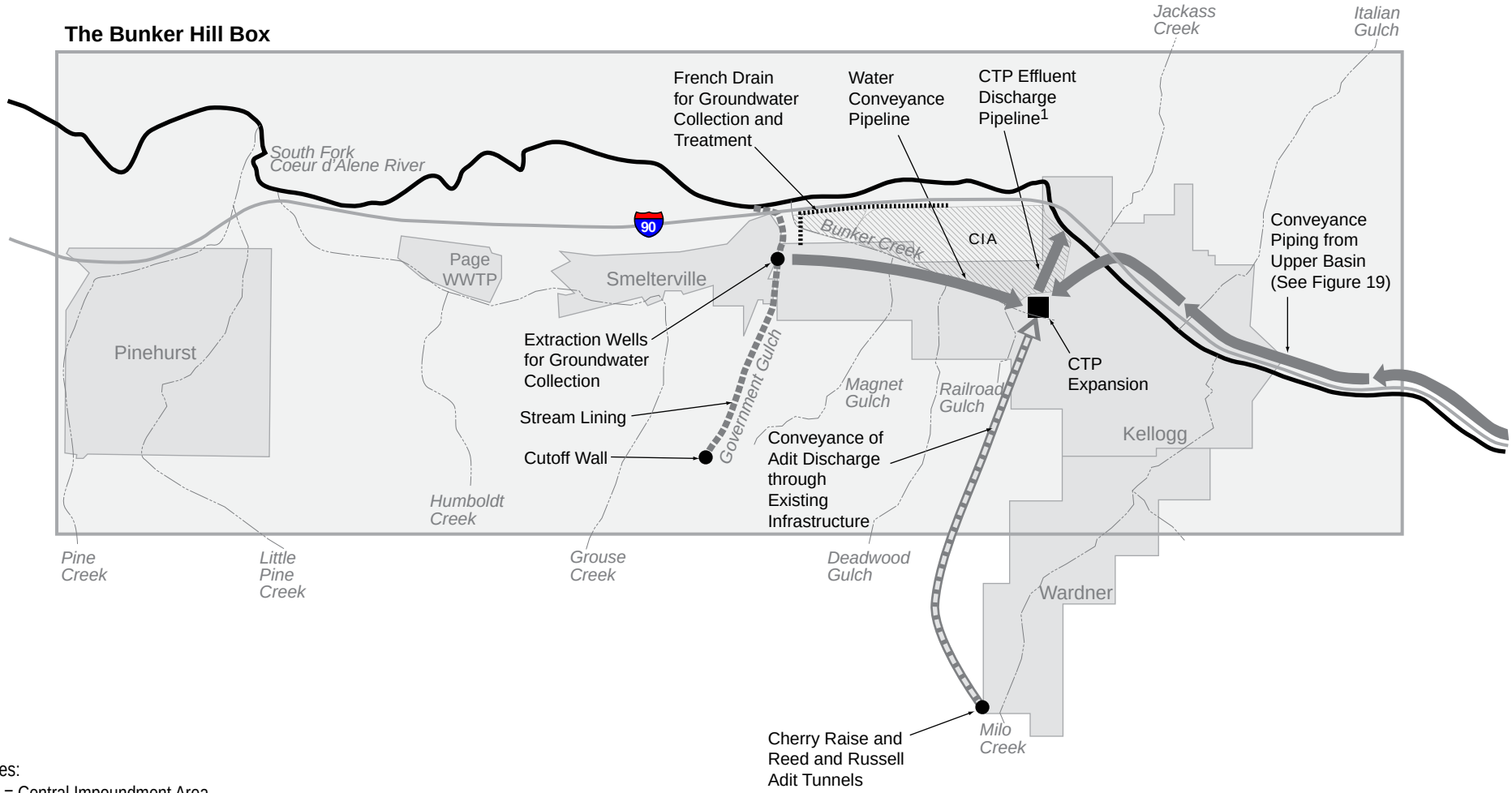


Big Challenges Require Big Solutions

A comprehensive, carefully sequenced, and flexible cleanup plan offers critical health and environmental benefits in comparison to a piece-meal approach of many separate plans.

- MORE EFFICIENCY – Having a complete menu of cleanup actions means that we can group and prioritize cleanup actions to get more human health and environmental improvements in less time and for less cost.
- BETTER USE OF FUNDS – A more efficient approach to the work means better use of Trust dollars: less money spent studying and more money spent on actual cleanup.
- MORE FLEXIBILITY – As we go forward, we will learn ways to do actions better, faster, and cheaper. We also may find that some actions are not needed or that other actions would be more appropriate. The comprehensive cleanup plan is coupled with a management approach that allows flexibility, considers new information and technologies, and embraces public input.
- CONTINUED AND FREQUENT PUBLIC INVOLVEMENT – Each set of cleanup actions will be laid out in an implementation plan that covers several years of work. Citizens and other stakeholders will have input on each implementation plan. EPA will provide well-published opportunities for public input because local participation and feedback are important to make sure we meet our goals. Public involvement opportunities also will be available through the Basin Commission, Citizens Coordinating Council, and smaller technically-focused groups.



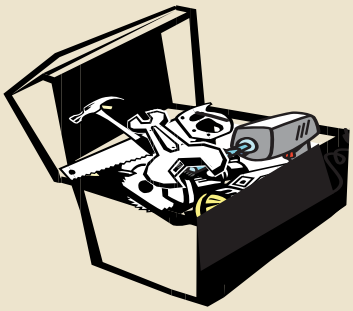


Notes:
CIA = Central Impoundment Area
CTP = Central Treatment Plant

[1]CTP effluent discharge pipeline my be conveyed to the SFCDR on the east side of the CIA (as pictured above) or along Bunker Creek.

N
0 2,000 4,000 Feet

Figure 20
Preferred Remedial Alternative: The Bunker Hill Box
Upper Basin Proposed Plan



Community Involvement Tool Box

Have a say in the Cleanup Plan for the Upper Basin

Here are some ways to get information about the Proposed Cleanup Plan:

Review the Proposed Plan and Related Documents:
Visit local libraries noted below or view the webpage at **http://go.usa.gov/igD** or **http://yosemite.epa.gov/r10/cleanup.nsf/sites/bh+rod+amendment**

Attend the August 4, 2010, Open House and Public Meeting:
Shoshone Medical Center, Health & Education Center, 858 Commerce Drive, Smelterville, ID 83868. Open House runs 5 - 6:30 pm – see displays, submit written comments, ask questions. Public Meeting runs 7 - 8:30 pm – hear a presentation, give oral comments for the record, submit written comments.

Comment on the Proposed Plan:
The public comment period runs July 12 to August 25, 2010. Send comments to: **cdabasin@epa.gov** or Coeur d'Alene Basin Team, EPA, 1200 6th Avenue, Suite 900, MS ECL-113, Seattle, WA 98101.

Read the Basin Bulletin:
EPA publishes the ***Basin Bulletin*** three times per year. The Bulletin gives updates about cleanup activities and involvement opportunities, and offers contact information. To be added to the mailing list, contact Andrea Lindsay at 206-553-1896, 1-800-424-4372, or **lindsay.andrea@epa.gov** To see back issues, visit the website at **http://yosemite.epa.gov/r10/cleanup.nsf/sites/cda**

Bookmark the Coeur d'Alene Basin Website:
The website has general information about the cleanup, fact sheets, data, technical documents, news, and contacts for more information.
http://yosemite.epa.gov/r10/cleanup.nsf/sites/cda

Attend Meetings of the Citizens Coordinating Council (CCC):
This group meets quarterly to explore local issues related to the cleanup. The CCC is part of the Basin Environmental Improvement Project Commission. All members of the public are welcome. Jerry Boyd, Chair, 509-455-6000.
www.basincommission.com/ccc.asp

Visit Local Libraries:
These locations keep material about the cleanup for you to view:
North Idaho College, Molstead Library, 1000 Garden Avenue, Coeur d'Alene
Wallace Public Library, 415 River Street, Wallace
Spokane Public Library, 906 West Main Avenue, Spokane
St. Maries Library, 822 W. College Avenue, St. Maries
Also: EPA Field Office, 1910 NW Blvd, Suite 208, Coeur d'Alene

EPA

Over 600 Jobs Per Year Created by EPA Cleanup

EPA will work with the community and local companies on a plan that will meet the environmental protection goals and enable wise use of Trust dollars

Upper Basin cleanup actions expect to employ over 600 workers, about 10% of the civilian work force.[1]

200 Number of estimated jobs from ongoing Residential Yards Cleanup

340 Number of estimated jobs from the Record of Decision (ROD) Amendment cleanup actions

85 Number of estimated additional jobs to support cleanup

Creating Jobs, Getting the Work Done

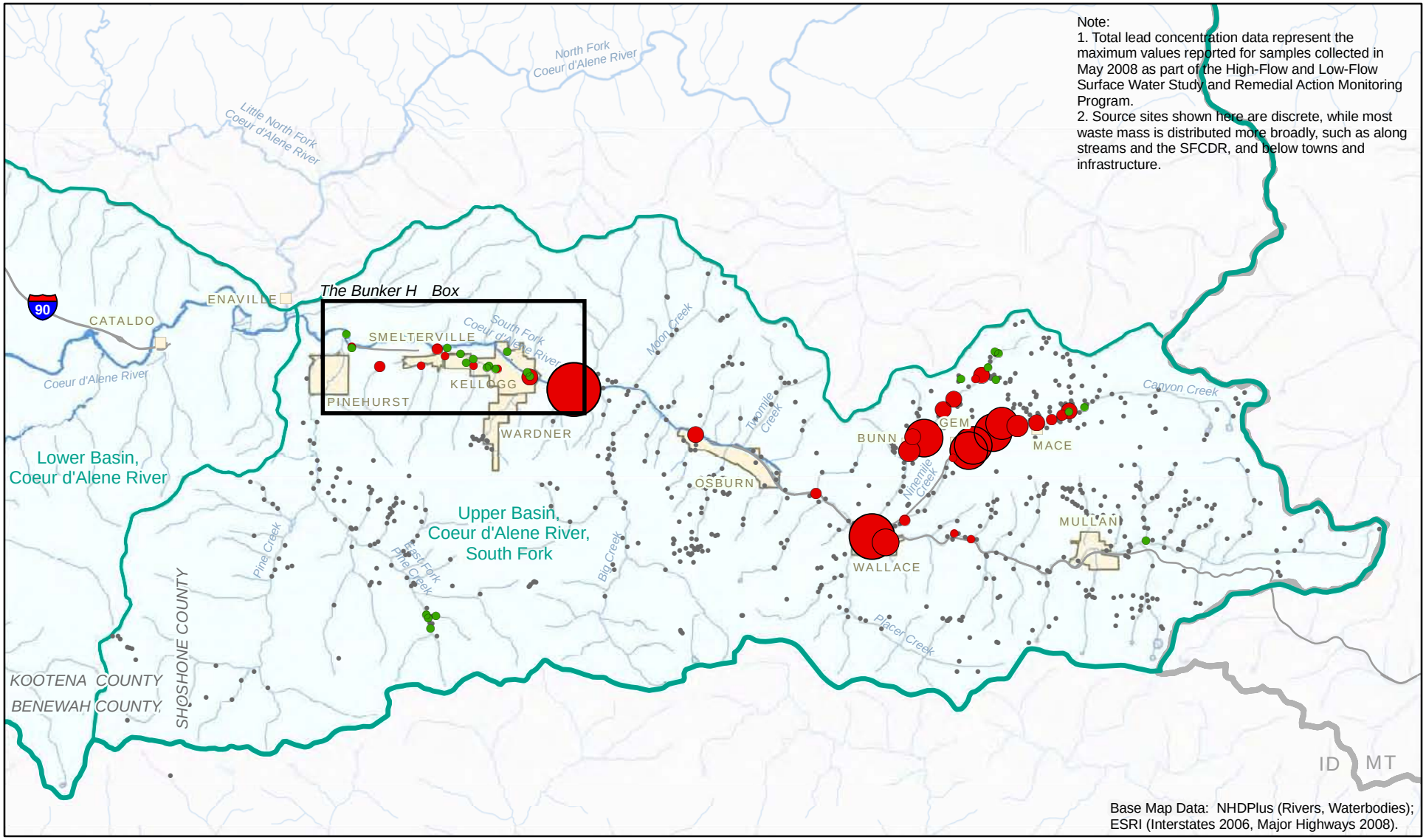
Estimated Silver Valley Annual Employment from EPA Remediation Activities

Job Description	Residential Yards Cleanup ($15M[2] per year)	ROD Amendment Cleanup ($25M	Estimated Number of Workers Directly Employed	Estimated Total Workers[4]
Local Design and Construction Work	186	311	497	569
State/Local Oversight	17	28	45	56
Total (rounded)	**200**	**340**	**540**	**625**

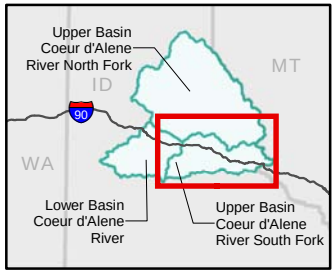
[1]Civilian work force estimate based on Idaho Department of Labor, Work Force Trends, Shoshone County, June 2010.
[2]$15M = $15 million
[3]$25M = $25 million
[4]Includes support jobs that result from initial spending on equipment, materials, and labor.

EPA

Note:
1. Total lead concentration data represent the maximum values reported for samples collected in May 2008 as part of the High-Flow and Low-Flow Surface Water Study and Remedial Action Monitoring Program.
2. Source sites shown here are discrete, while most waste mass is distributed more broadly, such as along streams and the SFCDR, and below towns and infrastructure.



Base Map Data: NHDPlus (Rivers, Waterbodies); ESRI (Interstates 2006, Major Highways 2008).



Total Lead Concentration

- <=15
- 25
- 75
- 150
- 500
- 1200

- Source Site
- River/Creek
- Coeur d'Alene River Subbasin Boundary
- City Limit

N

0 1 2 4 Miles

Figure B4-6
Basin-Wide Total Lead Concentrations in Surface Water, May 2008
Site Information Package for National Remedy Review Board

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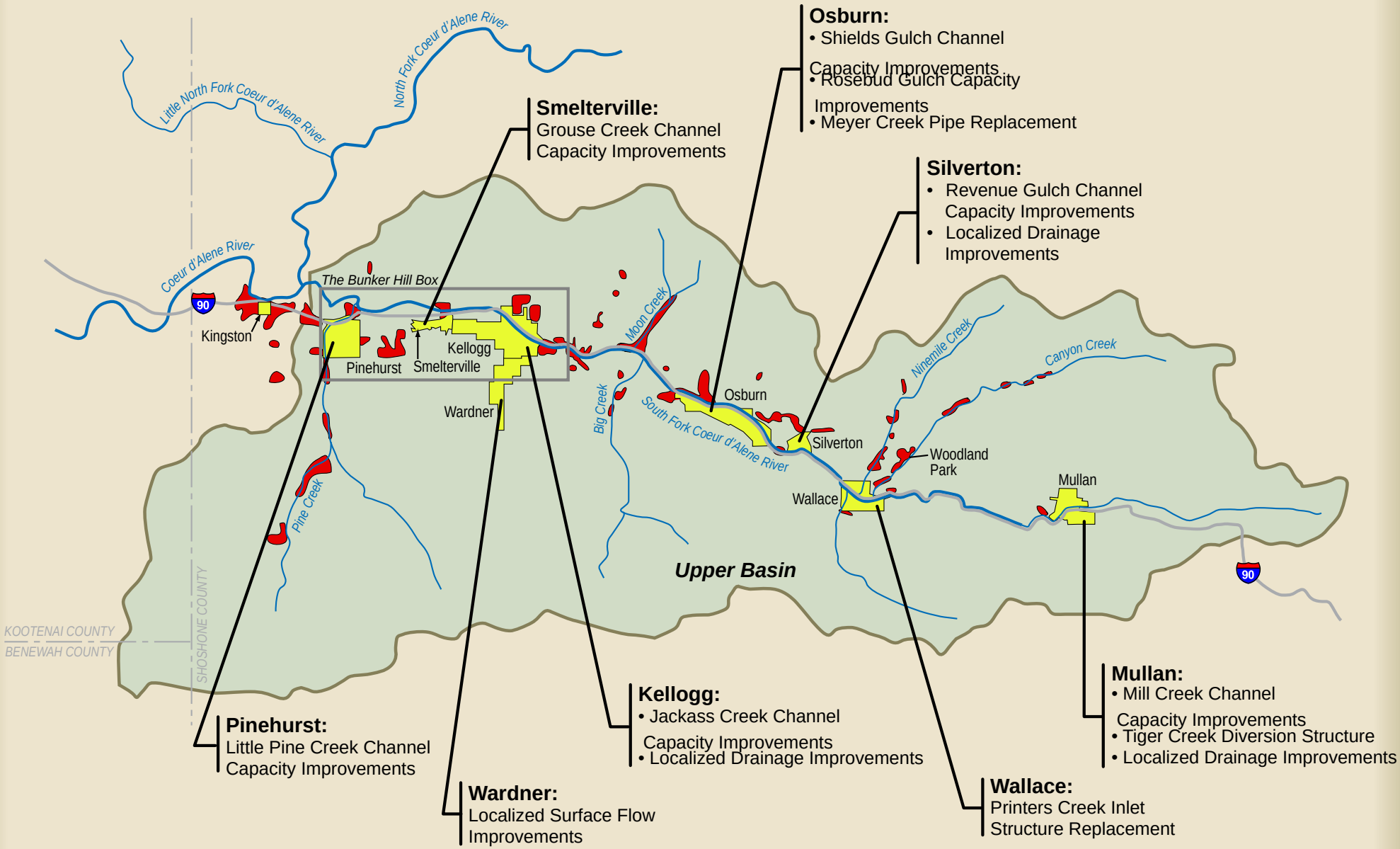
EPA

Remedy Protection Areas



EPA

The Road to the Record of Decision (ROD) Amendment and Beyond

Making Cleanup Decisions with Community Input

EPA wants you to understand the possible cleanup actions so you can tell us what you think about the cleanup plan for the Upper Basin. We want you to know that EPA is listening to your concerns and that we are seriously considering your comments. Ultimately, we want to make sure that feedback from people and organizations in the Basin is reflected in the final cleanup decisions.

EPA encourages you to learn more about what cleanup activities are being considered in the Upper Basin. Weigh in with your comments.

These are the milestones:

Focused Feasibility Study

Detailed analysis of cleanup options.

Proposed Plan

Summary of the cleanup alternatives.

- Public comment period runs July 12 through August 25, 2010.
- Open House and Public Meeting take place August 4, 2010.

EPA Response to Public Comments

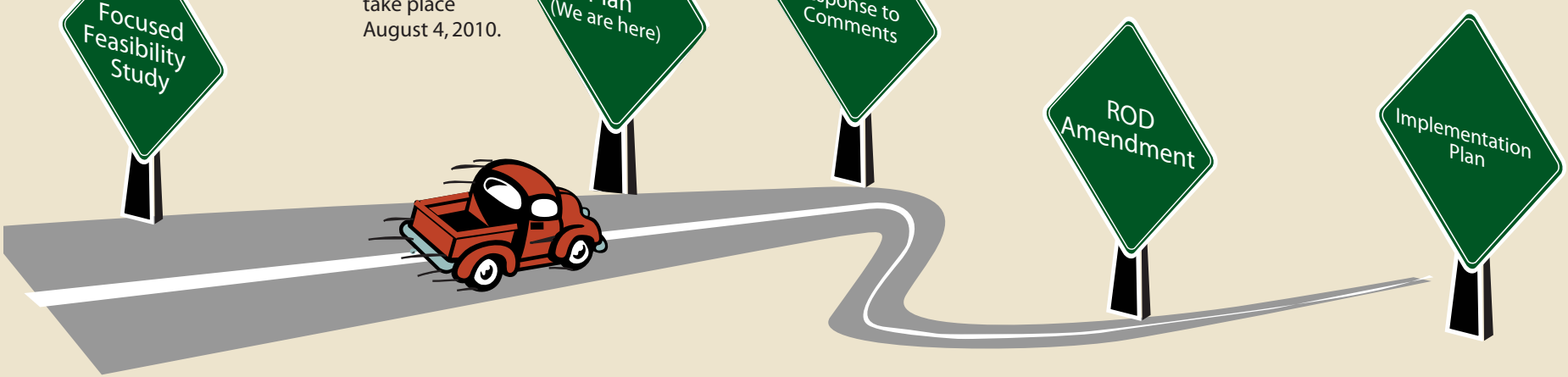
EPA considers and responds in writing to public feedback received during the comment period.

Record of Decision (ROD) Amendment

Official decision document describes the selected cleanup alternative. Targeted for late 2010. (The initial Implementation Plan comes out at this time, too.)

Implementation Plan

This document will be updated over time. Communities are encouraged to be involved because this is when more details of the cleanup actions are developed. These details — such as construction schedules, truck traffic, land use related issues — could have direct impacts on communities.

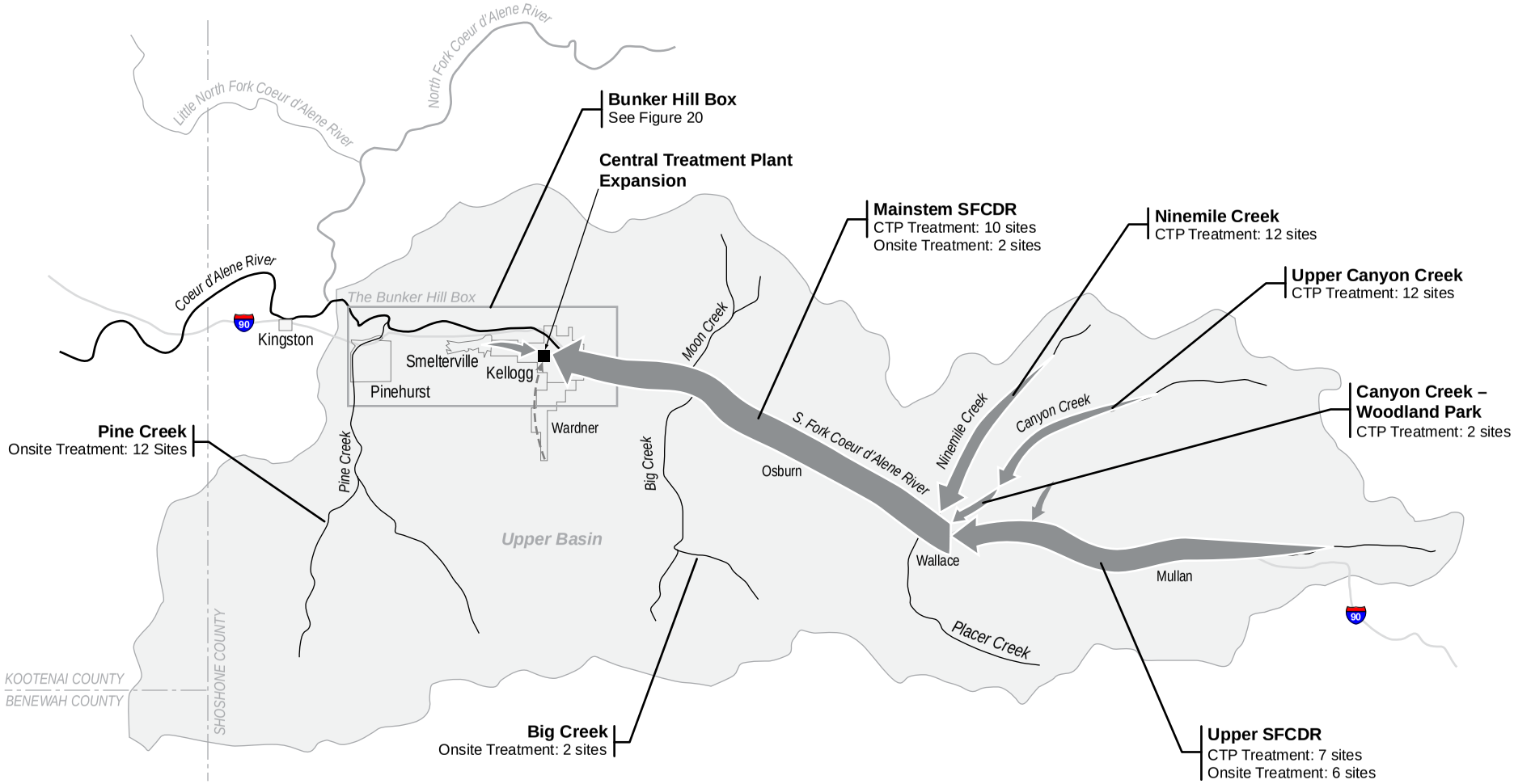


EPA

Water Treatment and River Flow

- EPA plans to use proven and effective methods to collect and treat groundwater and adit flows that are contaminating Upper Basin streams and rivers.
- Groundwater collection and treatment is the only practical option for the Bunker Hill Box, Woodland Park area, and a portion of the South Fork. Source removal is not possible in these areas as communities, highways, and other infrastructure are built upon the mining waste material.
- EPA is committed to using Trust dollars efficiently.
  - Water treatment provides the best "bang for the buck." Groundwater collection and treatment are the fastest and cheapest ways to clean up the South Fork and its tributaries.
  - The Bunker Hill Box groundwater cleanup actions would reduce contamination by about 40% at only 3% of the total cost of the cleanup.
- EPA knows that healthy stream and river flows must be preserved for recreation, mining activities and other water uses, and for fish habitat.
  - Studies in the Woodland Park area of Canyon Creek show that groundwater collection would reduce stream flows by about 5% in the fall, when stream flows are naturally at their lowest levels. This is a relatively small amount of water removed, while the benefits to the water quality in the creek are great.
  - Treated groundwater in the Bunker Hill Box will be returned to the river, so no loss of flow occurs.
  - In other areas of the Upper Basin, data needed to estimate reduction in streams flows from groundwater actions are more limited. Available data indicate that reductions could be about 7% in the South Fork when flows are naturally at their lowest.

GROUNDWATER COLLECTION AND TREATMENT WILL NOT "DRY UP" THE CREEKS AND RIVERS



Water Conveyance Pipeline to Central Treatment Plant

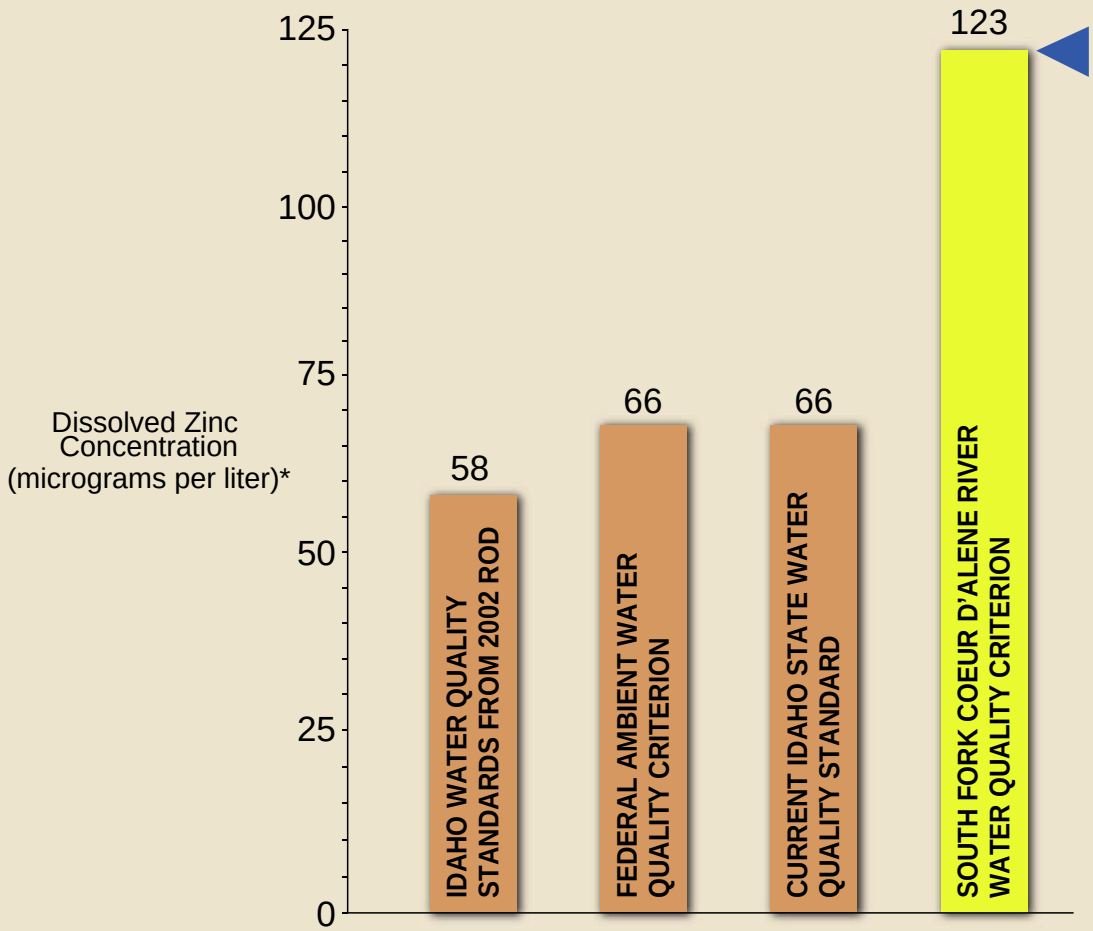
N

0 1 2 4 Miles

Notes:
CTP = Central Treatment Plant
SFCDR = South Fork Coeur d'Alene River

Figure 19
Preferred Remedial Alternative: Water Collection and Treatment in the Upper Basin
Upper Basin Proposed Plan

Local South Fork Water Quality Standard for Zinc Reflects Local Mineralization



- The State of Idaho, together with the mining companies and EPA, developed the South Fork Coeur d'Alene River ambient water quality criterion (AWQC) for dissolved zinc in March 2002. This AWQC is used for all of the Upper Basin watersheds.
- The State did scientific studies and developed the South Fork AWQC based on the natural conditions in the river and the fish that live in the river, such as westslope cutthroat trout.
- The South Fork AWQC for zinc is almost two times as high as EPA's more conservative general AWQC.
- Many areas of the Upper Basin still exceed the South Fork AWQC.

This means that the metals in the streams and rivers in the Upper Basin are still too high for a healthy fish population, even accounting for the local natural mineralization.

ROD = Record of Decision

* Concentration assumes a hardness of 50 milligrams of calcium carbonate per liter.

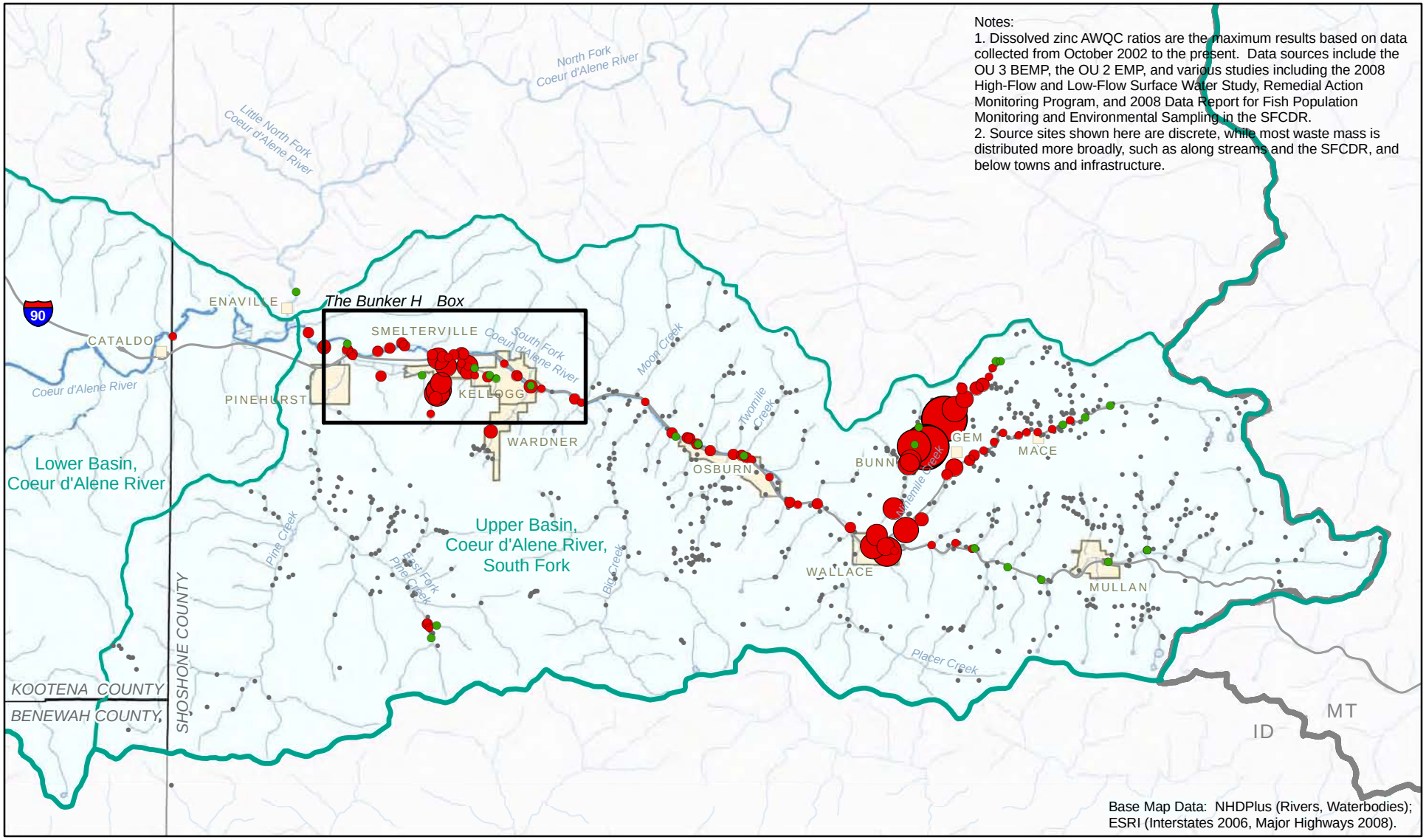
Working Together With Industry

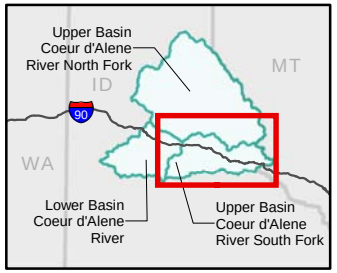
EPA is Committed to Working with Mining Companies and Local Businesses on Cleanup Strategies that Maintain Mining Operations and Support the Local Economy

Mining companies and other businesses need certainty for planning and investing in the local resource-based economy.

- EPA understands how much mining and mineral processing have been important in the development of the Silver Valley, and that these activities will continue.
- EPA will coordinate the cleanup activities – including timing, staging, and who would perform the work – with property owners in the areas being cleaned up.

- EPA will manage the cleanup in ways that allow responsible mining and mineral processing activities, and exploration and development to continue.





AWQC Ratios

- < 1
- 5
- 20
- 50
- 75

- Source Site
- River/Creek
- Coeur d'Alene River Subbasin Boundary
- City Limit
- County Boundary
- State Boundary

N

0 1 2 4 Miles

Figure B4-3
Maximum Basin-Wide Zinc AWQC Ratios in Surface Water, Post-2002
Site Information Package for National Remedy Review Board

EPA

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