

Follow-Up to September 4, 2015 Stanislaus Silverton Meeting

Q1. Provide the property value study referenced during the meeting.

A1. Gamper-Rabindran, Shanti and Christopher Timmins. 2013. "Does cleanup of hazardous waste sites raise housing values? Evidence of spatially localized benefits," Journal of Environmental Economics and Management 65(3): 345-360, <http://dx.doi.org/10.1016/j.jeem.2012.12.001>.

New Question: Q2. What are the methods used and findings in the Gamper-Rabindran and Timmins (2012) analysis?

A2: The analysis found that residential property values within 3 miles of Superfund sites increased 18.6% to 24.5% when sites were cleaned up and deleted from the National Priorities List (Gamper-Rabindran and Timmins 2013).

Gamper-Rabindran and Timmins (2013) use a hedonic regression model to identify the property value impacts of changes in the status of Superfund sites (i.e., proposed, listing, construction complete, deleted) at 321 sites across the country.

The way that the hedonic regression model works is that it compares changes in inflation adjusted housing values in census units located within 3 mile buffers around Superfund sites between 1990 and 2000 to changes in the nearby Superfund site's status (i.e., proposed, NPL listing, construction complete, and deletion), while also controlling for characteristics of the housing stock and socioeconomic and demographic attributes in the area that could also impact property values. Adjusted housing values are used to account for general price changes in the housing market across the nation.

New Question: Q3. Can Gamper-Rabindran and Timmins's (2013) findings be used to predict the property value impacts of a Superfund cleanup in an individual community or region?

A3: The Gamper-Rabindran and Timmins study is a robust analysis looking collectively at property value impacts of Superfund cleanup across the country. The study found on average an increase in property values once the site reached construction completion or deletion. However, given that changes in property values in a specific location will vary depending on the local characteristics, it shouldn't be used to guarantee that property values will increase at a specific site once it is cleaned up.

New Question: Q4. What happens to property values when a site is listed on the NPL?

A4: Peer reviewed studies show that the effect of site listing on property values is mixed. Some studies find increases, some find decreases, and others are not able to identify an effect on property values.

Q5. How many sites are proposed to the Superfund National Priorities List (NPL), on the NPL and deleted from the NPL? What is the likelihood a site ready to start construction will get funding?

A5: As of 9/24/2015, 47 non-Federal sites have been proposed to the NPL, 1163 non-Federal sites are on the NPL, and 372 non-Federal sites have been deleted from the NPL. As of the end of FY2014, more than 400 remedial action projects were underway at these sites, performed by either the Government or potentially responsible party (PRP).

In FY2014, EPA started 66 new remedial construction projects, including 38 government-performed projects and 28 PRP-performed projects. Due to funding constraints, EPA was unable to proceed with new construction work at five (5) NPL sites with projects ready to start construction in FY 2014. Data on new remedial construction activities is not yet available for FY 2015.

More information can be found at: <http://www2.epa.gov/superfund/sites/npl/index.htm>.

Q6. How does the NPL listing process work?

A6: Based on federal law, EPA has established a process to evaluate releases of hazardous substances from a site and, if appropriate, add it to the “Superfund” National Priorities List (NPL). In its simplest form the process involves collecting information and environmental data and evaluating that data using the Hazard Ranking System (HRS). The HRS is a numerically based screening tool that scores the relative threat to human health and the environment posed by contamination. A site’s score can range between 0 and 100 and sites with a score of 28.5 or greater are eligible for proposal to the NPL.

EPA generally requests support for NPL listing from the State or Tribe with jurisdiction prior to proposal. Then the site is proposed for the NPL through a Notice of Rulemaking where all relevant documentation, including the HRS report, is published in the Federal Register. This is followed by a 60-day public comment period. EPA then evaluates and responds to all comments and makes a final determination whether to list the site on the NPL.

What information is going to be used to determine if the site should be on the NPL?

The data included in an HRS report describes the sources of contamination and depends on available information and stakeholder input defining the goals of a desired clean up.

Can you give a precise date and timeline for developing a report based on collected data that shows our eligibility for the NPL?

Although EPA prepared a draft HRS report for Cement Creek in 2009, significant new environmental data has been collected since then that needs to be considered. EPA has not initiated a new HRS report but estimates it would take 3-6 months to complete once initiated, followed by the rulemaking process described above.

Q7. How is the public involved in the listing process?

A7: EPA is committed to work in concert with the Colorado Department of Public Health and Environment in answering questions about the potential for a NPL listing of Upper Animas Mining District sites and listening to the concerns of members of the public, affected Tribes and elected officials. These questions and concerns will shape any decision to initiate an NPL listing process. As a matter of policy, EPA seeks concurrence from the Governor of the State or a Tribe, when the Tribe has jurisdiction, prior to NPL proposal.

How is the public involved in the entire Superfund process?

Public involvement is an essential and well-developed, formal component of the Superfund process. EPA has a series of publications on this topic, including a detailed *Superfund Community Involvement Handbook*. EPA assigns public involvement specialists to Superfund sites. Cynthia Peterson is EPA's public involvement specialist (Community Involvement Coordinator) in the Upper Animas Mining District and she is available to provide a copy of the *Handbook* along with a personal meeting to explain the process in detail.

Q8. How would the site boundaries be determined? What are they likely to be? What is the process?

A8: The geographic scope of a NPL site is defined generally by the known contamination sources and this scope is proposed in the Notice of Rulemaking and is subject to public comment. In the case of a potential site in the Upper Animas watershed, EPA and CDPHE will continue discussions with all stakeholders on the appropriate site boundaries, whether that be Cement Creek, other drainages, or former smelter sites, before any proposal to the NPL is made.

Q9. Once a site is placed on the NPL, how soon does work begin? What is the average time on the NPL list (from listing and cleanup)?

A9: The first step following NPL listing is the development of, followed by the implementation of, a plan for a detailed, comprehensive investigation into the contamination sources (called a Remedial Investigation) followed by the development of feasible cleanup alternatives (called a Feasibility Study). The EPA has contracts in place to begin this work immediately after the site is proposed to the NPL. The remedial investigation serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the waste;
- assess risk to human health and the environment; and
- conduct treatability testing to evaluate the potential performance and cost of the treatment technologies that are being considered.

The FS is the mechanism for the development, screening, and detailed evaluation of alternative remedial actions.

The RI and FS are conducted concurrently - data collected in the RI influence the development of remedial alternatives in the FS, which in turn affect the data needs and scope of treatability studies and additional field investigations. This phased approach encourages the continual scoping of the site characterization effort, which minimizes the collection of unnecessary data and maximizes data quality.

Initial investigation work in the Upper Animas Mining District has been done through the previous efforts of EPA, BLM, USFS and the stakeholder group. EPA would work with the communities and stakeholders and look carefully at this existing information in determining the additional investigation needed. EPA takes public input on a proposed cleanup plan. Once a remedy is selected (called Record of Decision), it is designed and the cleanup work (called remedial action) begins. Community involvement, interim actions (such as, mine portal stabilizations and bulkhead installations), and potential enforcement actions occur throughout the entire process.

If warranted, removal actions, short-term responses used to handle threats of releases, may be taken at any step of the process to ensure public safety. For example, EPA took early removal actions to address imminent threats at 35% of hardrock mining or mineral processing NPL sites prior to their being added to the NPL.

The length of time it takes for remedial action to begin depends on a variety of site-specific factors. At the end of FY 13, there were approximately 130 130 hardrock mining or mineral processing NPL sites and remedial action work had started at 88 sites. At these sites, it took approximately 6 years for remedial action to begin after NPL listing.

At the end of FY13, 51 hardrock mining and mineral processing NPL sites had reached construction complete status. At these sites, it took approximately 12 years from NPL listing to achieve [construction complete status](#). Note that most of these sites that have achieved construction complete are mineral processing sites which tend to be less complex than hard-rock mining sites. Hardrock mining sites often have a requirement for long-term water treatment, and this often lengthens the period of time a site remains on the NPL.

Q10. What is the total budget to clean up sites on the NPL? If the Upper Animas Mining District were placed on the NPL, where does the money come from, and when would funding be available for the site?

A10: The Superfund program operates on the principle that polluters should pay for the cleanups, rather than passing the costs to taxpayers. EPA searches for parties legally responsible for the contamination at sites and it holds those parties accountable for the costs of cleanups. For sites that do not have viable PRPs, EPA uses congressional appropriations to the Superfund Trust Fund to investigate the full extent of the contamination, select a remedy, and conduct remedial construction. Annual Superfund appropriations have declined by more than \$200 million in nominal dollars (not adjusted for inflation) since the Superfund tax expired in 1995. EPA's Hazardous Substance Superfund enacted appropriation for FY 2015 was \$1.1 billion dollars.

Q11. How is the state involved financially with Superfund cleanup and O and M?

A11: State partnership is critical to the cleanup of Superfund sites. EPA requests state support to list sites on the NPL and coordinates with them to conduct early site assessments. At sites that do not have viable PRPs willing and able to conduct or finance the work, EPA will use congressionally appropriated resources to characterize the contamination, select and design the remedy and conduct a Superfund Trust Fund-financed remedial action. When EPA uses congressionally appropriated resources to conduct a remedial action, CERCLA requires the state to assure to pay generally 10% of the cost of the remedial action (i.e., cost share) as well as provide for all of the operation and maintenance at the site. If EPA conducts the cleanup, the state will generally pay cost share directly to EPA. A state may also lead the remedial action work pursuant to a cooperative agreement with EPA, in which EPA will pay for 90% of the cost of the cleanup. In some cases EPA may have settlement funds from a PRP that it uses to conduct a remedial action, which will reduce the cost of the fund-financed remedy for which the state owes cost share. A state may also obtain funds from a PRP which, depending on the terms of the settlement, the state may use to pay its cost share to EPA or use to conduct all or a portion of the remedial action through a cooperative agreement with EPA.

Q12. Is all the data collected in the County available for community review?

A12. Data collected on the Animas River as part of the response to Gold King Mine release are available on the EPA Gold King Mine website at: <http://www2.epa.gov/goldkingmine/data-gold-king-mine-response>. Data collected at individual properties are being provided to property owners, including private well sampling data. Data collected as part of EPA's pre-Gold King Mine incident are available under "Site Documents" "Investigations" at: <http://www2.epa.gov/region8/upper-animas-mining-district>.

Q13. How many cleanup personnel will be working in San Juan County next year? When will they come and for how long?

A13: As of September 28, 2015, 33 EPA and Coast Guard personnel and contractors were working at the mine site and 29 EPA personnel and contractors were working at the Incident Command Post in Durango. Over the next 12 months EPA anticipates scaling down dramatically the number of contractors in the Silverton-Durango region, but having a scaled-down, continued local presence supporting work at the mine site operating the temporary water treatment plant, stabilizing the Gold King Mine adit, installing and assessing the Red and Bonita bulkhead, and implementing the Monitoring Plan on Cement Creek and the Animas and San Juan Rivers.

Also, EPA, along with CDPHE, also anticipates participating in stakeholder and other community meetings.

Q14. How is the EPA measuring for potential harmful airborne dust from the accumulated remnants of the spill on the banks of Cement Creek drainage and Animas River below Cement Creek?

A14. Inhalation exposure to dust includes both dust from soil and dust from dry sediment in addition to other sources. The contribution of dry sediment dust would be small compared with the much larger contribution from soil. Therefore, EPA does not anticipate any change in air quality associated with the GKM release.

Q15. Will historical structures be preserved and protected?

A15. Under Superfund, EPA generally complies with the substantive portions of all applicable regulations, including those governing cultural resources. The National Environmental Policy Act (NEPA) states that it is the federal government's responsibility to use all practicable means to preserve historic, cultural and natural aspects of our national heritage. The National Historic Preservation Act (NHPA) of 1966 established a process by which federal agencies must incorporate historic resource issues. Section 106 of the Act requires a federal agency with jurisdiction over a federal undertaking to take into account the effects of that undertaking on properties included in or eligible for the National Register of Historic Places. If adverse effects are anticipated, agreement is usually reached on measures that avoid or mitigate the effects. One example where EPA has worked with local stakeholders to preserve historical areas/structures is the California Gulch Superfund site in Leadville, Co.

Q16. Has a Superfund proposal for the Forest Service Lands and Bureau of Land Management been presented? If so, has the agency responded?

A16:

BLM and USFS representatives have been active participants in stakeholder and community meetings and we expect this to continue. Discussions of a potential NPL site necessarily would include these federal land managers. EPA understands both agencies have been conducting independent assessment work to understand potential environmental concerns from lands they manage and have worked cooperatively with EPA.