1079699 - R8 SDMS

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Tuesday, July 17, 2007 – 9-11:30 am

Snyderville Basin Special Recreation District Trailside Offices
(Community Room)
5715 Trailside Drive, Park City

Agenda

Facilitator: Michele Straube, CommUnity Resolution, Inc.
mstraube@mindspring.com; 801-583-6362

Meeting Objectives:

- Introduce EPA contractor, Tetra Tech
- Review known information about soil and water contamination in Lower Silver Creek area
- Identify data gaps
- Discuss conceptual monitoring plan
- Get update on Summit County regulatory plans
- Obtain signed access agreements

10 min	Introductions and Welcome	Michele Straube
15 min	Scope and Purpose of EPA Lower Silver Creek Project	Kathy Hernandez, EPA
25 min	Review of Existing Data • Water Quality • Soils • Wetlands • Data Gaps	Bruce Marshall, Tetra Tech
15 min	Conceptual Monitoring Plan	Bruce Marshall, Tetra Tech
30 min	Questions and Discussion	Michele Straube
15 min	Summit County Plans for Lower Silver Creek	Jami R. Bracken or Nora Shepard, Summit County
15 min	Next steps • Schedule • Access Agreements	Kathy Hernandez, EPA

After meeting – landowners and EPA enter into access agreements.

NOTE: times are estimated; to be used as guidelines

Invited:

Name	Agency
Kathryn Hernandez	EPA Region 8
John Dalton	EPA Region 8 / Community Involvement
Dan Wall	EPA/FWS
Mo Slam	UDEQ / DERR
Dave Allison	UDEQ / Community Relations
Kari Lundeen	UDEQ / DWQ
Bill Rees	UDEQ / Voluntary Cleanup Program
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Nora Shepard / Lisa Fitzgerald / Jay Aguilar	Summit County Community Development
Jami Brackin	Summit County Deputy County Attorney
Derrick Radke	Summit County Engineer
Chris Cline	US Fish & Wildlife
Pam Kramer / Paul Burnett	UT Div Wildlife Resources
Hollis Jencks	US Corps of Engineers
John Knudson	UT Dept of Natural Resources / Parks
Briant A. Kimball	USGS
Kerry Gee	United Park City Mines
	Citizens for Responsible Growth
Leo Williams / Doug Evans	Mountain Regional Water District
Senta Beyer	Snyderville Basin Recreation District
Chris Donaldson / Kimber Gabryszak	Basin Open Space Advisory Committee
Barbara Carey	Uinta Headwaters RC&D Council
Carol Potter	Mountain Trails Foundation
Brendan Waterman	Upper Weber River Watershed Coordinator
LANDOWNERS/DEVELOPERS:	
Jeff Schoenbacher / Tom Bakaly / Dana Williams	Park City Municipal Corporation
Mike Luers / Michael Boyle	Snyderville Basin Water Reclamation District
Standley Pace / Mike Pace	Standley B and Beverly F Pace
Chuck Zuercher / Gale Pace	Angus and Ella Pace
Dwayne Pace	Pace Family Investments
Joe Tesch, Esq.	Silver Creek / Robert Larsen Investors
Lindsay Ford, Esq.	Florence J. Gillmor
Alain Balmanno, Esq.	Nadine Gillmor Fausett Trustee
Siv Gillmore	Edward L. Gillmor
Mike Dalley	Jack B. Parson Companies
Tony Christofferson	Geneva Rock Products, Inc.
	Lynn M and Cynthia G Gaufin
	Silver Creek Properties LLC
	Summit County A Municipal Corporation
	Municipal Bldg Authority of Park City
	BVD Properties LLC
	Forestdale Investments LLC
	Byer Excavating Inc.
	Stoly Associates LLC
Richard N. Reese	Richard N. Reese Family LP
Dave Burbidge	RDB LLC; Richard D. Burbidge
	Johnson International, Inc.
	Lacy Limited Liability Co.
	Park City Auto Center

	Sundborn LLC
	Qwest Corp.
Walt Plum / Spencer White	Silver Gate Ranches
Eric Bishop	Anderson Development
Jeramy Green	Pivotal Promontory Development LLC
	Park City Fire District
	South Summit School District
Daniel J. Olabarri	Olabarri Investment Company [no current address available]
Patricia Ford	American Ins. Co / Fireman's Fund Insurance
Elliott Christensen	Property Reserve, Inc.
	Jordanelle Storage Park, LLC
	Helene Barfuss, et al [no current address available]
Dick Burbidge	Burbs LLC

Lower Silver Creek Special Soils District
Next Steps to be taken by Summit County
April 6, 2007

1. Establish a "Special Soils District" –
   - A district should be established as soon as possible to notify property owners that there may be impaired soils.
   - Properties in the vicinity of known impaired soils will be notified.
   - A public hearing will probably be held with both the Snyderville Basin Planning Commission and the BCC
   - This district will be temporary until additional information is available as to the location of impaired soils and alternative for mitigation established.

2. Require a signed notification from all property owners within existing approved subdivisions (Silver Gate Ranches and Burbidge) prior to any building permit issuance. The notification should read something like:

   Notice of Environmentally Impacted Soils

"This notice is to advise you that the real property on which you have applied for a development permit falls within the Silver Creek soils (or whatever we call it) overlay area as contained in (code section). The inclusion of the property within the overlay area indicates that based upon (the preliminary study – can't remember the official name) there may be high quantities of metals in the soils which impact the Silver Creek drainage and may require remediation under federal, state and local laws.

By your signature below you acknowledge that you have read and understand this notification, that you have had opportunity to inquire further, and that you are willing to proceed with development at your own risk."

3. Prohibit new development unless they can provide proof of non-contamination or an approved mitigation plan.

4. Continue to participate in the Stakeholders Group and assist EPA/Consultants in their investigations.

Who Needs/Wants to be Involved

Based on the interviews conducted as part of this convening, Chart 1 reflects our identification of individuals and entities that may have an interest in the Lower Silver Creek work group's activities and discussions. This listing will need to be revisited periodically as more is learned about the nature and extent of contamination, as well as the nature and extent of remediation / restoration options. In particular, more or different landowners and/or developers may need to be included in the work group discussions as the focus of the group sharpens.

CHART 1:[3]

Name	Agency	Part of Full Stakeholder Group ??	Nature of Interest	Suggested as Work Group Member
KathrynHernandez	EPA Region 8	Yes	Superfund site project manager	Yes
Mo Slam Ty Howard	UDEQ / DERR	Yes	Superfund site project manager	Yes
John Whitehead Kari Lundeen	UDEQ / DWQ	Yes	TMDL / watershed coordinator	Yes
Brent Ovard	Summit County Health Dept	Yes	County Health Department	Yes
Sally Elliott	Summit County Commission	Yes	- Co. Commissioner -citizen on SH group	Yes
Michele Devaney Denise Hytonen	Summit County Comm.Development	No	Planning / zoning agency	Yes
Chris Cline	US Fish & Wildlife	Yes	Natural resource damages	Yes
Pam Kramer	UT Div Wildlife Resources	No	Wildlife habitat	Yes
Jason Gipson	US Corps of Engineers	No	Jurisdictional wetlands	Yes
Kerry Gee	United Park City Mines	Yes	- Coordination with UPCM-led activities - Watershed vision	Yes
John Knudson	UT Dept of Natural Resources / Parks	Yes	Owns rail trail	Yes
Jeff Schoenbacher Tom Bakaly	Park City Mun.Corporation	Yes	LSC landowner	Yes
20+ Landowners		No	LSC landowners	Yes
Jeramy Green	Promontory Development	No	LSC developer	Yes
Walt Plum	Silver GateRanches	No	LSC developer	Yes
Not yet identified	Not yet identified	No	LSC developers, but not landowners	Yes

[3] Wherever two names are reflected for one entity, they are considered alternates.

John Tuerff	Citizens for Responsible Growth	???[4]	Citizen advocacy on development issues	Yes
Jennifer Chergo	EPA Region 8	Yes	Community involvement	Resource
Dave Allison	UDEQ / DERR	Yes	Community involvement	Resource
Senta Beyer	Snyderville Basin Recreation District	No	Maintains /develops trails that intersect with rail trail	Resource
Chris Donaldson Kimber Gabryszak	Basin Open Space Advisory Committee	No	$10 million bond to protect and acquire open space	Resource
Barbara Carey RC&D Coordinator	Uinta Headwaters Resource Conservation & Development Council	No	Possible funding and planning resource	Resource

We suggest that the interests identified as "resource" be regularly informed of the work group's efforts and be invited to specific meetings at which they can be used as a resource for discrete work group discussions.

Add: Dan Wall – US F&WS – resource
Nora Shepard – Summit County Planning – resource
Leo Williams – Mountain Regional Water District – resource
Derek Radtke – County Engineer
Brian Kimball – USGS
Geneva Rock Products –

[4] While CARG was originally represented on the full watershed Stakeholders' Group, no CARG representative has attended meetings in the past 2+ years.

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Monday, May 8, 2006 – 1-4 pm

Snyderville Basin Special Recreation District
Trailside Offices (Community Room)
5715 Trailside Drive, Park City

Agenda

Facilitator: Michele Straube
mstraube@mindspring.com; 801-583-6362

new RPM
water & waste programs
Involv in TMDL review
& approval
ASR great potential
Opp. to work
to integrate progr
to more fully assess
and leverage
resources to
address LSC

Meeting Objective: Identify and integrate known information / data about soil and water contamination in Lower Silver Creek area, potential source(s) and vulnerable resources. This information will be presented to the full work group (including landowners and developers) at a subsequent meeting, to be scheduled.

1:00 - 1:15	Introductions and Welcome	~~Kathy Hernandez, EPA~~ Michele Straube
1:15 – 2:00	Work Group Process Design Summary of Convening Report Geographic Boundary Stakeholders Statement of Goals	Michele Straube
2:00 – 3:30 (with break)	Known Information about Lower Silver Creek area Overview Cataloguing Next steps to integrate info Schedule next work group meeting Presentations Audio-visual needs	 UDEQ Round robin Michele Straube
3:30 – 4:00	Ongoing public outreach	Michele Straube

Invited:

Name	Agency
KathrynHernandez	EPA Region 8
Mo Slam	UDEQ / DERR
John Whitehead Kari Lundeen	UDEQ / DWQ
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Michele Devaney	Summit County Comm.Development
Chris Cline	US Fish & Wildlife
Pam Kramer	UT Div Wildlife Resources
Jason Gipson	US Corps of Engineers
Kerry Gee	United Park City Mines
John Knudson	UT Dept of Natural Resources / Parks
Jeff Schoenbacher	Park City Mun.Corporation
Jennifer Chergo	EPA Region 8
Dave Allison	UDEQ / DERR

Sent Notice of Meeting and May Attend:

20+ Landowners	
Jeramy Green	Promontory Development
Walt Plum	Silver Gate Ranches
Michael Hutchings	Anderson Development
Other LSC developers	Not yet identified
John Tuerff	Citizens for Responsible Growth
Leo Williams	Mountain Regional Water District

new RPM

W & W Pr.

Inv. in TMDL

aware sig'n contam. in LSR

Excited to see progress

Opp. to integrate pr.

- more fully assess
- leverage resource

to address the LSC

Michele Straube
<mstraube@mindspring.com
>

04/24/2006 11:03 AM

To Jennifer Chergo/OCP/R8/USEPA/US@EPA, Dave Allison <dallison@utah.gov>, Dan Wall/EPR/R8/USEPA/US@EPA, Sally Elliott <sally@tellsally.com>, Brent Ovard <bovard@utah.gov>, Kathryn Hernandez/EPR/R8/USEPA/US@EPA, Muhammad Slam <mslam@utah.gov>, Chris Cline <chris_cline@fws.gov>, Jeff Schoenbacher <jschoenbacher@parkcity.org>, jason.a.gipson@usace.army.mil, pamkramer@utah.gov, klundeen@utah.gov, jwhitehead@utah.gov, mdevaney@co.summit.ut.us, dhytonen@co.summit.ut.us, kcgee@unitedpark.com, johnknudson@utah.gov

cc

bcc

Subject Lower Silver Creek Work Group -- First Mtg -- 5/8 1-4 pm

Mark your calendars -- Monday **May 8, 1-4 pm**, location to be announced, but definitely Park City (probably Kimball Junction). An RSVP would be appreciated.

I have attached a copy of the report that outlines my Lower Silver Creek Work Group convening efforts and proposed process design. This meeting on May 8 will be the first of two meetings to kickstart the work group's efforts. Landowners / known developers in Lower Silver Creek will be receiving notice of this meeting, but have not been specifically invited to attend. The primary goal of the May 8 meeting will be to identify and integrate known information about contaminated areas in Lower Silver Creek, the potential source(s) of contamination, vulnerable resources, and to correlate this information to land ownership and known development plans. The primary goal of the second work group meeting, still to be scheduled, will be to present the known information about contaminated areas and vulnerable resources in Lower Silver Creek to the full work group, including all landowners and known developers, and to offer an opportunity for the full group to share their respective visions for this area. Public outreach efforts will be on the agenda for both meetings, as time permits.

Please be sure to bring any and all relevant information with you to the May 8 meeting. I will send a reminder e-mail shortly before the meeting which will also let you know the meeting location.

Please feel free to call me with any questions or concerns.

Michele Straube
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)

mstraube@mindspring.com Lower Silver Creek Convening.final.doc

CommUnity Resolution Inc.

Facilitation & Mediation
Environmental Consulting
Dispute Resolution Training
Participatory Process Design

2915 East Oakhurst Drive Salt Lake City, UT 84108 Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

Silver Creek Watershed Stakeholders Group
Lower Silver Creek Work Group
Convening Report and Proposed Process Design

April 24, 2006

Introduction

The Silver Creek Watershed Stakeholders' Group was started in 1999. The group initially focused on the upper portion of the watershed, and many environmental improvements have been accomplished in that section of the watershed. The group has had some meetings to explore investigation and remediation options in the middle reach of Silver Creek. More information about the full stakeholder group and its activities can be found at www.silvercreekpc.org.

The Stakeholders' Group was initially convened and the group process designed by an independent third party facilitator -- Mike Hughes, then with RESOLVE. After the first year or so, the full group conducted its meetings without a facilitator until recently. A local independent third party facilitator – Michele Straube with CommUnity Resolution, Inc. – was hired in 2001 to convene and design a collaborative process for a stakeholder work group focused on soils issues in the Prospector Square area. The soils work group met for several years and successfully completed its work in spring 2004. In 2006, Ms. Straube began facilitating the full Stakeholders' Group. Third party facilitation services are being paid for by EPA Region VIII.

At its January 13, 2006 meeting, the full Stakeholders' Group tasked the facilitator to convene a work group to focus specifically on Lower Silver Creek. Several stakeholders indicated that current and future development plans for properties abutting Lower Silver Creek make it timely to identify and address any remediation / restoration requirements in this lower stream segment.

Michele Straube met, by telephone and in person, with stakeholders in the full watershed group and other people to gather needed information for creating an effective Lower Silver Creek work group. She asked questions about what interests and individuals should be included in the work group, and what some of the potential issues were likely

to be. Landowners, as well as known developers, for this portion of Lower Silver Creek were identified, but no effort has been made yet to contact them personally.[1] Based on that information and on independent research, this convening report summarizes what Ms. Straube learned and her process suggestions for the work group's first two meetings and beyond.

Geographic Boundary

The relevant geographic reach for the Lower Silver Creek work group is a matter of interpretation. Everyone agrees that the upstream end begins at Utah State Route 248 (aka the northern end of Richardson Flats). The full Stakeholders Group asserted at their January 2006 meeting that the relevant "Lower Silver Creek" area ended at "the dairy" (aka Atkinson, this stream segment is also sometimes referred to as the southern portion of Lower Silver Creek), and most interviewees have agreed with that boundary. One interviewee suggested that there is known contamination from mining in Silver Creek all the way from Route 248 to the Silver Creek / Weber River confluence in Wanship, and that therefore this entire reach should be a part of the work group's discussions.

An innovative site assessment conducted by UDEQ in 2001/2002 collected analytical samples from Route 248 to the confluence in Wanship, and concluded that all of the Lower Silver Creek area (southern and northern portions) should be placed on the CERCLIS list for further investigation and possible remediation under Superfund. A visual reconnaissance of the area confirms that the topography changes drastically at Atkinson, with the northern portion of Lower Silver Creek being confined within canyon walls, along with the rail trail and the I-80 highway corridor. Thus, the conditions possibly affecting Silver Creek stream quality (mine tailings, land use, infiltration, etc.), the options for remediation / restoration, and the stakeholders who will have control over and/or be affected by any remediation / restoration appear to be quite different in the southern and northern portions of Lower Silver Creek.

For these reasons, Ms. Straube recommends that the geographic boundary of the Lower Silver Creek work group be initially limited from Route 248 to the area referred to as "the dairy" or "Atkinson" (the southern portion of Lower Silver Creek). The work group should revisit this recommendation in its first meeting, and if confirmed, can expand its focus and geographic boundary to include the northern portion of Lower Silver Creek at a later time when sufficient progress has been made on investigating and remediating / restoring the southern portion.

The remainder of this convening report assumes that the work group will initially address the southern portion of Lower Silver Creek, as described above.

---

[1] Landowners were not contacted personally in this convening phase in part because only tax record contact information was available (often only PO box addresses). In addition, we concluded early on that *all* landowners would need to be involved in whatever process was designed, and we felt that a preliminary telephone contact, without firm ideas about how to move forward, might unduly raise concerns within this interest group. (See discussion below.)

Potential Issues and Challenges

The southern portion of Lower Silver Creek was historically used for mining-related activities. The Big Four Mill operated until 1918. In the mid-1900s, some tailings were moved and removed off-site for re-processing. In 2002, UDEQ conducted an innovative site assessment and recommended that the site be included on CERCLIS for further investigation under the Superfund program. This recommendation has not yet been implemented.

The riparian landscape in this portion of Lower Silver Creek has been described as including many non-vegetated tailings piles and numerous jurisdictional wetlands areas. Development interest is growing:

- Some commercial development exists upland on the west side of the stream.
- The Promontory Development has already completed extensive construction in the upland areas on the east side of the stream. They are in the process of building an equestrian center, also some distance from the stream and known tailings materials.
- A major development, Silver Gate Ranches, was just approved by the Summit County Commission in mid March 2006. The exact location and timing of their construction plans is currently unknown, but can be expected to be imminent.
- Development plans in this area proposed by Anderson Development have not been approved and are currently in litigation.
- It is our understanding that an environmental site assessment is being conducted for land east of Richardson Flats, but no specific details of the precipitating transaction are known.

We are unaware of any other existing or currently planned development in the riparian areas of this portion of Lower Silver Creek.

The rail trail, well-used by the public, follows along the stream through this entire section.

As of 2002, two active drinking water wells existed in the southern portion of Lower Silver Creek, operated by Mountain Regional SSD.

Silver Creek was listed on Utah's 1998, 2000, and 2002 303(d) list of impaired waterways for zinc and cadmium contamination. There has been a fish consumption advisory posted since 2004 for all of Silver Creek, including this lower reach, based on elevated arsenic levels in trout. A TMDL (total maximum daily load) has been established for dissolved zinc and cadmium for Silver Creek, which some interviewees believe is extremely stringent and difficult to attain.

Both history and the present day may present challenges for the Lower Silver Creek work group, which process design should attempt to address.

Current Status of Development Plans. The Summit County Commission approved the Silver Gate Ranches development at its March 15, 2006 meeting. Since no construction permits have been issued yet, we do not know the timing or location of intended construction, or the potential impact (if any) of tailings-related contamination.

Similarly, the existing Promontory development is expanding somewhat closer to the stream. Based on the distance from the stream, potential impact (if any) of tailings-related contamination is thought to be unlikely.

There are current discussions about possible wetland restoration work in the meadow area near the concrete plant.

The coordination of future development and other activities within the Lower Silver Creek work group area with environmental investigation and possible remediation / restoration of this area is critical. The work group will need to educate itself quickly about the relationship between planned development and areas within Lower Silver Creek that may pose a risk to human health and the environment.

Historical Reaction to Regulatory Agencies. The greater Park City area has a long history of resistance to regulatory approaches to local environmental problems, accompanied more recently by successful innovative local solutions. The Prospector Square area is the only area in the United States that Congress has ever exempted from placement on the National Priorities List under Superfund (at Park City's request), yet its local soils ordinance and environmental management system approach to preventing human exposure to contaminated tailings (known as "institutional controls") has received national recognition.

The larger Silver Creek Watershed Stakeholders Group has worked together over the past five years to build working relationships between previously conflicting interests, and to encourage an attitude of collaboration and innovation, rather than regulation and resistance. It is hoped that the participants in the Lower Silver Creek work group who come from the full Stakeholders Group will bring that learning with them and will encourage any new participants who retain the historical resistance to regulatory agencies to keep an open mind. In addition, design of the process to encourage joint fact-finding and exploration of innovative solutions, as well as facilitation of the process by an independent third party (the facilitator), should provide reassurance to reluctant participants.

Landowner Cooperation. There are numerous (over 20) private landowners potentially affected by any investigation and possible remediation / restoration in the southern portion of Lower Silver Creek, some of whom have already established relationships with potential developers. Not all private landowners agreed to provide access to their land for sampling in 2001 when UDEQ was conducting its innovative site assessment. It is believed that some of these entities are philosophically opposed to any land use or other controls on development, and regularly challenge county land use decisions. We do not mention this to question the validity of these

entities' actions, but merely to highlight the potential resistance that some interests may exhibit to the work group's efforts.

Landowner cooperation will likely be essential, however, for any further investigations within Lower Silver Creek and any potential future remediation / restoration. At a minimum, access to property will be necessary. At a maximum, landowner/developer participation in any remediation /restoration may be essential to the effort's success.

The practical import of these facts cannot be determined until more information is available that correlates potential contamination sources and areas possibly requiring remediation / restoration with land ownership and development plans. The Lower Silver Creek work group process must be open, transparent, and sensitive to keeping all landowners and known developers fully informed of its activities, to avoid surprises and misinterpretation to the extent possible.

The large number of landowners, the uniqueness of their individual property interests, and the need for cooperation from individual landowners makes it difficult, if not impossible, to select a "representative" of this interest to participate in the work group process.[2] The process should be designed to offer all landowners the opportunity to participate as fully as they wish in work group activities that may affect their property interest and/or that may require their cooperation. Process design must also be sensitive, however, to the logistical difficulty of working with large groups (greater than 20-25 members), as well as the respectful and efficient use of work group participants' time.

Multiplicity of Entities Potentially Responsible For and/or Capable of Taking Action. By contrast to some other portions of the Silver Creek watershed, there does not appear to be one financially capable entity that could be considered legally responsible for addressing any contamination found and performing remediation / restoration in Lower Silver Creek. (I.e., there does not appear to be one viable "potentially responsible party" under Superfund.) In addition, the landowners often do not undertake development of their property themselves. This means that the developer may be the entity that has relevant knowledge and/or technical capacity to conduct investigation and/or remediation / restoration on a given landowner's property. At a minimum, the developers should be a part of the work group process.

This situation will also require flexibility and innovation on the part of the work group participants to take responsibility for and find funding for any work that needs to be done. A stakeholder process, where all potentially affected interests work together to create a vision for the area, gather needed information, and make joint decisions to implement that vision, is ideally suited to deal with this type of situation.

[2] Collaborative decision-making processes are generally designed to include a "representative" or two from each interest group, rather than all potentially affected individuals and entities, in order to maintain a manageable group size.

Who Needs/Wants to be Involved

Based on the interviews conducted as part of this convening, Chart 1 reflects our identification of individuals and entities that may have an interest in the Lower Silver Creek work group's activities and discussions. This listing will need to be revisited periodically as more is learned about the nature and extent of contamination, as well as the nature and extent of remediation / restoration options. In particular, more or different landowners and/or developers may need to be included in the work group discussions as the focus of the group sharpens.

CHART 1:[3]

Name	Agency	Part of Full Stakeholder Group ??	Nature of Interest	Suggested as Work Group Member
KathrynHernandez	EPA Region 8	Yes	Superfund site project manager	Yes
Mo Slam Ty Howard	UDEQ / DERR	Yes	Superfund site project manager	Yes
John Whitehead Kari Lundeen	UDEQ / DWQ	Yes	TMDL / watershed coordinator	Yes
Brent Ovard	Summit County Health Dept	Yes	County Health Department	Yes
Sally Elliott	Summit County Commission	Yes	- Co. Commissioner -citizen on SH group	Yes
Michele Devaney Denise Hytonen	Summit County Comm.Development	No	Planning / zoning agency	Yes
Chris Cline	US Fish & Wildlife	Yes	Natural resource damages	Yes
Pam Kramer	UT Div Wildlife Resources	No	Wildlife habitat	Yes
Jason Gipson	US Corps of Engineers	No	Jurisdictional wetlands	Yes
Kerry Gee	United Park City Mines	Yes	- Coordination with UPCM-led activities - Watershed vision	Yes
John Knudson	UT Dept of Natural Resources / Parks	Yes	Owns rail trail	Yes
Jeff Schoenbacher Tom Bakaly	Park City Mun.Corporation	Yes	LSC landowner	Yes
20+ Landowners		No	LSC landowners	Yes
Jeramy Green	Promontory Development	No	LSC developer	Yes
Walt Plum	Silver GateRanches	No	LSC developer	Yes
Not yet identified	Not yet identified	No	LSC developers, but not landowners	Yes

[3] Wherever two names are reflected for one entity, they are considered alternates.

John Tuerff	Citizens for Responsible Growth	???[4]	Citizen advocacy on development issues	Yes
Jennifer Chergo	EPA Region 8	Yes	Community involvement	Resource
Dave Allison	UDEQ / DERR	Yes	Community involvement	Resource
Senta Beyer	Snyderville Basin Recreation District	No	Maintains /develops trails that intersect with rail trail	Resource
Chris Donaldson Kimber Gabryszak	Basin Open Space Advisory Committee	No	$10 million bond to protect and acquire open space	Resource
Barbara Carey RC&D Coordinator	Uinta Headwaters Resource Conservation & Development Council	No	Possible funding and planning resource	Resource

We suggest that the interests identified as "resource" be regularly informed of the work group's efforts and be invited to specific meetings at which they can be used as a resource for discrete work group discussions.

Technical Information Available

In conducting this convening, Ms. Straube has identified the following technical information that may be relevant to the Lower Silver Creek work group's efforts:

- *Innovative Assessment Analytical Results Report*, Lower Silver Creek, Summit County, Utah. Prepared by Ann M. Tillia, Utah Department of Environmental Quality, Division of Environmental Response and Remediation. Final dated 9/25/02. (Available at UDEQ/DERR)
- *TMDL for Silver Creek.* (Available at: http://www.waterquality.utah.gov/TMDL/SilverCreekFinalTMDL_11-15-04.pdf)
- *Fish Consumption Advisory for Trout from Silver Creek.* Utah Department of Environmental Quality. 10/27/04. (Available at: http://www.deq.utah.gov/News/2004/fish_advisory_info_sheet_102704.pdf)
- *Water Resources of the Park City Area, Utah with Emphasis on Ground Water.* Utah Department of Natural Resources (UDEQ/DERR) and US Geological Survey (USGS). Technical Publication No. 85. 1986. (Available at UDEQ/DWQ ??)

[4] While CARG was originally represented on the full watershed Stakeholders' Group, no CARG representative has attended meetings in the past 2+ years.

- *Principal Locations of Metal Loading from Floodplain Tailings, Lower Silver Creek, Utah, April 2004.* U.S. Geological Survey (USGS), prepared in cooperation with UDEQ. Draft 2005. (Currently at UDEQ / DWQ offices; not yet circulated to other agencies or entities)
- *Quantification of Metal Loading to Silver Creek Through the Silver Maple Claims Area, Park City, Utah, May 2002.* U.S. Geological Survey (USGS), prepared in cooperation with BLM and UDEQ. Water-Resources Investigations Report 03-4296. 2004. (Available at EPA and UDEQ)

Suggested Process

The Lower Silver Creek Work Group process design we suggest has been tailored to address the challenges identified in a previous section of this report.

Sponsor: This work group, as an outgrowth of the existing Silver Creek Watershed Stakeholders Group, should be sponsored by EPA. As is the case with the full Stakeholders Group, all entities retain their full decision-making authority and commit solely to coordinate activities that will impact the Lower Silver Creek environment to the greatest extent possible. EPA's main role as sponsor of the collaborative effort is to provide funding for the logistics of the group's meetings, including publicity and independent facilitation.

Work Group Membership: Suggested work group membership is reflected in Chart 1. While this group size is initially quite large (15 individually identified members *plus* 20+ landowners and an unknown number of developers), the design of the first two work group meetings is intended to assist the group in honing its focus so that individual landowners and developers can self-determine whether continued meeting attendance or simply remaining "in the loop" will be appropriate to meet their interests. It is anticipated that, based on the results of the first two meetings, a natural attrition will occur.

Landowners and known developers will be sent a letter from Ms. Straube (by certified mail) containing an announcement about the Lower Silver Creek work group process, a description of the first two work group meetings, and a personal invitation to participate. We suggest that the invitation to participate come from an independent third party to emphasize the collaborative non-directive nature of the work group process.

The interests identified on Chart 1 as "resource" will not be an active part of the work group, but may attend any meetings they are interested in. They can be invited to participate in specific meetings where their knowledge and expertise will be most helpful. They will be specifically invited to participate in the second (visioning) work group meeting. In addition, these entities will receive all work group meeting summaries. These interests should be encouraged to contact the facilitator directly at any time with any questions or concerns.

Work Group Activities: Long term, it is our view that the work group will need to accomplish the following tasks:

- identify existing information about soil and water contamination within the southern portion of Lower Silver Creek
- identify data gaps, if any, and ways to gather the additional information
- create a vision for the future in this section of Lower Silver Creek, especially the areas containing or impacted by contaminated tailings
- identify options for remediation / restoration to meet the vision
- assign responsibility for implementation of remediation /restoration to meet the vision.

These work group tasks will be accomplished over a long period of time, and the work group process will necessarily be flexible and iterative. We suggest that the work group begin its efforts with two initial meetings, designed both to outline the potential scope of its activities and to begin creating the vision for the future that will serve as a goal for all future activities.

First Meeting. We suggest that the first meeting be held in early to mid-May. The primary goal of this meeting will be to identify and integrate known information about contaminated areas in Lower Silver Creek, the potential source(s) of contamination, vulnerable resources, and to correlate this information to land ownership and known development plans.

While all members of the work group will be welcome to attend this first meeting, the following members will be specifically invited (as opposed to given notice of) the meeting to share whatever relevant data they may have:

- EPA
- DEQ/DERR
- DEQ/DWQ
- Summit County Health
- Summit County Commission
- Summit County Community Development
- US Fish & Wildlife
- UT Div of Wildlife Resources
- US Army Corps of Engineers
- United Park City Mines
- UT Dept of Natural Resources / Parks
- Park City Municipal Corporation

Work group meetings will need to be held in a location that is potentially large enough to hold 40-45 people, just in case all interested parties choose to attend. We suggest the Summit County Services Building (Richins Building) in Kimball Junction as a suitable location.

A tentative agenda for the first work group meeting is attached to this convening report.

Second Meeting. We suggest that shortly after the first meeting, but with enough time to gather additional existing information and prepare visuals if necessary, the second meeting be held. The primary goal of this second meeting will be to present the known information about contaminated areas and vulnerable resources in Lower Silver Creek to the full work group, including all landowners and known developers, and to offer an opportunity for the full group to share their respective visions for this area. This will help guide the work group's next steps in conducting further investigation, if necessary, and in pursuing remediation / restoration options.

All interests identified on Chart 1 (both work group members and "resources") should be invited to attend this second meeting and to participate actively in the visioning part of the meeting. It is hoped that all landowners and developers will attend this second meeting.

Ongoing Public Outreach. It is critical that the work group's efforts be open and transparent, to build confidence in both the process and its outcome(s). Landowners, developers and the general public should have regular access to the data and other information that the work group reviews and generates. Activities that will support transparency include:

- Forwarding work group meeting minutes to all work group members and resource interests
- Updating and maintaining relevant information on the watershed Stakeholder Group website (www.silvercreekpc.org)
- Maintaining an information repository (hard copies) at a central location.

Tentative Agenda for First Work Group Meeting

Suggested Invited Participants: anyone with knowledge and/or data about existing soil and water contamination within the southern portion of Lower Silver Creek, potential sources thereof, and/or vulnerable environmental resources.

Suggested Outcomes of Meeting:

- Agreement with work group process and approach
- Consensus on geographic boundary of work group area
- Identification of additional stakeholders, if any
- Suggested changes for full Stakeholders' Group Statement of Goals to make it applicable to Lower Silver Creek work group
- Identification of all known information / data re: contamination, potential sources and vulnerable resources
- Assignments re: putting info / visuals together for second work group meeting
- Assignments of responsibility for ongoing public outreach (could be postponed to a later meeting, if run out of time)

Suggested Meeting Length: 2-3 hours

Suggested Agenda:

- intro and welcome to process – EPA
- summary of convening report and suggested process / how this meeting fits into process – Facilitator (ground rules on back of name tents)
- confirm geographic boundary -- Facilitator
- confirm stakeholders included in work group – anyone missing? -- Facilitator
- go over statement of goals from full Stakeholders Group and suggest necessary changes for Lower Silver Creek -- Facilitator
- review known information – EPA lead, with round robin
- next steps to provide info to full work group in second meeting -- Facilitator
    - who to present what?
    - create info / visuals for second meeting
- assign responsibility for ongoing public outreach (if time permits) -- Facilitator
    - update and maintain website – EPA re-take responsibility
    - information repository
    - other suggestions

Tentative Agenda for Second Work Group Meeting

Suggested Invited Participants: all work group members, including all landowners and known developers, and "resource" interests

Suggested Outcomes of Meeting:

- Agreement with work group process and approach
- Identification of additional stakeholders, if any
- Consensus on statement of goals (as revised for work group)
    - If changes are suggested in this meeting that are major / contentious, table for full discussion at future meeting
- Identification of additional known information, if any
- Group vision for area – or clear idea of where differences are re: vision
- Next meeting
    - When
    - What to cover / accomplish
    - Which LOs/developers want to be active participants v. kept informed

Suggested Length for Meeting: half day (3-4 hours)

Suggested Agenda:

- intro and welcome to process – EPA
- summary of convening report and suggested process / how this meeting fits into process – Facilitator (ground rules on back of name tents)
- confirm geographic boundary -- Facilitator
- confirm stakeholders included in work group – anyone missing? -- Facilitator
- go over statement of goals from full SH group and suggested changes for Lower Silver Creek – any comments/concerns -- Facilitator
- presentation on known information re: contamination, potential sources and vulnerable resources – Presenter(s) to be determined at first meeting
    - anything to be added?
    - Q/A
- visioning for area
    - brief round robin identification of each participant's future plans for their part of the area (and timing)
    - divide participants into pre-selected groups of 8-10 people (a mix of interests in each group) and have them brainstorm about a vision for the area – what should it look like post-development and post-remediation / restoration
    - small groups report back to full group
    - clarifying Q/A
- next steps for work group (in future meetings) -- Facilitator
    - if general consensus re: vision for area, identify any additional data gathering and move on, when ready, to generating options for implementing vision

        - if no general consensus re: vision for area, identify any additional data gathering and explore pros/cons of different visions for future
    - Have LOs self-select who comes to future meetings -- Facilitator
    - Public outreach / keeping them informed -- Facilitator
        - Website
        - Preferences?

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Monday, June 5, 2006 – 1-5 pm

Snyderville Basin Special Recreation District
Trailside Offices (Community Room)
5715 Trailside Drive, Park City

Meeting Summary

Meeting Attendees

Michele Devaney	Summit County Planning	mdevaney@co.summit.ut.us
Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Kerry Gee	United Park City Mines	kcgee@unitedpark.com
Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
Mike Luers	Snyderville Basin Water Reclamation District	mluers@sbwrd.org
Brent Ovard	Summit County Health	bovard@utah.gov
Michael Boyle	Snyderville Basin Water Reclamation District	mboyle@sbwrd.org
Derrick Radke	Summit County Engineering	dradke@co.summit.ut.us
Sally Elliott	Summit County Commission	selliott@co.summit.ut.us
John Knudson	Utah State Parks	johnknudson@utah.gov
Chuck Zuercher	Angus & Ella Pace	(b) (6) [redacted]
Kari Lundeen	UDEQ / DWQ	klundeen@utah.gov
Paul Burnett	UT Div of Wildlife	paulburnett@utah.gov
Dave Burbidge	Burbidge Brothers	(b) (6) [redacted]
Mike Behunin	Anderson Development	mikeb@and-dev.com
Mike Dalley	Jack B. Parson Co.	mdalley@stakerparson.com
Lindsay Ford	Florence Gillmor	lford@parsonsbehle.com
Gale Pace	Ella Pace	(b) (6) [redacted]
Doug Evans	Mountain Regional Water	doug@mtregional.org
Chris Cline	FWS	chris_cline@fws.gov
Standley Pace	Silver Gate Ranches	
Mike Pace	Silver Gate Ranches	(b) (6) [redacted]
Dave Allison	UDEQ / Community Involve.	dallison@utah.gov
Scott Everett	UDEQ / DERR	severett@utah.gov
Joe Tesch	Bob Larsen / Silver Creek	joet@teschlaw.com
Ron ivie	Park City Municipal	rivie@parkcity.org
Michele Straube	Facilitator	mstraube@mindspring.com

Handout – Agenda (with list of all invited stakeholders on the back)

Perspectives on Silver Creek Watershed Stakeholder Group

Handout – Summary of Stakeholder Group process and recent accomplishments

Sally Elliott, Summit County Commissioner and a watershed stakeholder group member from the beginning, reflected on the positive relationships and innovative solutions that this collaborative process has fostered. In comparing Lower Silver Creek to the Prospector Square area, she emphasized that we have the opportunity to correct problems *before* construction occurs. She concluded her observations by stating that she "believes in this [stakeholder group] process," and she urged the group to continue to work together.

Kerry Gee, environmental manager for United Park City Mines and a long-time watershed stakeholder group member, shared his experience that dealing with existing contamination is a prerequisite to any future property title exchanges – whether a current landowner plans to develop the land or not, any future owner will expect that remediation has been addressed. He acknowledged that addressing remediation through the stakeholder process has been time-consuming and at times "tense", but that long-term this cooperative approach is worthwhile. He told the group that they could contact him any time with any questions about the process, as he has already been through it. He also offered the Silver Creek Watershed Stakeholder Group website as a resource: www.silvercreekpc.org.

Work Group Process Design

After introductions, Michele Straube summarized the Lower Silver Creek work group convening report and its recommendations for work group design. The purpose of today's meeting is to kickstart the work group process and to get all work group members to the same level of knowledge about contaminated areas in Lower Silver Creek, the potential source(s) of contamination, vulnerable resources, and to correlate this information to land ownership and known development plans.

The group agreed that the south-north boundaries of the Lower Silver Creek work group area should be State Route 248 and Atkinson (aka "the dairy"). The east-west boundaries of the work group area follow the floodplain and contours of the land. These geographic boundaries may change as additional information is gathered about contaminated areas and potential source(s) of contamination.

No additional stakeholder interests were identified. Anyone having contact information for stakeholders for whom no individual name is listed should let Michele Straube know.

Handout – Draft Lower Silver Creek Work Group Statement of Goals. The group expressed no suggested changes or concerns about the draft statement of goals.

The facilitator reviewed the behavioral norms for work group conversations (printed on the back of the name tents). She stated the hope that these would be learning conversations, in which participants would listen to understand each other and ask clarifying questions. She emphasized that it's ok to disagree, that disagreement is an

opportunity to learn and find creative solutions. She also encouraged work group members to keep the conversation constructive by looking for common ground, rather than staking out positions and defending them.

Known Information about Silver Creek Area

Handouts:

- PowerPoint presentation / slides – Kari Lundeen
- Map of Silver Creek Mill site, showing historical features
- Silver Creek TMDL sampling locations
- Lower Silver Creek landownership (on aerial photo)
- Map showing potential wetland areas within Lower Silver Creek area
- PowerPoint presentation / slides – Scott Everett

Kari Lundeen (UDEQ Division of Water Quality) gave a summary of water quality and soils contamination information available for the Lower Silver Creek work group area. Highlights of the presentation:

- UDEQ/DWQ water quality review (through the Total Maximum Daily Load / TMDL process under the Clean Water Act) identified cleanup priorities:
    - Zinc -- between Park City and Atkinson
    - Cadmium – between Richardson and Atkinson, and above Park City monitoring station
    - The majority of the pollutant load comes from non-point sources (dispersed sources such as runoff) from Park City to Atkinson
- Fish consumption advisory exists on Silver Creek for arsenic
- UDEQ/DERR innovative assessment (pre-CERCLIS screening under Superfund) found elevated levels of metals:
    - Surface water in excess of drinking water standards: lead, antimony, cadmium
    - Sediment: lead, arsenic, cadmium, mercury, zinc, antimony
    - Soil: lead, arsenic, mercury, zinc, chromium, antimony

Scott Everett (UDEQ toxicologist) gave a brief primer on metal toxicity – summarizing the types of human health and ecological risks generally presented by elevated metal levels. He started the presentation with a general definition of risk:

Risk = Exposure x. Toxicity

In assessing the level of risk, one needs to look at *both* whether and how humans (or ecological resources) are exposed to the metals *and* the toxicity of the metals. A reduction in either exposure or toxicity reduces the level of risk. Dr. Everett emphasized that no formal risk assessment has been conducted for the Lower Silver Creek area.

Mountain Regional Water Company may have groundwater data for the Lower Silver Creek area. They will share any such data with Kari Lundeen, UDEQ.

Site-Specific Future Plans / Vision for Lower Silver Creek Area

Two participants indicated their desire to develop property to a higher and better use. There was some discussion about the likelihood that future property use would drive the timing and extent of remediation / restoration.

UDEQ plans to conduct additional investigations in the Lower Silver Creek area in early fall 2006. This will involve the use of piezometers to measure groundwater flow through the tailings materials, definition of source areas, and possibly leachability studies to measure the rate at which metals leach from the tailings materials into the groundwater. It is anticipated that sample analyses will be ready for review by late fall 2006.

EPA has sought funding for additional investigations in the Lower Silver Creek area to support an options analysis. The objective of these investigations would be to gather any needed additional data to identify, compare and contrast remediation options, with the ultimate goal of providing the work group with information for consideration of the most strategic and cost-effective remediation / restoration options.

There was a brief discussion about potential source(s) of funding for cleanup. Kathy Hernandez noted that there are minimal funds available under section 319 of the Clean Water Act. Larger funds possibly accessible through Superfund are not available here unless and until the site has been listed on CERCLIS and included in the Superfund program. The other potential source of cleanup funding is landowners and developers.

The following topics have been identified for possible future work group discussions:

- Need for additional investigations
    - Lead bioavailability study
    - Airborne exposure issues
    - Alternatives analysis
- Action levels / cleanup levels
- Need for tailings repository, other than Richardson Flats

Next Work Group Meeting

The next Lower Silver Creek work group meeting will be scheduled in late fall after the sampling analyses are available. All work group members will be notified when the meeting is scheduled.

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Monday, June 5, 2006 – 1-5 pm

Snyderville Basin Special Recreation District
Trailside Offices (Park Room)
5715 Trailside Drive, Park City

Agenda – 6/1/06 Draft

Facilitator: Michele Straube
mstraube@mindspring.com; 801-583-6362

Meeting Objectives:

- Introduce work group process
- Present known information / data about soil and water contamination in Lower Silver Creek area, potential source(s) and vulnerable resources
- Identify additional known information, if any
- Share stakeholders' future plans / visions for Lower Silver Creek area
- Identify which landowners/developers want to be active work group participants v. being kept informed
- Identify next steps

1:00 – 1:15	Introductions and Welcome	Kathy Hernandez, EPA Michele Straube
1:15 – 1:35	Perspectives on Silver Creek Watershed Stakeholders Process	Sally Elliott Kerry Gee
1:35 – 2:00	Work Group Process Design Summary of Convening Report Geographic Boundary Stakeholders	Michele Straube

2:00 – 2:30	Overview of Known Information about Lower Silver Creek area	Kari Lundeen, UDEQ
	Q/A	
	Additional available information?	Full Group
2:30 – 2:45	BREAK	
2:45 – 3:00	Risks presented at site	Scott Everett UDEQ toxicologist
	Q/A	
3:00 – 4:45	Site-specific future plans / vision for Lower Silver Creek area	Round robin
3:45 – 4:00	Next steps Future involvement / outreach Statement of Goals Open Issues	Michele Straube

Invited:

Name	Agency
Kathryn Hernandez	EPA Region 8
Jennifer Chergo	EPA Region 8 / Community Involvement
Dan Wall	EPA/FWS
Mo Slam	UDEQ / DERR
Dave Allison	UDEQ / Community Relations
Kari Lundeen or John Whitehead	UDEQ / DWQ
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Michele Devaney or Nora Shepard	Summit County Community Development
Derrick Radke	Summit County Engineer
Chris Cline	US Fish & Wildlife
Pam Kramer or Paul Burnett	UT Div Wildlife Resources
Jason Gipson	US Corps of Engineers
John Knudson	UT Dept of Natural Resources / Parks
Kerry Gee	United Park City Mines
John Tuerff	Citizens for Responsible Growth
Leo Williams	Mountain Regional Water District
Senta Beyer	Snyderville Basin Recreation District
Chris Donaldson or Kimber Gabryszak	Basin Open Space Advisory Committee
Barbara Carey	Uinta Headwaters RC&D Council
Carol Potter	Mountain Trails Foundation
Jeff Schoenbacher	Park City Municipal Corporation
Mike Luers	Snyderville Basin Water Reclamation District
	Standley B and Beverly F Pace
Chuck Zuercher	Angus and Ella Pace
	Silver Creek / Robert Larsen Investors
Lindsay Ford, Esq.	Florence J. Gillmor
	Nadine Gillmor Fausett Trustee
Lindsay Ford, Esq.	Edward L. Gillmor
Mike Dalley	Jack B. Parson Companies
Tony Christofferson	Geneva Rock Products, Inc.
	Lynn M and Cynthia G Gaufin
	Silver Creek Properties LLC
Jay Aguilar	Summit County A Municipal Corporation
	Municipal Bldg Authority of Park City
	BVD Properties LLC
	Forestdale Investments LLC
	Byer Excavating Inc.
	Stoly Associates LLC
Richard N. Reese	Richard N. Reese Family LP
Dave Burbidge	RDB LLC; Richard D. Burbidge
	Johnson International, Inc.
	Lacy Limited Liability Co.
	Park City Auto
	Sundborn LLC
	Qwest Corp.
Walt Plum	Silver Gate Ranches
Mike Benunin	Anderson Development
Jeramy Green	Pivotal Promontory Development LLC

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Monday, May 8, 2006 – 1-4 pm

Snyderville Basin Special Recreation District
Trailside Offices (Community Room)
5715 Trailside Drive, Park City

Meeting Summary

Meeting Attendees

Michele Devaney	Summit County Planning	mdevaney@co.summit.ut.us
Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Kerry C. Gee	United Park City Mines	kcgee@unitedpark.com
Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
Mike Luers	Snyderville Basin Water Reclamation District	mluers@sbwrd.org
Brent Ovard	Summit County Health	bovard@utah.gov
John Whitehead	UDEQ / DWQ	jwhitehead@utah.gov
Michael Boyle	Snyderville Basin Water Reclamation District	mboyle@sbwrd.org
Derrick Radke	Summit County Engineering	dradke@co.summit.ut.us
Sally Elliott	Summit County Commission	selliott@co.summit.ut.us
John Knudson	Utah State Parks	johnknudson@utah.gov
Chuck Zuercher	Angus & Ella Pace	(b) (6) [redacted]
Jason Gipson	Corps of Engineers	jason.a.gipson@usace.army.mil
Kari Lundeen	UDEQ / DWQ	klundeen@utah.gov
Paul Burnett	UT Div of Wildlife	paulburnett@utah.gov
Dave Burbidge	Burbidge Brothers	(b) (6) [redacted]
Tony Cristofferson	Geneva Rock	tchristofferson@clydeinc.com
Mike Benunin	Anderson Development	mikeb@and-dev.com
Michele Straube	Facilitator	mstraube@mindspring.com

Work Group Process Design

After introductions, Michele Straube summarized the Lower Silver Creek work group convening report and its recommendations for work group design. She stated that the primary purpose of this first meeting was to identify and integrate known environmental information about the Lower Silver Creek work group area, with the intention of presenting this synthesized knowledge to the full work group at a subsequent meeting. No substantive discussions or decisions about Lower Silver Creek were on the agenda for this first meeting.

The group agreed that the south-north boundaries of the Lower Silver Creek work group area should be State Route 248 and Atkinson (aka "the dairy"). Later discussions reflected that the east-west boundaries of the work group area follow the floodplain and contours of the land. These geographic boundaries will be confirmed by the full work group.

Several additional stakeholder interests were identified that had not been included in the convening report:

- Derrick Radke, Summit County Engineer
- Brian Kimball, US Geological Survey (data resource)
- Michael Luers, Snyderville Basin Water Reclamation District.

These stakeholders will be added to the work group, and the question will be revisited with the full work group.

The group reviewed the Statement of Goals adopted by the Silver Creek Watershed Stakeholders' Group and suggested the following changes to make them more relevant to the Lower Silver Creek work group's efforts:

- Refer to the Summit County general plan and Lower Silver Creek in paragraphs 1.2.1 and 1.2.2.
- Refer to achieving compliance with the TMDL, to the extent possible.

The work group's Statement of Goals will be reviewed by the full work group at its next meeting.

Known Information about Silver Creek Area

Kari Lundeen gave a summary of water quality and soils contamination information available for the Lower Silver Creek work group area, drawn from the following resources:

- *Innovative Assessment Analytical Results Report*, Lower Silver Creek, Summit County, Utah. Prepared by Ann M. Tillia, Utah Department of Environmental Quality, Division of Environmental Response and Remediation. Final dated 9/25/02. (Available at UDEQ/DERR)
- *TMDL for Silver Creek.* (Available at: http://www.waterquality.utah.gov/TMDL/SilverCreekFinalTMDL_11-15-04.pdf)
- *Fish Consumption Advisory for Trout from Silver Creek.* Utah Department of Environmental Quality. 10/27/04. (Available at: http://www.deq.utah.gov/News/2004/fish_advisory_info_sheet_102704.pdf)
- *Water Resources of the Park City Area, Utah with Emphasis on Ground Water.* Utah Department of Natural Resources (UDEQ/DERR) and US Geological Survey (USGS). Technical Publication No. 85. 1986. (Available at UDEQ/DWQ ??)
- *Principal Locations of Metal Loading from Floodplain Tailings, Lower Silver Creek, Utah, April 2004.* U.S. Geological Survey (USGS), prepared in cooperation with UDEQ. Draft 2005. (Currently at UDEQ / DWQ offices; not yet circulated to other agencies or entities)
- *Quantification of Metal Loading to Silver Creek Through the Silver Maple Claims Area, Park City, Utah, May 2002.* U.S. Geological Survey (USGS), prepared in

CommUnity Resolution Inc. Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

cooperation with BLM and UDEQ. Water-Resources Investigations Report 03-4296. 2004. (Available at EPA and UDEQ).

The following additional information is available:

- Informal boundaries of wetlands, based on requests for 404 permits and national wetlands inventory – Corps of Engineers
- Mapping of 100-year floodplain – Corps of Engineers and Summit County Engineer
- Aerial photograph of meadow area – Corps of Engineers
- Aerial photograph of Lower Silver Creek Area, from which topographic map can be generated – United Park City Mines
- Land ownership information (plat map) – Summit County Planning
- Fish / amphibian data (from 5 years ago) – UT Division of Wildlife Resources
- Quarterly information about metals coming into and leaving the water treatment plant – Snyderville Basin Water Reclamation District
- Additional water quality sampling since TMDL – UDEQ / DWQ
- Aerial photograph from 2003 – GIS consortium

The GIS consortium will be updating aerial photography during the fall of 2006. They will need to know specific needs to include in their effort by mid-summer 2006.

Landowners and developers are particularly interested in the following information:

- an overlay of property ownership information and known wetlands
- an overlay of property ownership information and known tailings / areas of soil contamination, and
- easements (e.g., conservation, access) and other land development restrictions.

The following topics were suggested for the next work group meeting:

- an overlay of property ownership information and known wetlands – to be created by Jason Gipson, Corps of Engineers, using the UPCM aerial photograph, Summit County property ownership information, and Corps of Engineers wetland delineations
- an overlay of property ownership information and known tailings / areas of soil contamination – to be created by Kathy Hernandez, EPA, using UDEQ/DERR data, 100-year floodplain information, and Summit County property ownership information; lead and arsenic will be the marker metals
- more detailed information on the additional sampling that UDEQ hopes to conduct in the Lower Silver Creek area this summer, as well as the alternatives analysis that EPA wishes to have conducted under contract
- information on the health and ecological risks presented by the Lower Silver Creek area – to be presented by Scott Everett, UDEQ toxicologist, in collaboration with UDEQ technical staff and EPA
- a brief history of the Silver Creek Watershed Stakeholders' Group process, as well as perspectives on addressing watershed issues collaboratively – Sally Elliott and Kerry Gee
- a brief summary of the regulatory context in which any remediation activity will have to take place.

CommUnity Resolution Inc. Phone 801-583-6362 Fax 801-582 2043 mstraube@mindspring.com

The following topics of discussion were identified for future work group discussions:

- need for a lead bioavailability study
- need for a tailings repository, other than Richardson Flats

Ongoing Public Outreach

The existing watershed stakeholders' group website (www.silvercreekpc.org) is currently being maintained by United Park City Mines. Kerry Gee stated that they are willing to continue updating the website as additional information is provided to them, including adding a section for the Lower Silver Creek work group.

Next Work Group Meeting

The next Lower Silver Creek work group meeting will be held Monday, June 5, 2006, from 1 – 5 pm, at the Snyderville Basin Special Recreation District Trailside Offices (Park Room), 5715 Trailside Drive, Park City.

CommUnity Resolution Inc. Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Monday, May 8, 2006 – 1-4 pm

Snyderville Basin Special Recreation District
Trailside Offices (Community Room)
5715 Trailside Drive, Park City

Agenda

Facilitator: Michele Straube
mstraube@mindspring.com; 801-583-6362

Meeting Objective: Identify and integrate known information / data about soil and water contamination in Lower Silver Creek area, potential source(s) and vulnerable resources. This information will be presented to the full work group (including landowners and developers) at a subsequent meeting, to be scheduled.

1:00 - 1:15	Introductions and Welcome	Kathy Hernandez, EPA Michele Straube
1:15 – 2:00	Work Group Process Design Summary of Convening Report Geographic Boundary Stakeholders Statement of Goals	Michele Straube
2:00 – 3:30 (with break)	Known Information about Lower Silver Creek area Overview Cataloguing Next steps to integrate info Schedule next work group meeting Presentations Audio-visual needs	 UDEQ Round robin Michele Straube
3:30 – 4:00	Ongoing public outreach	Michele Straube

Invited:

Name	Agency
KathrynHernandez	EPA Region 8
Mo Slam	UDEQ / DERR
John Whitehead Kari Lundeen	UDEQ / DWQ
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Michele Devaney	Summit County Comm.Development
Chris Cline	US Fish & Wildlife
Pam Kramer	UT Div Wildlife Resources
Jason Gipson	US Corps of Engineers
Kerry Gee	United Park City Mines
John Knudson	UT Dept of Natural Resources / Parks
Jeff Schoenbacher	Park City Mun.Corporation
Jennifer Chergo	EPA Region 8
Dave Allison	UDEQ / DERR

Sent Notice of Meeting and May Attend:

20+ Landowners	
Jeramy Green	Promontory Development
Walt Plum	Silver Gate Ranches
Michael Hutchings	Anderson Development
Other LSC developers	Not yet identified
John Tuerff	Citizens for Responsible Growth
Leo Williams	Mountain Regional Water District

CommUnity Resolution Inc.

Facilitation & Mediation
Environmental Consulting
Dispute Resolution Training
Participatory Process Design

2915 East Oakhurst Drive Salt Lake City, UT 84108 Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

Silver Creek Watershed Stakeholders Group
Lower Silver Creek Work Group
Convening Report and Proposed Process Design

April 24, 2006

Introduction

The Silver Creek Watershed Stakeholders' Group was started in 1999. The group initially focused on the upper portion of the watershed, and many environmental improvements have been accomplished in that section of the watershed. The group has had some meetings to explore investigation and remediation options in the middle reach of Silver Creek. More information about the full stakeholder group and its activities can be found at www.silvercreekpc.org.

The Stakeholders' Group was initially convened and the group process designed by an independent third party facilitator -- Mike Hughes, then with RESOLVE. After the first year or so, the full group conducted its meetings without a facilitator until recently. A local independent third party facilitator – Michele Straube with CommUnity Resolution, Inc. – was hired in 2001 to convene and design a collaborative process for a stakeholder work group focused on soils issues in the Prospector Square area. The soils work group met for several years and successfully completed its work in spring 2004. In 2006, Ms. Straube began facilitating the full Stakeholders' Group. Third party facilitation services are being paid for by EPA Region VIII.

At its January 13, 2006 meeting, the full Stakeholders' Group tasked the facilitator to convene a work group to focus specifically on Lower Silver Creek. Several stakeholders indicated that current and future development plans for properties abutting Lower Silver Creek make it timely to identify and address any remediation / restoration requirements in this lower stream segment.

Michele Straube met, by telephone and in person, with stakeholders in the full watershed group and other people to gather needed information for creating an effective Lower Silver Creek work group. She asked questions about what interests and individuals should be included in the work group, and what some of the potential issues were likely

to be. Landowners, as well as known developers, for this portion of Lower Silver Creek were identified, but no effort has been made yet to contact them personally.[1] Based on that information and on independent research, this convening report summarizes what Ms. Straube learned and her process suggestions for the work group's first two meetings and beyond.

Geographic Boundary

The relevant geographic reach for the Lower Silver Creek work group is a matter of interpretation. Everyone agrees that the upstream end begins at Utah State Route 248 (aka the northern end of Richardson Flats). The full Stakeholders Group asserted at their January 2006 meeting that the relevant "Lower Silver Creek" area ended at "the dairy" (aka Atkinson, this stream segment is also sometimes referred to as the southern portion of Lower Silver Creek), and most interviewees have agreed with that boundary. One interviewee suggested that there is known contamination from mining in Silver Creek all the way from Route 248 to the Silver Creek / Weber River confluence in Wanship, and that therefore this entire reach should be a part of the work group's discussions.

An innovative site assessment conducted by UDEQ in 2001/2002 collected analytical samples from Route 248 to the confluence in Wanship, and concluded that all of the Lower Silver Creek area (southern and northern portions) should be placed on the CERCLIS list for further investigation and possible remediation under Superfund. A visual reconnaissance of the area confirms that the topography changes drastically at Atkinson, with the northern portion of Lower Silver Creek being confined within canyon walls, along with the rail trail and the I-80 highway corridor. Thus, the conditions possibly affecting Silver Creek stream quality (mine tailings, land use, infiltration, etc.), the options for remediation / restoration, and the stakeholders who will have control over and/or be affected by any remediation / restoration appear to be quite different in the southern and northern portions of Lower Silver Creek.

For these reasons, Ms. Straube recommends that the geographic boundary of the Lower Silver Creek work group be initially limited from Route 248 to the area referred to as "the dairy" or "Atkinson" (the southern portion of Lower Silver Creek). The work group should revisit this recommendation in its first meeting, and if confirmed, can expand its focus and geographic boundary to include the northern portion of Lower Silver Creek at a later time when sufficient progress has been made on investigating and remediating / restoring the southern portion.

The remainder of this convening report assumes that the work group will initially address the southern portion of Lower Silver Creek, as described above.

---

[1] Landowners were not contacted personally in this convening phase in part because only tax record contact information was available (often only PO box addresses). In addition, we concluded early on that *all* landowners would need to be involved in whatever process was designed, and we felt that a preliminary telephone contact, without firm ideas about how to move forward, might unduly raise concerns within this interest group. (See discussion below.)

Potential Issues and Challenges

The southern portion of Lower Silver Creek was historically used for mining-related activities. The Big Four Mill operated until 1918. In the mid-1900s, some tailings were moved and removed off-site for re-processing. In 2002, UDEQ conducted an innovative site assessment and recommended that the site be included on CERCLIS for further investigation under the Superfund program. This recommendation has not yet been implemented.

The riparian landscape in this portion of Lower Silver Creek has been described as including many non-vegetated tailings piles and numerous jurisdictional wetlands areas. Development interest is growing:

- Some commercial development exists upland on the west side of the stream.
- The Promontory Development has already completed extensive construction in the upland areas on the east side of the stream. They are in the process of building an equestrian center, also some distance from the stream and known tailings materials.
- A major development, Silver Gate Ranches, was just approved by the Summit County Commission in mid March 2006. The exact location and timing of their construction plans is currently unknown, but can be expected to be imminent.
- Development plans in this area proposed by Anderson Development have not been approved and are currently in litigation.
- It is our understanding that an environmental site assessment is being conducted for land east of Richardson Flats, but no specific details of the precipitating transaction are known.

We are unaware of any other existing or currently planned development in the riparian areas of this portion of Lower Silver Creek.

The rail trail, well-used by the public, follows along the stream through this entire section.

As of 2002, two active drinking water wells existed in the southern portion of Lower Silver Creek, operated by Mountain Regional SSD.

Silver Creek was listed on Utah's 1998, 2000, and 2002 303(d) list of impaired waterways for zinc and cadmium contamination. There has been a fish consumption advisory posted since 2004 for all of Silver Creek, including this lower reach, based on elevated arsenic levels in trout. A TMDL (total maximum daily load) has been established for dissolved zinc and cadmium for Silver Creek, which some interviewees believe is extremely stringent and difficult to attain.

Both history and the present day may present challenges for the Lower Silver Creek work group, which process design should attempt to address.

Current Status of Development Plans. The Summit County Commission approved the Silver Gate Ranches development at its March 15, 2006 meeting. Since no construction permits have been issued yet, we do not know the timing or location of intended construction, or the potential impact (if any) of tailings-related contamination.

Similarly, the existing Promontory development is expanding somewhat closer to the stream. Based on the distance from the stream, potential impact (if any) of tailings-related contamination is thought to be unlikely.

There are current discussions about possible wetland restoration work in the meadow area near the concrete plant.

The coordination of future development and other activities within the Lower Silver Creek work group area with environmental investigation and possible remediation / restoration of this area is critical. The work group will need to educate itself quickly about the relationship between planned development and areas within Lower Silver Creek that may pose a risk to human health and the environment.

Historical Reaction to Regulatory Agencies. The greater Park City area has a long history of resistance to regulatory approaches to local environmental problems, accompanied more recently by successful innovative local solutions. The Prospector Square area is the only area in the United States that Congress has ever exempted from placement on the National Priorities List under Superfund (at Park City's request), yet its local soils ordinance and environmental management system approach to preventing human exposure to contaminated tailings (known as "institutional controls") has received national recognition.

The larger Silver Creek Watershed Stakeholders Group has worked together over the past five years to build working relationships between previously conflicting interests, and to encourage an attitude of collaboration and innovation, rather than regulation and resistance. It is hoped that the participants in the Lower Silver Creek work group who come from the full Stakeholders Group will bring that learning with them and will encourage any new participants who retain the historical resistance to regulatory agencies to keep an open mind. In addition, design of the process to encourage joint fact-finding and exploration of innovative solutions, as well as facilitation of the process by an independent third party (the facilitator), should provide reassurance to reluctant participants.

Landowner Cooperation. There are numerous (over 20) private landowners potentially affected by any investigation and possible remediation / restoration in the southern portion of Lower Silver Creek, some of whom have already established relationships with potential developers. Not all private landowners agreed to provide access to their land for sampling in 2001 when UDEQ was conducting its innovative site assessment. It is believed that some of these entities are philosophically opposed to any land use or other controls on development, and regularly challenge county land use decisions. We do not mention this to question the validity of these

entities' actions, but merely to highlight the potential resistance that some interests may exhibit to the work group's efforts.

Landowner cooperation will likely be essential, however, for any further investigations within Lower Silver Creek and any potential future remediation / restoration. At a minimum, access to property will be necessary. At a maximum, landowner/developer participation in any remediation /restoration may be essential to the effort's success.

The practical import of these facts cannot be determined until more information is available that correlates potential contamination sources and areas possibly requiring remediation / restoration with land ownership and development plans. The Lower Silver Creek work group process must be open, transparent, and sensitive to keeping all landowners and known developers fully informed of its activities, to avoid surprises and misinterpretation to the extent possible.

The large number of landowners, the uniqueness of their individual property interests, and the need for cooperation from individual landowners makes it difficult, if not impossible, to select a "representative" of this interest to participate in the work group process.[2] The process should be designed to offer all landowners the opportunity to participate as fully as they wish in work group activities that may affect their property interest and/or that may require their cooperation. Process design must also be sensitive, however, to the logistical difficulty of working with large groups (greater than 20-25 members), as well as the respectful and efficient use of work group participants' time.

Multiplicity of Entities Potentially Responsible For and/or Capable of Taking Action. By contrast to some other portions of the Silver Creek watershed, there does not appear to be one financially capable entity that could be considered legally responsible for addressing any contamination found and performing remediation / restoration in Lower Silver Creek. (I.e., there does not appear to be one viable "potentially responsible party" under Superfund.) In addition, the landowners often do not undertake development of their property themselves. This means that the developer may be the entity that has relevant knowledge and/or technical capacity to conduct investigation and/or remediation / restoration on a given landowner's property. At a minimum, the developers should be a part of the work group process.

This situation will also require flexibility and innovation on the part of the work group participants to take responsibility for and find funding for any work that needs to be done. A stakeholder process, where all potentially affected interests work together to create a vision for the area, gather needed information, and make joint decisions to implement that vision, is ideally suited to deal with this type of situation.

---

[2] Collaborative decision-making processes are generally designed to include a "representative" or two from each interest group, rather than all potentially affected individuals and entities, in order to maintain a manageable group size.

Who Needs/Wants to be Involved

Based on the interviews conducted as part of this convening, Chart 1 reflects our identification of individuals and entities that may have an interest in the Lower Silver Creek work group's activities and discussions. This listing will need to be revisited periodically as more is learned about the nature and extent of contamination, as well as the nature and extent of remediation / restoration options. In particular, more or different landowners and/or developers may need to be included in the work group discussions as the focus of the group sharpens.

CHART 1:[3]

Name	Agency	Part of Full Stakeholder Group ??	Nature of Interest	Suggested as Work Group Member
KathrynHernandez	EPA Region 8	Yes	Superfund site project manager	Yes
Mo Slam Ty Howard	UDEQ / DERR	Yes	Superfund site project manager	Yes
John Whitehead Kari Lundeen	UDEQ / DWQ	Yes	TMDL / watershed coordinator	Yes
Brent Ovard	Summit County Health Dept	Yes	County Health Department	Yes
Sally Elliott	Summit County Commission	Yes	- Co. Commissioner -citizen on SH group	Yes
Michele Devaney Denise Hytonen	Summit County Comm.Development	No	Planning / zoning agency	Yes
Chris Cline	US Fish & Wildlife	Yes	Natural resource damages	Yes
Pam Kramer	UT Div Wildlife Resources	No	Wildlife habitat	Yes
Jason Gipson	US Corps of Engineers	No	Jurisdictional wetlands	Yes
Kerry Gee	United Park City Mines	Yes	- Coordination with UPCM-led activities - Watershed vision	Yes
John Knudson	UT Dept of Natural Resources / Parks	Yes	Owns rail trail	Yes
Jeff Schoenbacher Tom Bakaly	Park City Mun.Corporation	Yes	LSC landowner	Yes
20+ Landowners		No	LSC landowners	Yes
Jeramy Green	Promontory Development	No	LSC developer	Yes
Walt Plum	Silver GateRanches	No	LSC developer	Yes
Not yet identified	Not yet identified	No	LSC developers, but not landowners	Yes

[3] Wherever two names are reflected for one entity, they are considered alternates.

John Tuerff	Citizens for Responsible Growth	???[4]	Citizen advocacy on development issues	Yes
Jennifer Chergo	EPA Region 8	Yes	Community involvement	Resource
Dave Allison	UDEQ / DERR	Yes	Community involvement	Resource
Senta Beyer	Snyderville Basin Recreation District	No	Maintains /develops trails that intersect with rail trail	Resource
Chris Donaldson Kimber Gabryszak	Basin Open Space Advisory Committee	No	$10 million bond to protect and acquire open space	Resource
Barbara Carey RC&D Coordinator	Uinta Headwaters Resource Conservation & Development Council	No	Possible funding and planning resource	Resource

We suggest that the interests identified as "resource" be regularly informed of the work group's efforts and be invited to specific meetings at which they can be used as a resource for discrete work group discussions.

Technical Information Available

In conducting this convening, Ms. Straube has identified the following technical information that may be relevant to the Lower Silver Creek work group's efforts:

- *Innovative Assessment Analytical Results Report*, Lower Silver Creek, Summit County, Utah. Prepared by Ann M. Tillia, Utah Department of Environmental Quality, Division of Environmental Response and Remediation. Final dated 9/25/02. (Available at UDEQ/DERR)
- *TMDL for Silver Creek.* (Available at: http://www.waterquality.utah.gov/TMDL/SilverCreekFinalTMDL_11-15-04.pdf)
- *Fish Consumption Advisory for Trout from Silver Creek.* Utah Department of Environmental Quality. 10/27/04. (Available at: http://www.deq.utah.gov/News/2004/fish_advisory_info_sheet_102704.pdf)
- *Water Resources of the Park City Area, Utah with Emphasis on Ground Water.* Utah Department of Natural Resources (UDEQ/DERR) and US Geological Survey (USGS). Technical Publication No. 85. 1986. (Available at UDEQ/DWQ ??)

[4] While CARG was originally represented on the full watershed Stakeholders' Group, no CARG representative has attended meetings in the past 2+ years.

- *Principal Locations of Metal Loading from Floodplain Tailings, Lower Silver Creek, Utah, April 2004.* U.S. Geological Survey (USGS), prepared in cooperation with UDEQ. Draft 2005. (Currently at UDEQ / DWQ offices; not yet circulated to other agencies or entities)
- *Quantification of Metal Loading to Silver Creek Through the Silver Maple Claims Area, Park City, Utah, May 2002.* U.S. Geological Survey (USGS), prepared in cooperation with BLM and UDEQ. Water-Resources Investigations Report 03-4296. 2004. (Available at EPA and UDEQ)

Suggested Process

The Lower Silver Creek Work Group process design we suggest has been tailored to address the challenges identified in a previous section of this report.

Sponsor: This work group, as an outgrowth of the existing Silver Creek Watershed Stakeholders Group, should be sponsored by EPA. As is the case with the full Stakeholders Group, all entities retain their full decision-making authority and commit solely to coordinate activities that will impact the Lower Silver Creek environment to the greatest extent possible. EPA's main role as sponsor of the collaborative effort is to provide funding for the logistics of the group's meetings, including publicity and independent facilitation.

Work Group Membership: Suggested work group membership is reflected in Chart 1. While this group size is initially quite large (15 individually identified members *plus* 20+ landowners and an unknown number of developers), the design of the first two work group meetings is intended to assist the group in honing its focus so that individual landowners and developers can self-determine whether continued meeting attendance or simply remaining "in the loop" will be appropriate to meet their interests. It is anticipated that, based on the results of the first two meetings, a natural attrition will occur.

Landowners and known developers will be sent a letter from Ms. Straube (by certified mail) containing an announcement about the Lower Silver Creek work group process, a description of the first two work group meetings, and a personal invitation to participate. We suggest that the invitation to participate come from an independent third party to emphasize the collaborative non-directive nature of the work group process.

The interests identified on Chart 1 as "resource" will not be an active part of the work group, but may attend any meetings they are interested in. They can be invited to participate in specific meetings where their knowledge and expertise will be most helpful. They will be specifically invited to participate in the second (visioning) work group meeting. In addition, these entities will receive all work group meeting summaries. These interests should be encouraged to contact the facilitator directly at any time with any questions or concerns.

Work Group Activities: Long term, it is our view that the work group will need to accomplish the following tasks:

- identify existing information about soil and water contamination within the southern portion of Lower Silver Creek
- identify data gaps, if any, and ways to gather the additional information
- create a vision for the future in this section of Lower Silver Creek, especially the areas containing or impacted by contaminated tailings
- identify options for remediation / restoration to meet the vision
- assign responsibility for implementation of remediation /restoration to meet the vision.

These work group tasks will be accomplished over a long period of time, and the work group process will necessarily be flexible and iterative. We suggest that the work group begin its efforts with two initial meetings, designed both to outline the potential scope of its activities and to begin creating the vision for the future that will serve as a goal for all future activities.

First Meeting. We suggest that the first meeting be held in early to mid-May. The primary goal of this meeting will be to identify and integrate known information about contaminated areas in Lower Silver Creek, the potential source(s) of contamination, vulnerable resources, and to correlate this information to land ownership and known development plans.

While all members of the work group will be welcome to attend this first meeting, the following members will be specifically invited (as opposed to given notice of) the meeting to share whatever relevant data they may have:

- EPA
- DEQ/DERR
- DEQ/DWQ
- Summit County Health
- Summit County Commission
- Summit County Community Development
- US Fish & Wildlife
- UT Div of Wildlife Resources
- US Army Corps of Engineers
- United Park City Mines
- UT Dept of Natural Resources / Parks
- Park City Municipal Corporation

Work group meetings will need to be held in a location that is potentially large enough to hold 40-45 people, just in case all interested parties choose to attend. We suggest the Summit County Services Building (Richins Building) in Kimball Junction as a suitable location.

A tentative agenda for the first work group meeting is attached to this convening report.

Second Meeting. We suggest that shortly after the first meeting, but with enough time to gather additional existing information and prepare visuals if necessary, the second meeting be held. The primary goal of this second meeting will be to present the known information about contaminated areas and vulnerable resources in Lower Silver Creek to the full work group, including all landowners and known developers, and to offer an opportunity for the full group to share their respective visions for this area. This will help guide the work group's next steps in conducting further investigation, if necessary, and in pursuing remediation / restoration options.

All interests identified on Chart 1 (both work group members and "resources") should be invited to attend this second meeting and to participate actively in the visioning part of the meeting. It is hoped that all landowners and developers will attend this second meeting.

Ongoing Public Outreach. It is critical that the work group's efforts be open and transparent, to build confidence in both the process and its outcome(s). Landowners, developers and the general public should have regular access to the data and other information that the work group reviews and generates. Activities that will support transparency include:

- Forwarding work group meeting minutes to all work group members and resource interests
- Updating and maintaining relevant information on the watershed Stakeholder Group website (www.silvercreekpc.org)
- Maintaining an information repository (hard copies) at a central location.

Tentative Agenda for First Work Group Meeting

Suggested Invited Participants: anyone with knowledge and/or data about existing soil and water contamination within the southern portion of Lower Silver Creek, potential sources thereof, and/or vulnerable environmental resources.

Suggested Outcomes of Meeting:

- Agreement with work group process and approach
- Consensus on geographic boundary of work group area
- Identification of additional stakeholders, if any
- Suggested changes for full Stakeholders' Group Statement of Goals to make it applicable to Lower Silver Creek work group
- Identification of all known information / data re: contamination, potential sources and vulnerable resources
- Assignments re: putting info / visuals together for second work group meeting
- Assignments of responsibility for ongoing public outreach (could be postponed to a later meeting, if run out of time)

Suggested Meeting Length: 2-3 hours

Suggested Agenda:

- intro and welcome to process – EPA
- summary of convening report and suggested process / how this meeting fits into process – Facilitator (ground rules on back of name tents)
- confirm geographic boundary -- Facilitator
- confirm stakeholders included in work group – anyone missing? -- Facilitator
- go over statement of goals from full Stakeholders Group and suggest necessary changes for Lower Silver Creek -- Facilitator
- review known information – EPA lead, with round robin
- next steps to provide info to full work group in second meeting -- Facilitator
    - who to present what?
    - create info / visuals for second meeting
- assign responsibility for ongoing public outreach (if time permits) -- Facilitator
    - update and maintain website – EPA re-take responsibility
    - information repository
    - other suggestions

Tentative Agenda for Second Work Group Meeting

Suggested Invited Participants: all work group members, including all landowners and known developers, and "resource" interests

Suggested Outcomes of Meeting:

- Agreement with work group process and approach
- Identification of additional stakeholders, if any
- Consensus on statement of goals (as revised for work group)
  - If changes are suggested in this meeting that are major / contentious, table for full discussion at future meeting
- Identification of additional known information, if any
- Group vision for area – or clear idea of where differences are re: vision
- Next meeting
  - When
  - What to cover / accomplish
  - Which LOs/developers want to be active participants v. kept informed

Suggested Length for Meeting: half day (3-4 hours)

Suggested Agenda:

- intro and welcome to process – EPA
- summary of convening report and suggested process / how this meeting fits into process – Facilitator (ground rules on back of name tents)
- confirm geographic boundary -- Facilitator
- confirm stakeholders included in work group – anyone missing? -- Facilitator
- go over statement of goals from full SH group and suggested changes for Lower Silver Creek – any comments/concerns -- Facilitator
- presentation on known information re: contamination, potential sources and vulnerable resources – Presenter(s) to be determined at first meeting
  - anything to be added?
  - Q/A
- visioning for area
  - brief round robin identification of each participant's future plans for their part of the area (and timing)
  - divide participants into pre-selected groups of 8-10 people (a mix of interests in each group) and have them brainstorm about a vision for the area – what should it look like post-development and post-remediation / restoration
  - small groups report back to full group
  - clarifying Q/A
- next steps for work group (in future meetings) -- Facilitator
  - if general consensus re: vision for area, identify any additional data gathering and move on, when ready, to generating options for implementing vision

        - if no general consensus re: vision for area, identify any additional data gathering and explore pros/cons of different visions for future
    - Have LOs self-select who comes to future meetings -- Facilitator
    - Public outreach / keeping them informed -- Facilitator
        - Website
        - Preferences?

Michele Straube
<mstraube@mindspring.com>

04/24/2006 11:03 AM

To Jennifer Chergo/OCP/R8/USEPA/US@EPA, Dave Allison <dallison@utah.gov>, Dan Wall/EPR/R8/USEPA/US@EPA, Sally Elliott <sally@tellsally.com>, Brent Ovard

cc

bcc

Subject Lower Silver Creek Work Group -- First Mtg -- 5/8 1-4 pm

Mark your calendars -- Monday **May 8, 1-4 pm**, location to be announced, but definitely Park City (probably Kimball Junction). An RSVP would be appreciated.

I have attached a copy of the report that outlines my Lower Silver Creek Work Group convening efforts and proposed process design. This meeting on May 8 will be the first of two meetings to kickstart the work group's efforts. Landowners / known developers in Lower Silver Creek will be receiving notice of this meeting, but have not been specifically invited to attend. The primary goal of the May 8 meeting will be to identify and integrate known information about contaminated areas in Lower Silver Creek, the potential source(s) of contamination, vulnerable resources, and to correlate this information to land ownership and known development plans. The primary goal of the second work group meeting, still to be scheduled, will be to present the known information about contaminated areas and vulnerable resources in Lower Silver Creek to the full work group, including all landowners and known developers, and to offer an opportunity for the full group to share their respective visions for this area. Public outreach efforts will be on the agenda for both meetings, as time permits.

Please be sure to bring any and all relevant information with you to the May 8 meeting. I will send a reminder e-mail shortly before the meeting which will also let you know the meeting location.

Please feel free to call me with any questions or concerns.

Michele Straube
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)

mstraube@mindspring.com Lower Silver Creek Convening.final.doc

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Thursday, February 8, 2007 – 9-11:30 am

Sheldon Richins Building, 6505 North Landmark Drive, Park City

Agenda

Facilitator: Michele Straube
mstraube@mindspring.com; 801-583-6362

Meeting Objectives:

- Update on recent sampling in Lower Silver Creek
- Information on agencies' approach to identifying remedial alternatives
- Information on Summit County's intended regulatory approach
- Overview of Utah's Voluntary Cleanup Program (VCP)

10 min	Introductions and Welcome	Kathy Hernandez, EPA Michele Straube
25 min	Update on UDEQ Sampling in Fall 2006	Mo Slam, UDEQ
25 min	EPA Plans for Additional Sampling and Alternatives Analysis	Kathy Hernandez, EPA
45 min	Summit County Plans for Lower Silver Creek	Jami R. Bracken or Nora Shepard, Summit County
30 min	Voluntary Cleanup Program Overview	Bill Rees, UDEQ
15 min	Next steps	Michele Straube

NOTE: times are estimated; to be used as guidelines

Invited:

Name	Agency
Kathryn Hernandez	EPA Region 8
Jennifer Chergo	EPA Region 8 / Community Involvement
Dan Wall	EPA/FWS
Mo Slam	UDEQ / DERR
Dave Allison	UDEQ / Community Relations
Kari Lundeen	UDEQ / DWQ
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Nora Shepard / Jay Aguilar	Summit County Community Development
Derrick Radke	Summit County Engineer
Chris Cline	US Fish & Wildlife
Pam Kramer / Paul Burnett	UT Div Wildlife Resources
Jason Gipson	US Corps of Engineers
John Knudson	UT Dept of Natural Resources / Parks
Briant A. Kimball	USGS
Kerry Gee	United Park City Mines
John Tuerff	Citizens for Responsible Growth
Leo Williams / Doug Evans	Mountain Regional Water District
Senta Beyer	Snyderville Basin Recreation District
Chris Donaldson / Kimber Gabryszak	Basin Open Space Advisory Committee
Barbara Carey	Uinta Headwaters RC&D Council
Carol Potter	Mountain Trails Foundation
Brendan Waterman	Upper Weber River Watershed Coordinator
LANDOWNERS/DEVELOPERS:	
Jeff Schoenbacher	Park City Municipal Corporation
Mike Luers / Michael Boyle	Snyderville Basin Water Reclamation District
Standley Pace / Mike Pace	Standley B and Beverly F Pace
Chuck Zuercher / Gale Pace	Angus and Ella Pace
Joe Tesch, Esq.	Silver Creek / Robert Larsen Investors
Lindsay Ford, Esq.	Florence J. Gillmor
Bruce Baird, Esq.	Nadine Gillmor Fausett Trustee
	Edward L. Gillmor
Mike Dalley	Jack B. Parson Companies
Tony Christofferson	Geneva Rock Products, Inc.
	Lynn M and Cynthia G Gaufin
	Silver Creek Properties LLC
	Summit County A Municipal Corporation
	Municipal Bldg Authority of Park City
	BVD Properties LLC
	Forestdale Investments LLC
	Byer Excavating Inc.
	Stoly Associates LLC
Richard N. Reese	Richard N. Reese Family LP
Dave Burbidge	RDB LLC; Richard D. Burbidge
	Johnson International, Inc.
	Lacy Limited Liability Co.
	Park City Auto
	Sundborn LLC
	Qwest Corp.
Walt Plum / Spencer White	Silver Gate Ranches
Mike Behunin	Anderson Development
Jeramy Green	Pivotal Promontory Development LLC

	Park City Fire District
	South Summit School District
Daniel J. Olabarri	Olabarri Investment Company
Samantha Graham	American Ins. Co / Fireman's Fund Insurance
	Pace Family Investments, LLC
Elliott Christensen	Property Reserve, Inc.
	Jordanelle Storage Park, LLC
	Helene Barfuss, et al
Dick Burbidge	Burbs LLC
	Utah Power & Light
	Salt Lake Pipe Line Co.
	UDOT
	State Road Commission

SILVER CREEK WATERSHED

Kathryn Hernandez

USEPA, Region 8

TMDL Load Reduction Alternatives Assessment and Analysis

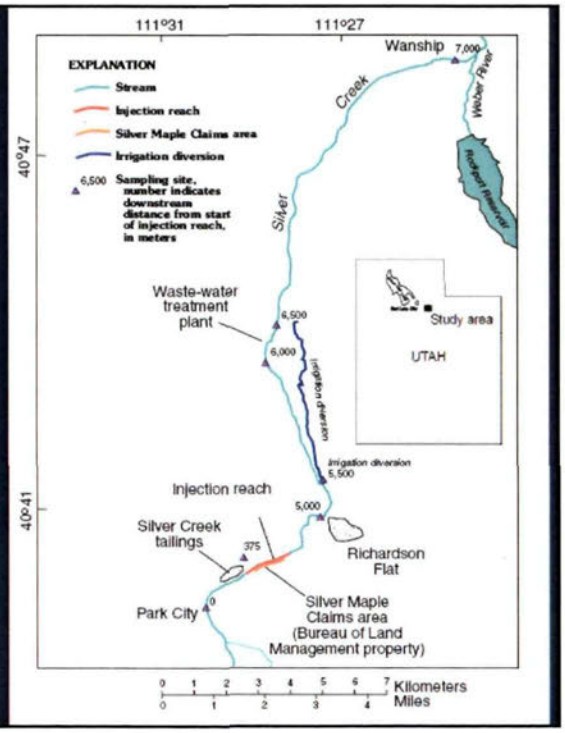
Silver Creek Overview

- Silver Creek is classified as a 3A – cold water fishery & drinking water supply
- Heavily impacted by historic mining – metals contamination
  - Zinc, lead, arsenic and cadmium
- Lower Silver Creek – currently undergoing significant growth & development
- Listed Utah's Section 303(d) list due to elevated levels of cadmium & zinc
- An Innovative Assessment was completed in 2002 for Lower Silver Creek → recommended for CERCLIS listing

Project Objectives

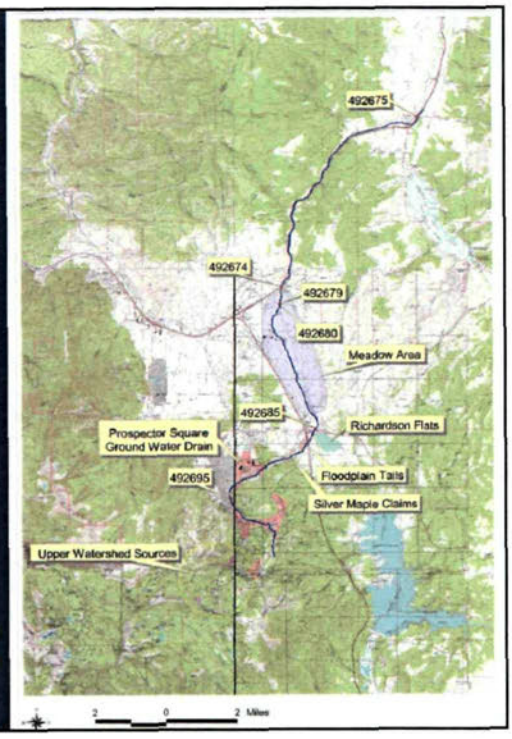
- Review/analyze water quality & sediment data collected by UDEQ/DERR
- Conduct new surveys
  - Geomorphology & development issues
  - Observe known source areas
  - Forum to discuss issues with agency personnel & stakeholders
- Analyze restoration alternatives to determine the expected metals pollution reductions
- Compare the costs of restoration alternatives

Silver Creek Location

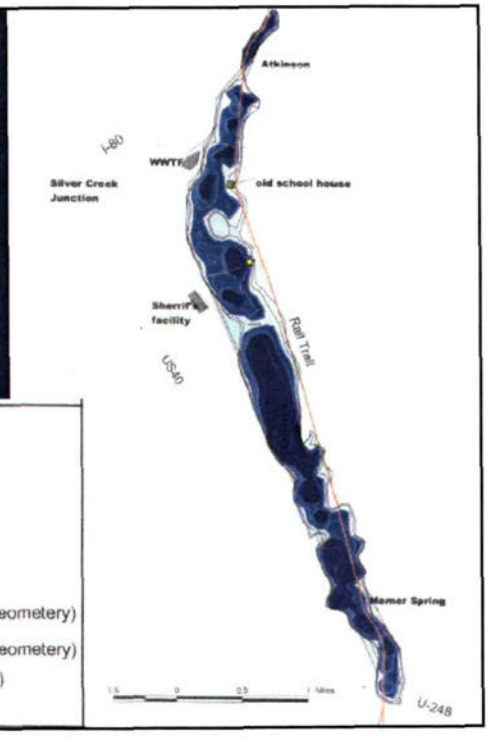


Potential Sources

- Upper Watershed Sources
- Prospector Square groundwater drain
- Silver Maple Claims
- Flood Plain Tailings
- Richardson Flats
- Meadow Area



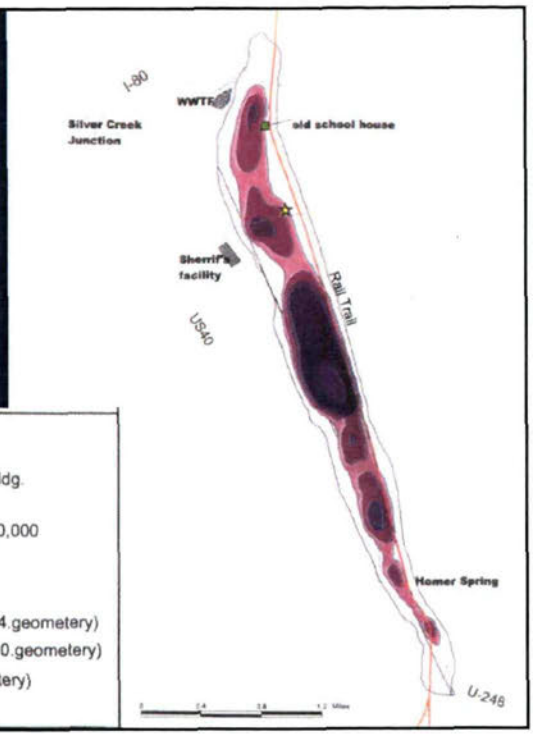
Lead Concentrations



Legend

- ☆ Historical Big Four Mill Site and currently the site of a Pace Ranch bldg.
- Lead concentrations (ppm) (Pb poly.shp)
  - 0 - 2,000
  - 2,000 - 6,000
  - 6,000 - 8,000
  - 8,000 - 10,000
  - >10,000
- Water courses (Dataadmin.hdwco_qd24.geometery)
- Roads and Trails (Dataadmin.trrds_qu10.geometery)
- Rail Trail (Dataadmin.trrrd_st10.geometery)
- WWTF: waste water treatment facility

Zinc Concentrations



Legend

- Historical big Four Mill Site and currently the site of a Pace Ranch bldg.

Zinc concentrations (ppm) (Zn poly.shp)

- 0 - 20,000
- 20,000 - 30,000
- 30,000 - 40,000
- 40,000 - 50,000
- >50,000

Water courses (Dataadmin.hdwco_qd24.geometery)

Roads and Trails (Dataadmin.trrds_qu10.geometery)

Rail Trail (Dataadmin.trrrd_st10.geometery)

WWTF = waste water treatment facility

Existing Sampling Efforts Lower Silver Creek Investigation

- Collaborative effort UDEQ/UDERR
- 28 sampling stations
- Water quality & sediment
- Lead, Arsenic & Zinc

Restoration Alternatives

Recovery & Disposal

Channel Relocation

Restoration

Recovery & Disposal

Channel Relocation

Restoration
Cap & Re-establish Vegetation

Project Summary

- Review & Analyze data
- Conduct new surveys
- Analyze restoration alternatives & compare the $$$

Questions???

Silver Creek/ Hwy 40 Corridor Parcel Information

Serial #	Acres	Owner
S-404	2.89	QWEST CORP c/o LAGER DOUGLAS/PROP TAX DEPT
SS-22	5.87	PACE FAMILY INVESTMENTS LLC
SS-23	363.30	PIVOTAL PROMONTORY LLC
SS-27	115.08	PACE FAMILY INVESTMENTS LLC
SS-28	30.10	PACE FAMILY INVESTMENTS LLC
SS-28-A-1-X	39.13	PARK CITY UTAH
SS-28-A-X	49.13	MUNICIPAL BLDG AUTHORITY OF PARK CITY
SS-29	125.75	(b) (6)
SS-44	97.85	(b) (6)
SS-44-B	4.31	JOHNSON INTERNATIONAL INC c/o SALLQUIST & DRUMMOND PC
SS-47	159.28	(b) (6)
SS-49	30.00	(b) (6)
SS-50	130.00	J
SS-51-A	15.34	(b) (6)
SS-56	131.23	
SS-56-A	50.61	GILLMOR NADINE FAUSETT TRUSTEE
SS-56-A-1	208.47	GILLMORE EDWARD L
SS-57-1	111.28	PROPERTY RESERVE INC
SS-64-A	153.79	GILLMOR NADINE FAUSETT TRUSTEE
SS-65-1-A	2.79	PARK CITY AUTO CENTER INC
SS-65-3	5.00	JACK B PARSON COMPANIES c/o MAXFIELD DAK
SS-65-A-2-A	2.00	BYER EXCAVATING INC
SS-65-A-3	7.68	STOLY ASSOCIATES LC c/o BURTON LUMBER
SS-65-A-3-1	4.90	FORESTDALE INVESTMENTS LLC
SS-65-A-5	40.00	RDB LLC
SS-65-A-6	15.14	RDB LLC
SS-65-A-7	3.99	LACY LIMITED LIABILITY COMPANY
SS-65-A-X	69.80	UTAH DEPARTMENT OF TRANSPORTATION
SS-65-B	11.29	GENEVA ROCK PRODUCTS INC
SS-88	201.07	UNITED PARK CITY MINES CO
(MULTIPLE): SS-65-A-8	90.25	FORESTDALE INVESTMENTS LLC
(MULTIPLE): SS-65-A-8-A	90.25	SUNBORN LLC
SS-65-1	0.00	UTAH POWER & LIGHT CO
S-303 & SS-65-1-X	0.00	UTAH POWER & LIGHT CO

Silver Creek Watershed Stakeholders' Group

Tuesday, September 12, 2006 – 10 am – noon
Park City Library Meeting Room

AGENDA

Welcome and Introductions

Updates from upper to lower watershed:
- Empire Canyon
- Richardson Flat
- FWS Natural Resource Damage Assessment
- Alice Lode Voluntary Cleanup
- Soils Ordinance Area
- PCMC Biocell Project
- Middle Reach Silver Creek
- Lower Silver Creek

Action items

Invited Meeting Participants

Kathy Hernandez	EPA
Jennifer Chergo	EPA
Mo Slam	UDEQ
Ty Howard	UDEQ
Dave Allison	UDEQ
Kari Lundeen	UDEQ/DWQ
Jeff Schoenbacher	PCMC
Tom Bakaly	PCMC
Dana Williams	PCMC
Tim Ingwell	BLM
Glenn Carpenter	BLM
Chris Cline	FWS
Dan Wall	FWS
John Knudson	UDNR / Parks
Brent Ovard	Summit County
Sally Elliott	Prospector / Historical / Summit County Commissioner
Kerry Gee	United Park City Mines
Bob Wells	Deer Valley Resort
Brent Giles	Park City Mountain Resort
Brendan Waterman	UT Assoc of Conservation Districts
John Tuerff	Citizens for Responsible Growth

Michele Straube
<mstraube@mindspring.com>

11/07/2006 02:44 PM

To Muhammad Slam <mslam@utah.gov>, Kathryn Hernandez/EPR/R8/USEPA/US@EPA
cc
bcc
Subject Draft Missive to Lower Silver Creek Work Group

Kathy and Mo: I'd like to send a quick update e-mail / letter to Lower Silver Creek work group members, so that they don't stay up nights wondering what's happening and why we didn't meet in October. (You may think this crazy, but Anderson Development did call me recently to ask just that question.) Please let me know whether what I've drafted below is accurate / OK to send out.

DRAFT -- Lower Silver Creek Work Group members: I am writing to update you about what's been happening in Lower Silver Creek since we met in June. At that time, we had anticipated that UDEQ would be conducting water and soil sampling over the summer, and that a work group meeting would be scheduled in late fall to review the sampling results. UDEQ's sampling trip happened later than expected and the sampling analyses are now expected by early December. I have suggested that we wait until after the holiday season to get the group back together. I will be back in touch with you in January to schedule another work group meeting, at which we hope to accomplish the following:

- have UDEQ present the results of their sampling this fall, and give an indication of any future sampling plans
- get an update from EPA on timing and scope of a remediation options analysis to be performed by an EPA contractor
- hear a presentation(s) on various cleanup programs that can be helpful to landowners and developers. Here are some resources for those of you interested in conducting your own research before the next meeting:
    - EPA brownfields program, http://www.epa.gov/brownfields/
    - Utah Voluntary Cleanup program, http://www.superfund.utah.gov/vcp.htm
    - **Kathy and Mo: any other programs or resources I should add here ???**

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

"Michele Straube" <mstraube@mindspring.com >

07/10/2007 11:45 AM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA, "Bruce Marshall" <Bruce.Marshall@ttrmc.com>
cc "Shanklin, Brianna" <Brianna.Shanklin@tetratech.com>
bcc
Subject Re: Lower Silver Creek -- Property Access Will be Requested

Quick update on the properties to which you want access:

- SS-44 ([redacted]), SS-29 and SS-51-A ([redacted]) -- 7-10-07 e-mail to Chuck Zuercher (consultant) and Gale Pace (family member)
  - Chuck Zuercher will be attending meeting, but I doubt he has authority to sign an agreement
- SS-28-A-X, SS-28-A-1-X (Park City) -- 7-10-07 e-mail to Jeff Schoenbacher
  - **you need to submit formal request and sampling plan** (see e-mail pasted in below)
- SS-47 and SS-50 ([redacted] -- 7-10-07 e-mail to Lindsay Ford (attorney who has attended previous work group meetings)
  - **send draft access agreement to attorney before meeting** (see e-mail pasted in below)
  - Lindsay Ford, Esq., lford@parsonsbehle.com, 801-536-6605, 801-536-6111 (fax)
- SS-56-A-1 (Edward L. Gillmore) -- 7-10-07 voice for Siv Gillmore (family member who attended 2/8/07 work group meeting)
  - no confirmation yet that she will attend, or that she has authority to sign access agreement
- SS-57-1 (Property Reserve, Inc.) -- 7-10-07 e-mail to Elliott Christensen (attorney)
  - no confirmation yet that he will attend, or that he has authority to sign access agreement
- SS-65-A-3 (Stoly Associates LLC)
  - no contact information available beyond mailing address; certified letter giving notice of meeting was received (green card returned)
  - no representative has ever attended any work group meeting or contacted me
- SS-65-A-6 (RDB LLC) -- 7-10-07 e-mail to Dave Burbidge (representative who has attended previous work group meetings)
  - no confirmation yet that he will attend, or that he has authority to sign access agreement

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

From: Jeff Schoenbacher
To: Michele Straube
Cc: Ron Ivie
Sent: Monday, July 09, 2007 2:22 PM
Subject: RE: Lower Silver Creek -- Property Access Will be Requested

They will need to submit a formal request and the sampling plan to access PCMC property.

Thanks,

Jeff

----- Original Message -----
From: Ford, Lindsay
To: Michele Straube
Sent: Monday, July 09, 2007 2:55 PM
Subject: RE: Lower Silver Creek -- Property Access Will be Requested

Michele,

Thanks for the advance notice. The ownership situation for Miss Gillmor's property is complicated such that an access agreement will require the signature of two attorneys and the consent of a tenant. If you could forward to us a copy of the draft access agreement in advance of the meeting, we will attempt to expedite approval of the agreement.

Thanks,

Lindsay

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Tuesday, July 17, 2007 – 9-11:30 am

Snyderville Basin Special Recreation District Trailside Offices
(Community Room)
5715 Trailside Drive, Park City

Agenda

Facilitator: Michele Straube, CommUnity Resolution, Inc.
mstraube@mindspring.com; 801-583-6362

Meeting Objectives:

- Introduce EPA contractor, Tetra Tech
- Review known information about soil and water contamination in Lower Silver Creek area
- Identify data gaps
- Discuss conceptual monitoring plan
- Get update on Summit County regulatory plans
- Obtain signed access agreements

10 min	Introductions and Welcome	Michele Straube
15 min	Scope and Purpose of EPA Lower Silver Creek Project	Kathy Hernandez, EPA
25 min	Review of Existing Data • Water Quality • Soils • Wetlands • Data Gaps	Bruce Marshall, Tetra Tech
15 min	Conceptual Monitoring Plan	Bruce Marshall, Tetra Tech
30 min	Questions and Discussion	Michele Straube
15 min	Summit County Plans for Lower Silver Creek	Jami R. Bracken or Nora Shepard, Summit County
15 min	Next steps • Schedule • Access Agreements	Kathy Hernandez, EPA

After meeting – landowners and EPA enter into access agreements.

NOTE: times are estimated; to be used as guidelines

Invited:

Name	Agency
Kathryn Hernandez	EPA Region 8
John Dalton	EPA Region 8 / Community Involvement
Dan Wall	EPA/FWS
Mo Slam	UDEQ / DERR
Dave Allison	UDEQ / Community Relations
Kari Lundeen	UDEQ / DWQ
Bill Rees	UDEQ / Voluntary Cleanup Program
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Nora Shepard / Lisa Fitzgerald / Jay Aguilar	Summit County Community Development
Jami Brackin	Summit County Deputy County Attorney
Derrick Radke	Summit County Engineer
Chris Cline	US Fish & Wildlife
Pam Kramer / Paul Burnett	UT Div Wildlife Resources
Hollis Jencks	US Corps of Engineers
John Knudson	UT Dept of Natural Resources / Parks
Briant A. Kimball	USGS
Kerry Gee	United Park City Mines
	Citizens for Responsible Growth
Leo Williams / Doug Evans	Mountain Regional Water District
Senta Beyer	Snyderville Basin Recreation District
Chris Donaldson / Kimber Gabryszak	Basin Open Space Advisory Committee
Barbara Carey	Uinta Headwaters RC&D Council
Carol Potter	Mountain Trails Foundation
Brendan Waterman	Upper Weber River Watershed Coordinator
LANDOWNERS/DEVELOPERS:	
Jeff Schoenbacher / Tom Bakaly / Dana Williams	Park City Municipal Corporation
Mike Luers / Michael Boyle	Snyderville Basin Water Reclamation District
Standley Pace / Mike Pace	Standley B and Beverly F Pace
Chuck Zuercher / Gale Pace	Angus and Ella Pace
Dwayne Pace	Pace Family Investments
Joe Tesch, Esq.	Silver Creek / Robert Larsen Investors
Lindsay Ford, Esq.	Florence J. Gillmor
Alain Balmanno, Esq.	Nadine Gillmor Fausett Trustee
Siv Gillmore	Edward L. Gillmor
Mike Dalley	Jack B. Parson Companies
Tony Christofferson	Geneva Rock Products, Inc.
	Lynn M and Cynthia G Gaufin
	Silver Creek Properties LLC
	Summit County A Municipal Corporation
	Municipal Bldg Authority of Park City
	BVD Properties LLC
	Forestdale Investments LLC
	Byer Excavating Inc.
	Stoly Associates LLC
Richard N. Reese	Richard N. Reese Family LP
Dave Burbidge	RDB LLC; Richard D. Burbidge
	Johnson International, Inc.
	Lacy Limited Liability Co.
	Park City Auto Center

	Sundborn LLC
	Qwest Corp.
Walt Plum / Spencer White	Silver Gate Ranches
Eric Bishop	Anderson Development
Jeramy Green	Pivotal Promontory Development LLC
	Park City Fire District
	South Summit School District
Daniel J. Olabarri	Olabarri Investment Company [no current address available]
Patricia Ford	American Ins. Co / Fireman's Fund Insurance
Elliott Christensen	Property Reserve, Inc.
	Jordanelle Storage Park, LLC
	Helene Barfuss, et al [no current address available]
Dick Burbidge	Burbs LLC

Conference Call Agenda
Lower Silver Creek Load Reduction Alternatives Assessment
June 6, 2007

Invited Attendees

- Jason Gipson (USACE)
- Hollis Jencks (USACE)
- Kathryn Hernandez (EPA)
- Bruce Marshall (Tetra Tech)
- Brianna Shanklin (Tetra Tech)
- Sam Wilkes (Tetra Tech)

Purpose of Call

The Lower Silver Creek Load Reduction Alternatives Assessment project will identify areas contributing to metals loading of Silver Creek in the stretch between US Highway 248 and I-80. The EPA has contracted with Tetra Tech to develop a series of remedial alternatives to decrease metals loading to Silver Creek. These alternatives will be developed to the feasibility level and are intended to provide landowners, developers, etc. with practical methods to address the mine waste contamination on their properties as development in Summit County moves forward. The alternatives proposed by Tetra Tech to reduce metals loading will likely include relocation of the stream channel, disturbance of potential wetlands, etc. Each landowner would be responsible for delineating wetlands on their properties prior to implementing any alternative; we want to make sure that the alternatives that we provide them are not fatally flawed. To that end, the EPA would like to involve the Corps of Engineers in the scoping of the project to ensure the constructability of the proposed remedial alternatives with respect to issues involving navigable waters.

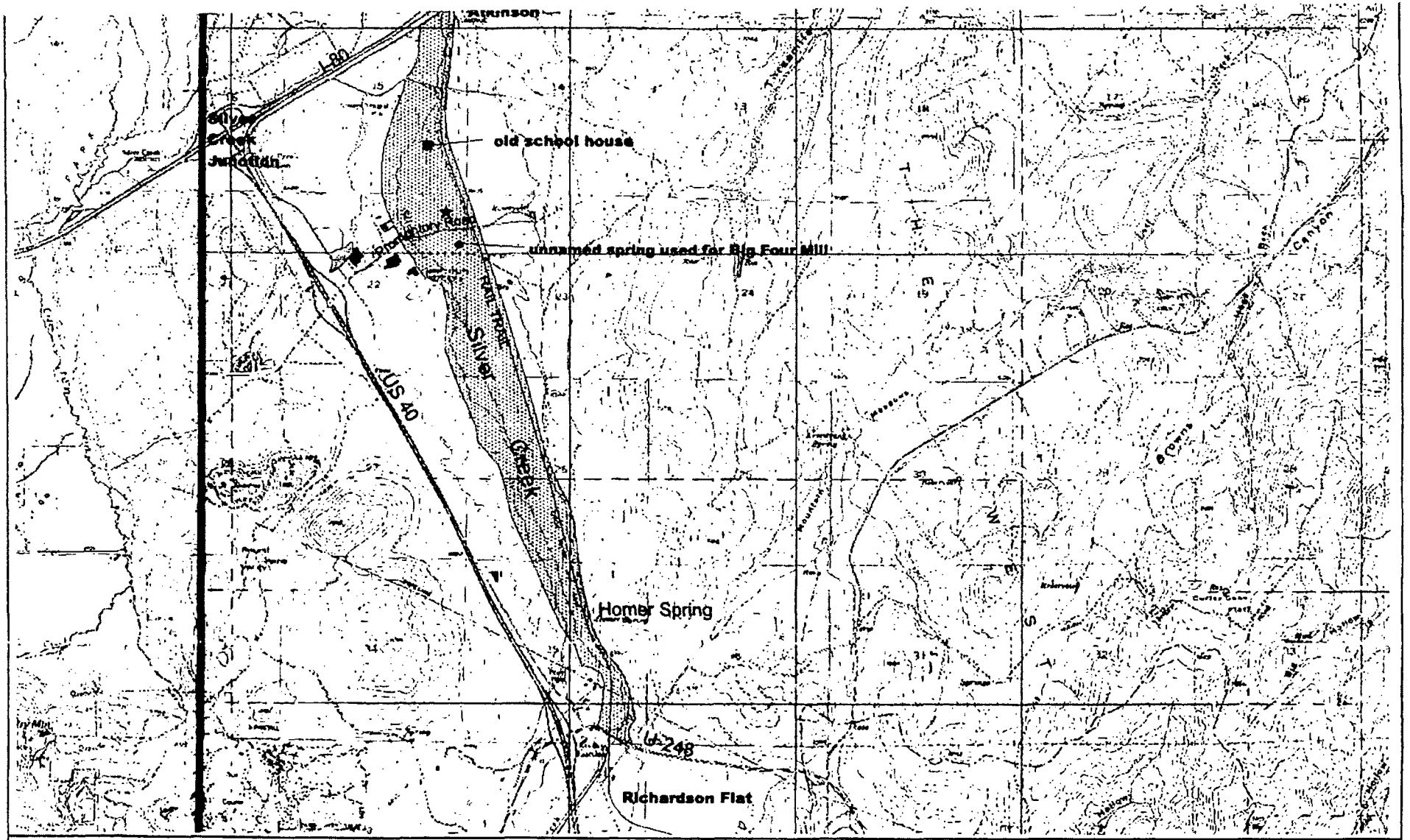
Existing Wetlands Information

Map *Potential Wetland Areas within the Silver Creek Drainage* prepared by the USACE.

Issues to be discussed

1. Do we have sufficient information concerning wetlands for the USACE to offer input at this time? If not, what data do we need?
2. If we do have sufficient information, what types of alternatives are definitely on the table? What types of alternatives are definitely off the table? What types of alternatives are in the "gray" area and what data do we need to make them black and white?
3. Future field activities?
4. Future conference calls?

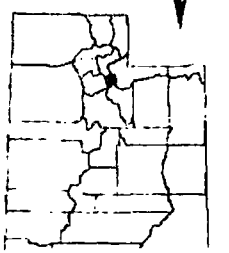
Action Items



0.5 0 0.5 1 1.5 2 2.5 Miles

Legend

- ★ Historical Big Four Mill Site and currently the site of a Pace ranch bldg.
- Site area - Southern portion
- Site area - Northern portion
- Road and Trails (Dataadmin.trrrd_st10.geometery)
- Rail Trail (Dataadmin.trrrd_st10.geometery)

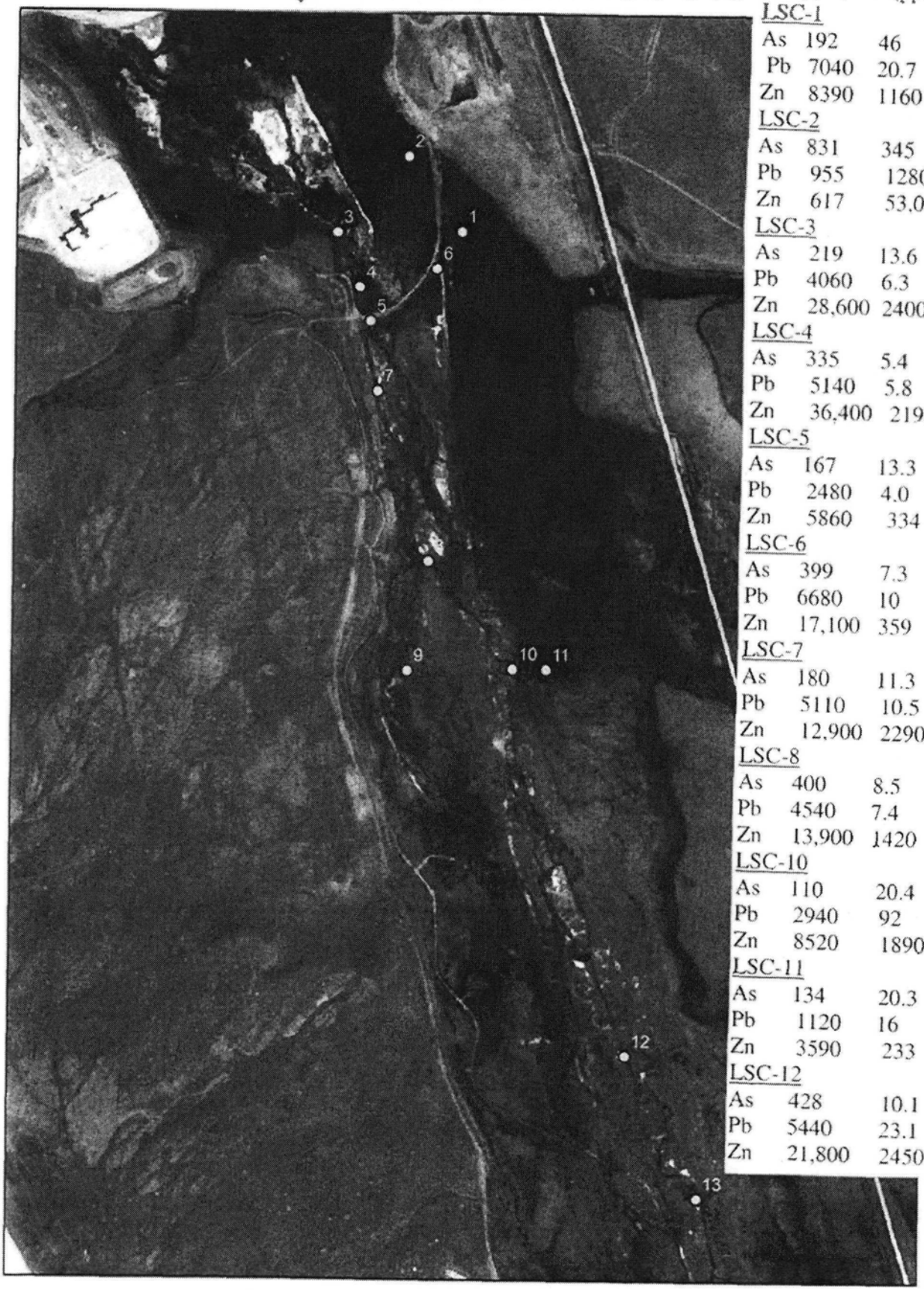


Utah Department of Environmental Quality
Division of Environmental Response and Remediation

Figure 2
Site Location Map

Lower Silver Creek
Summit County, Utah

Lower Silver Creek Investigation
Samples LSC 001 to LSC 013

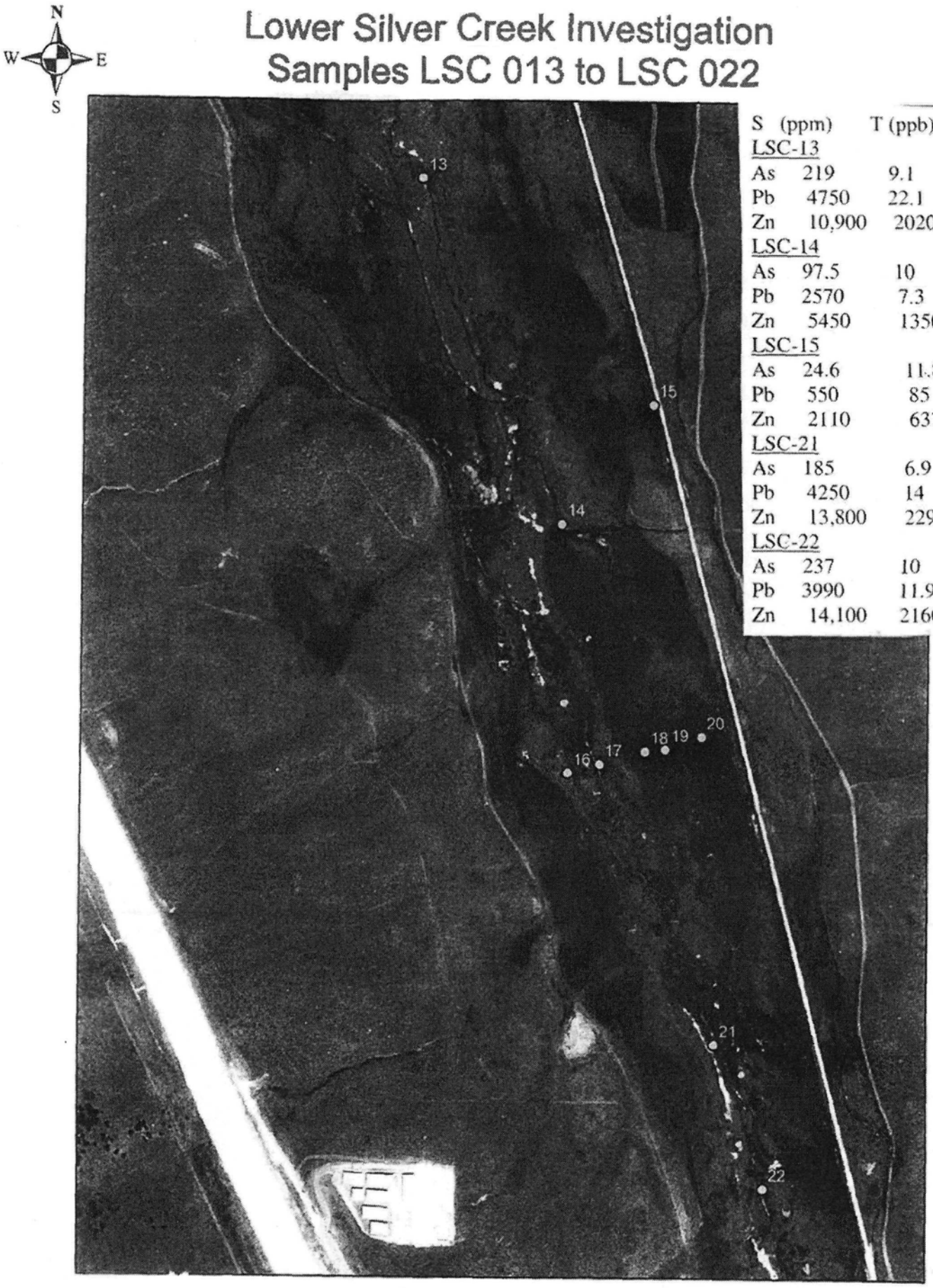


	S (ppm)	T (ppb)	D (ppb)
LSC-1			
As	192	46	19.3
Pb	7040	20.7	10
Zn	8390	1160	1010
LSC-2			
As	831	345	32.1
Pb	955	1280	1120
Zn	617	53,000	42,900
LSC-3			
As	219	13.6	7.1
Pb	4060	6.3	5.1
Zn	28,600	2400	2360
LSC-4			
As	335	5.4	8.0
Pb	5140	5.8	3.6
Zn	36,400	2190	2110
LSC-5			
As	167	13.3	10
Pb	2480	4.0	3.8
Zn	5860	334	318
LSC-6			
As	399	7.3	10.0
Pb	6680	10	10
Zn	17,100	359	373
LSC-7			
As	180	11.3	6.4
Pb	5110	10.5	3.7
Zn	12,900	2290	2700
LSC-8			
As	400	8.5	11.9
Pb	4540	7.4	2.6
Zn	13,900	1420	1380
LSC-10			
As	110	20.4	10
Pb	2940	92	10
Zn	8520	1890	1680
LSC-11			
As	134	20.3	10
Pb	1120	16	10
Zn	3590	233	138
LSC-12			
As	428	10.1	6.3
Pb	5440	23.1	16.1
Zn	21,800	2450	2460

0 250 500 1,000 1,500 2,000 Feet

Figure 3

Lower Silver Creek Investigation
Samples LSC 013 to LSC 022



S	(ppm)	T (ppb)	D (ppb)
LSC-13			
As	219	9.1	10.0
Pb	4750	22.1	10.4
Zn	10,900	2020	2060
LSC-14			
As	97.5	10	10
Pb	2570	7.3	2.5
Zn	5450	1350	1310
LSC-15			
As	24.6	11.8	8.4
Pb	550	85	5.9
Zn	2110	637	469
LSC-21			
As	185	6.9	8.5
Pb	4250	14	5.5
Zn	13,800	2290	2370
LSC-22			
As	237	10	10.1
Pb	3990	11.9	10
Zn	14,100	2160	2210

Figure 4

Lower Silver Creek Investigation
Samples LSC 022 to LSC 028

S	(ppm)	T (ppb)	D (ppb)
LSC-23			
As	13.5	12.3	10.9
Pb	185	177	15.8
Zn	303	248	55.1
LSC-24			
As	466	13.9	11.7
Pb	9090	17.1	6.3
Zn	6000	421	426
LSC-25			
As	204	6.7	12.4
Pb	4300	10	5.4
Zn	7580	4480	3900
LSC-26			
As	30	8.3	12.8
Pb	572	34	3.7
Zn	1270	499	461
LSC-27			
As	207	10	10
Pb	4060	21.5	10
Zn	8940	254	379
LSC-28			
As	55.7	5.7	
Pb	1300	3.3	
Zn	22900	389	

0 250 500 1,000 1,500 2,000 Feet

Figure 5

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Thursday, February 8, 2007 – 9 – 11:30 am

Sheldon Richins Building (Auditorium)
6505 North Landmark Drive, Park City, Utah

Meeting Summary

Meeting Attendees

Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Lisa Fitzgerald	Summit County Planning	lfitzgerald@co.summit.ut.us
Jami Brackin	Summit Co. Deputy Attorney	jbrackin@co.summit.ut.us
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Kerry Gee	United Park City Mines	kcgee@unitedpark.com
Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
Mike Luers	Snyderville Basin Water Reclamation District	mluers@sbwrd.org
Leslie Freeman, for Brent Ovard	Summit County Health	bovard@utah.gov
Michael Boyle	Snyderville Basin Water Reclamation District	mboyle@sbwrd.org
Derrick Radke	Summit County Engineering	dradke@co.summit.ut.us
John Knudson	Utah State Parks	johnknudson@utah.gov
Chuck Zuercher	Angus & Ella Pace	chuckz@pureutah.com
Dwayne Pace		
Kari Lundeen	UDEQ / DWQ	klundeen@utah.gov
Paul Burnett	UT Div of Wildlife	paulburnett@utah.gov
Alain Balmanno	Nadine Gillmor Fausett, Trustee	abalmanno@hbcalaw.com
Troy Hardy	Richard D. Burbidge, RDB LLC	david.burbidge@gmail.com
Lindsay Ford	Florence Gillmor	lford@parsonsbehle.com
Doug Evans	Mountain Regional Water	doug@mtregional.org
Dave Allison	UDEQ / Community Involve.	dallison@utah.gov
Bill Rees	UDEQ / Voluntary Cleanup Program	brees@utah.gov
Jeff Schoenbacher	Park City Municipal	jschoenbacher@parkcity.org
Brendan Waterman	Watershed Coordinator	brendan.waterman@ut.nacdnet.net
Siv Gillmor	Edward L. Gillmor	
Michele Straube	Facilitator	mstraube@mindspring.com

Handouts – Meeting handouts should be available in the next few weeks on the stakeholder group website – www.silvercreekpc.org, "Current Documents" tab, "Lower Silver Creek" -- or contact the facilitator.

Handout – Agenda (with list of all invited stakeholders)

Update on UDEQ Sampling in Fall 2006

Handout (and attachment to this meeting summary) –PowerPoint slides showing sampling results for arsenic, lead and zinc

Mo Slam summarized the chemical analysis results from UDEQ's sampling in the Lower Silver Creek area during fall 2006. The handout shows results for arsenic (As), lead (Pb) and zinc (Zn) in the sediment (S) (in parts per million, ppm), total in the water column (T) (in parts per billion, ppb), and dissolved in the water column (D) (in ppb). Mr. Slam observed that zinc concentrations are very high in both sediments and water, and that some samples show very high arsenic concentrations as well.

The following regulatory standards were identified for comparison purposes:

- Arsenic (As)
  - 340 ppb – water quality standard developed for aquatic life short-term (acute) exposure
  - 150 ppb -- water quality standard developed for aquatic life chronic exposure
- Lead (Pb)
  - 281 ppb – water quality standard developed for aquatic life short-term (acute) exposure
  - 11 ppb – water quality standard developed for aquatic life chronic exposure
- Zinc (Zn)
  - 390 ppb – total maximum daily load (TMDL) calculated for Lower Silver Creek

Note that there are no sampling results for wells 16-20, as these are piezometers installed to take future groundwater samples.

EPA Plans for Additional Sampling and Alternatives Analysis

Handout – PowerPoint slides

Kathy Hernandez gave details about the Alternatives Analysis contract EPA has entered into with TetraTech. The objective of the project is to identify areas of significant contaminant loading ("hot spots") within the Lower Silver Creek area, and to explore the technical and economic feasibility of various restoration alternatives.

The contractors will undertake additional surveys within 2007 to observe known source areas and investigate the geomorphology and development issues in the area. They will

also determine the impact of different flow levels (high flow, low flow, irrigation flow) on contaminant loading. Three possible restoration alternatives have been identified so far:

- recovery and disposal;
- channel relocation; and/or
- restoration (cap and re-establish vegetation).

Ms. Hernandez anticipates that the final report, which will evaluate alternative cleanup options, will be completed within a year (ie, by spring 2008).

Work group members and the community at large will be kept involved as the project proceeds. Stakeholders will be given an opportunity to comment on draft sample analysis plans (including proposed sampling locations), as well as the proposed cleanup alternatives that will be the subject of the feasibility analysis. Ms. Hernandez suggested that the next Lower Silver Creek work group meeting might coincide with the contractors' first site visit.

Sampling locations for the EPA-funded alternatives analysis will be selected, to the extent possible, in consultation with the state's Voluntary Cleanup Program, in order to maximize the usefulness of sample results for individual landowners and minimize the need for duplicative sampling. There is no guarantee, however, that cleanups under the Voluntary Cleanup Program will not require additional sampling and/or analysis. Lower Silver Creek landowners and developers who wish to be directly involved in identifying sampling locations should contact Kathy Hernandez (303-312-6101, hernandez.kathryn@epa.gov). Landowners in Lower Silver Creek can expect that EPA or UDEQ will be contacting them to schedule access for the contractors' spring 2007 sampling activities.

Summit County Plans for Lower Silver Creek

Visual -- Map of Lower Silver Creek showing property ownership

Jami Brackin, Deputy County Attorney, outlined Summit County's anticipated role in the Lower Silver Creek investigation and restoration process.

Summit County will create an overlay zone once the EPA-funded alternatives analysis has been completed (assumed to be within one year). For any property within the overlay zone, no development will be allowed until proof is provided that cleanup has been accomplished in accordance with the conclusions in that study. The County does not anticipate doing its own certifications of cleanup and will not dictate specifically how cleanups should be done, but will rely on approvals from other entities such as Utah's Voluntary Cleanup Program (VCP).

The County will also develop regulations for properties within the Lower Silver Creek area that are active and already have approved developments, whether built or not. It will most likely be a nuisance abatement scheme, giving landowners a certain number of years to comply and obtain a certificate. The County is looking for input on how to frame this requirement – Park City allows a 5-year period to complete cleanup, or the county can undertake any cleanup itself and lien the property, or the county can initiate an enforcement program.

In the short term, until the boundaries of the final overlay zone have been identified, the County will fairly rapidly initiate a temporary overlay zone. During the time period that the temporary overlay zone is in place, the notice of building permit for developments that are platted but not yet built will include a notice that future cleanup may be required and will require developers' signature that the notice was received. Landowners within the temporary overlay zone will also receive notice of the likelihood of future cleanup requirements, whether or not there are any future development plans for the property.

Recognizing that some sort of repository will probably be needed for contaminated materials within the Lower Silver Creek area, the county is open to any suggestions on how to incentivize landowners to provide this service for the larger area. The county will not condemn property for a repository.

Kerry Gee suggested that there are many creative opportunities that arise out of the need for a repository. One idea that was discussed was to combine a repository for contaminated materials with a location to size and categorize excavated soils, to reduce the amount of land disturbance caused by these activities. Alternatively, a repository could be co-sited with a location for developers to bring clean fill material for recycling or re-use, keeping this material out of the landfill. Incentives for such creative opportunities could include a county policy that any development within x miles of the repository would be required to take their excavated fill to the clean fill transfer station. Incentives could also be developed to require construction contractors to deliver clean fill materials directly to the remediation project where they are needed, reducing the need for clean fill storage or disposal.

In response to a question about remediation of contaminated materials and construction within the floodplain, Nora Shepard stated that the county development code already includes a riparian corridor / stream buffer zone. A county representative also mentioned that the county is in the process of establishing its own wetlands regulations.

Utah Voluntary Cleanup Program (VCP) Overview

Handouts – PowerPoint slides
VCP brochure

The purpose of the Utah Voluntary Cleanup Program (VCP) is to encourage voluntary cleanup of contaminated sites. The VCP agreement, negotiated between the landowner and the Utah Department of Environmental Quality, provides the roadmap for landowner-financed investigation and cleanup activities that will be required for the property to receive a VCP Certificate of Completion. The VCP Certificate of Completion provides a limited release of liability under Utah law, and is transferable to subsequent property owners. The VCP Certificate of Completion will be recorded on the property title.

Cleanups under the VCP are risk-based, meaning they are tied to the anticipated post-cleanup land use. All applicable regulatory standards must be met, and there are minimum public notice and comment requirements. Although the VCP Certificate of

Completion does not release the landowner from federal liability, properties that are cleaned up under the VCP program will not come under the Superfund program. The Lower Silver Creek area is not currently under the Superfund program (is not listed on CERCLIS), and the collaborative work group approach to investigation and restoration is intended to prevent such a result.

More information about the VCP program is available at www.superfund.utah.gov/vcp.htm.

The group discussion after Mr. Rees's presentation highlighted some possible funding sources for investigation and cleanup activities within Lower Silver Creek, although some are not directly available to private landowners:

- Brownfields grants and revolving loan funds available for local governments (http://www.epa.gov/brownfields/pilot.htm);
- Federal tax benefits for private entities (meeting participants did not know when these tax benefits expire); and
- Implementation funding for TMDL compliance ("incremental funds" under Clean Water Act Section 319, available through states) (http://www.epa.gov/OWOW/NPS/cwact.html)

Next Work Group Meeting

The next Lower Silver Creek work group meeting will be scheduled in coordination with the work of the EPA alternatives analysis contractors. We are considering having work group meetings at these points in the project:

- after contractors have completed their first on-site visit (April 2007 timeframe);
- draft sampling plan available;
- sampling analyses (chemistry results) available;
- draft alternatives analysis report available;
- final alternatives analysis report issued.

All work group members will be notified when the next meeting is scheduled, probably at the end of April.

Michele Straube
<mstraube@mindspring.com
>

03/06/2007 10:19 AM

To Elliott Christensen <christensenef@ldschurch.org>, Alain Balmanno <abalmanno@hbcalaw.com>, Patricia Ford <pford@ffic.com>, Gale Pace <paceg@yahoo.com>, Jami

cc

bcc

Subject Lower Silver Creek - 2/8/07 Mtg Summary

Lower Silver Creek Work Group members:

Attached please find the following:

- 2/8/07 Work Group Meeting Summary
- PowerPoint slides showing fall 2006 Lower Silver Creek sampling results for arsenic, lead and zinc

If, after an opportunity to think about the ideas presented at the meeting, you have any suggestions for Summit County on their regulatory approach, including ideas on how to incentivize landowners to create a repository, please contact Jami Brackin (435-3335-3206; jbrackin@co.summit.ut.us) or Nora Shepard (435-336-3131; nshepard@co.summit.ut.us) directly.

I will let you know when the next Lower Silver Creek work group meeting is scheduled, likely to be in late April or early May 2007.

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)

mstraube@mindspring.com

mtg summary 020807.lower silver creek.doc lsc slides.mo slam.0207

Michele Straube
<mstraube@mindspring.com
>

03/05/2007 11:33 AM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA
cc
bcc
Subject Lower Silver Creek Mtg Summary -- Please Review

I'm finally drafting the meeting summary for last month's Lower Silver Creek work group meeting. Could you please review these two sections of the meeting summary and let me know if I need to make any changes. Thanks. Mich.

EPA Plans for Additional Sampling and Alternatives Analysis

Handout – Kathy Hernandez's PowerPoint slides

Kathy Hernandez gave details about the Alternatives Analysis contract EPA has entered into with TetraTech. The objective of the project is to identify areas of significant contaminant loading ("hot spots") within the Lower Silver Creek area, and to explore the technical and economic feasibility of various restoration alternatives.

The contractors will undertake additional surveys within 2007 to observe known source areas and investigate the geomorphology and development issues in the area. They will also determine the impact of different flow levels (high flow, low flow, irrigation flow) on contaminant loading. Three possible restoration alternatives have been identified so far:

- recovery and disposal;
- channel relocation; and/or
- restoration (cap and re-establish vegetation).

Ms. Hernandez anticipates that the final report, which will evaluate alternative cleanup options, will be completed within a year (ie, by spring 2008).

Work group members and the community at large will be kept involved as the project proceeds. Stakeholders will be given an opportunity to comment on draft sample analysis plans (including proposed sampling locations), as well as the proposed cleanup alternatives that will be the subject of the feasibility analysis. Ms. Hernandez suggested that the next Lower Silver Creek work group meeting might coincide with the contractors' first site visit.

Sampling locations for the EPA-funded alternatives analysis will be selected, to the extent possible, in consultation with the state's Voluntary Cleanup Program, in order to maximize the usefulness of sample results for individual landowners and minimize the need for duplicative sampling. There is no guarantee, however, that cleanups under the Voluntary Cleanup Program will not require additional sampling and/or analysis. Lower Silver Creek landowners and developers who wish to be directly involved in identifying sampling locations should contact Kathy Hernandez directly (303-312-6101, hernandez.kathryn@epa.gov).

Next Work Group Meeting

The next Lower Silver Creek work group meeting will be scheduled in coordination with the work of the EPA alternatives analysis contractors. We are considering having work group meetings at these points in the project:

- after contractors have completed their first on-site visit (April 2007 timeframe);

- draft sampling plan available;
- sampling analyses (chemistry results) available;
- draft alternatives analysis report available;
- final alternatives analysis report issued.

All work group members will be notified when the next meeting is scheduled.

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

Silver Creek Watershed, Load Reduction Alternatives Assessment and Analysis Pilot—Progress Report February 14, 2007

Background

Today over 500,000 abandoned mines litter the western regions, affecting 16,000 miles of streams, with little funds available for cleanup. Abandoned mines pose one of the most significant and least understood problems that affect the health of people, fish, and water quality in the western United States. Approaches that utilize the watershed approach and develop methods for optimizing costs and pollutant reduction are lacking. This lack of a TMDL implementation planning framework jeopardizes our ability to ensure that funding for cleanup and restoration, which is woefully scarce, is targeted at restoration efforts that will lead to long-term improvements in water quality. Silver Creek was proposed as an ideal candidate for a pilot based on the understanding of the sources and the previous analysis conducted to develop the TMDLs. The watershed is a historic ore mining and processing area located near Park City, Summit County, Utah. The watershed consists of steep canyon walls with mine/mill wastes and mine overburden present throughout much of the watershed. This pilot will lead to the development of both an approach that can be transferred to other mining impacted sites throughout the west and the development of an optimized plan for allocating scarce restoration resources within Silver Creek while moving closer to attainment of water quality standards.

Current Status

EPA Region 8 prepared contract paperwork to secure contractor support for the pilot project. The Task Order was released competitively through the National Watershed contract on November 21, 2006. EPA received 3 proposals for the work and selected Tetra Tech based on their technical approach. The official contract was sent to Tetra Tech on December 29, 2006.

In January, the contractor contacted EPA, Utah Department of Environmental Quality (UDEQ) and the potentially responsible party (PRP) (United Park City Mines) to compile all relevant data (i.e., water quality/flow/soils data, land use & landownership data, source data, site assessments/characterizations, etc.) for the Silver Creek watershed.

EPA presented the overall project objectives and preliminary approach to the Silver Creek Watershed Stakeholders Group on February 8, 2007. EPA also discussed additional sampling efforts to be conducted by UDEQ and summarized potential remedial alternatives and the approach to selecting the preferred alternatives.

Next Steps

A critical component of the pilot project is the planning and implementation of a watershed reconnaissance survey to be followed by a source assessment and survey. The survey will be planned and conducted to coincide with UDEQ sampling planned for the watershed. Weather permitting, the site reconnaissance is planned for April 2007 and the survey is planned for late spring 2007. Other efforts planned in the next several months include:

- Development/refinement of a conceptual model for Silver Creek—the conceptual model will include a tool that will support the evaluation of the potential effectiveness of remedial alternatives. The conceptual model will also include a decision matrix for remedial alternatives and associated costs of design/implementation
- Development of source-specific remedial design alternatives and associated costs
- Development and application of various source-specific remedial scenarios to determine which alternatives or combination of alternatives will provide the most efficient means of watershed cleanup
- Update remedial alternatives matrix with pollutant/source loadings and the associated costs with design/implementation
- Present results (source specific design alternatives and associated pollutant load reductions and costs) to stakeholders

"Michele Straube"
<mstraube@mindspring.com
>

07/25/2007 03:22 PM

To "Chris Cline" <Chris_Cline@fws.gov>, "Nora Shepard" <nshepard@co.summit.ut.us>, "Sally Elliott" <selliott@co.summit.ut.us>, "Kari Lundeen"
cc <brianna.shanklin@tetratech.com>, <david.steed@tetratech.com>, <gene.bosley@tetratech.com>,
bcc

Subject Lower Silver Creek - Next Mtg and Mtg Summary

Please mark your calendars: The next Lower Silver Creek work group meeting has been scheduled for **Tuesday, September 18, 1-3:30 pm**, location TBD. The purpose of the meeting will be for Tetra Tech to present the results of the Phase I sampling, as well as their Phase II sampling plan. We also will set aside time for the group to brainstorm about resources available / needed for any future cleanup activities.

I have attached the July 17 meeting summary -- please let me know if anything significant has been omitted or misstated. Tetra Tech's PowerPoint presentation and the maps showing Phase I sampling plans are available for download at the following location: ftp://ftp.ttrmc.com. User name = Public_Documents; password = silver_creek (case sensitive). More detailed instructions can be found on the last page of the meeting summary.

Anyone having additional information in response to these two questions should forward it directly to Bruce Marshall at bruce.marshall@tetratech.com.

- What was the exact location of the Big 4 Mill site?
- How active are the irrigation diversions? Have they been exercised to their full right?

Please feel free to contact me directly with any questions or concerns.

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

mtg summary 071707.lower silver creek.doc

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Tuesday, July 17, 2007 – 9 – 11:30 am
Snyderville Basin Special Recreation District Trailside Offices
(Community Room), 5715 Trailside Drive, Park City

Meeting Summary

Meeting Attendees

Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Lisa Fitzgerald	Summit County Planning	lfitzgerald@co.summit.ut.us
Jami Brackin	Summit Co. Deputy Attorney	jbrackin@co.summit.ut.us
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Kari Lundeen	UDEQ / DWQ	klundeen@utah.gov
Kerry Gee	United Park City Mines	kcgee@unitedpark.com
Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
John Dalton	EPA	dalton.john@epamail.epa.gov
Mike Luers	Snyderville Basin Water Reclamation District	mluers@sbwrd.org
Bob Swensen, for Brent Ovard	Summit County Health	bovard@utah.gov
Derrick Radke	Summit County Engineering	dradke@co.summit.ut.us
Michael Boyle	Snyderville Basin Water Reclamation District	mboyle@sbwrd.org
John Knudson	Utah State Parks	johnknudson@utah.gov
Chuck Zuercher	Angus & Ella Pace, Pace Family Investments	chuckz@pureutah.com
Eric Bishop	Anderson Development	eric@and-dev.com
Alain Balmanno	Nadine Gillmor Fausett, Trustee	abalmanno@hbcalaw.com
Lindsay Ford	Florence Gillmor	lford@parsonsbehle.com
Dana Williams	Mayor, Park City	dana@parkcity.org
Tom Bakaly	City Manager, Park City	tom@parkcity.org
Jeff Schoenbacher	Park City Municipal	jschoenbacher@parkcity.org
Tony Christofferson	Geneva Rock Products	tchristofferson@clydeinc.com
Ron Ivie	Park City Municipal	rivie@parkcity.org
Siv Gillmor	Edward L. Gillmor	
Hollis Jencks	US Corps of Engineers	hollis.g.jencks@usace.army.mil
Jason Gipson	US Corps of Engineers	jason.a.gipson@usace.army.mil
Briant A. Kimball	USGS	bkimball@usgs.gov
Mike Dalley	Jack B. Parson Companies	mdalley@stakerparson.com
Bruce Marshall	TetraTech / EPA contractor	bruce.marshall@tetratech.com
Mike Egan	TetraTech / EPA contractor	mike.egan@tetratech.com
Gene Bosley	TetraTech / EPA contractor	gene.bosley@tetratech.com
David Steed	TetraTech / EPA contractor	david.steed@tetratech.com
Michele Straube	Facilitator	mstraube@mindspring.com

EPA Lower Silver Creek Project

Handout – Maps showing Phase I proposed sampling transects (Portable Document Format, PDF) and PowerPoint slides are available for download at the following location[1]: ftp://ftp.ttrmc.com

User name = Public_Documents
Password = silver_creek (this password is case sensitive)

-- or for hard copy, contact the facilitator.

Kathy Hernandez gave an overview of the two-phase sampling and alternatives assessment that EPA is undertaking in Lower Silver Creek (LSC) to support the community's desire to accomplish soil cleanup without listing the area on the Superfund National Priority List. EPA's assessment has the following goals:

- Better characterize the soils materials within the LSC area;
- Explore available cleanup options;
- Identify the most cost-effective cleanup option(s);
- Delineate jurisdictional wetlands;
- Provide LSC landowners with the environmental data equivalent to that contained in a Phase II environmental assessment, to inform their plans for cleanup under the Utah Voluntary Cleanup Program or other regulatory authority.

Bruce Marshall, project manager for EPA's contractor Tetra Tech, described the Phase I and Phase II sampling plans. This meeting summary contains only a few highlights from the presentation and subsequent discussion – readers should follow the link cited above to view the full presentation and look at the maps.

Tetra Tech's Phase I LSC assessment is designed to provide the following information:

- Nature and extent of contamination in the LSC area (spread of contamination horizontally and vertically);
- Form of the metals (primary sulfides, secondary minerals, etc.);
- Reactive transport surface water model;
- Jurisdictional wetlands assessments; and
- Provide information to help Summit County develop its soils ordinance and overlay zone.

During Phase I (August 2007), Tetra Tech will take water and soil samples along six transects crossing the river valley, including uplands and floodplains. The purpose of Phase I is to characterize the LSC area more fully, to identify dominant flow paths, and to focus the Phase II sampling. Only properties along the six transects will be sampled in Phase I; however, wetlands mapping will be performed on most, if not all, properties.

[1] Instructions for accessing the Tetra Tech FTP site are on a separate page at the end of this meeting summary.

Phase II (sampling October / November 2007, report expected spring 2008) will involve more detailed surface water, sediment, groundwater and soil sample collection, possibly from every property within the LSC area.

Tetra Tech sought the following additional historical use information:

- What was the exact location of the Big 4 Mill site? Nora Shepard suggested that one of the Summit County Commissioners might be able to answer this question.
- How active are the irrigation diversions? Have they been exercised to their full right? One participant stated that Standley Pace has flood irrigated in the past.

Work group participants provided the following information to assist Tetra Tech in its LSC assessment:

- Park City soils ordinance provides that "approved topsoil" for use as cover material is soil with lead concentrations that do not exceed 200 ppm for "occupied property" and 1,000 ppm for "vacant property."
- Soil Conservation Service mapped soils in Summit County from 1975-1982, including horizon studies to identify where the bottom of the tailings are; results were published a year or so ago.
- Far south end of drainage as it goes under Hwy 248, there are smaller intermittent streams that do not currently show on Tetra Tech's map; these streams begin in the middle of the tailings. What happens to them during periods of high flow – do they get recharged with water and find their way to the main stream? Do they simply flow for a short distance and get reabsorbed into the tailings? USGS sampled one of these streams and found very high zinc concentrations. Tetra Tech's assessment should identify and characterize each one of these intermittent streams.
- Natural channels and irrigation ditches, not all of which are currently shown on Tetra Tech's map, should be included in the assessment.
- Between transects 1 and 2, there are lots of tailing piles that collect rainwater and snowmelt, or alter water flow. The assessment should include sampling of each individual pile and any accumulated water, and the options analysis should include pile-specific strategies.
- Conclusions based on the sampling should reflect that this is a particularly dry year.
- USGS sampling includes sampling of "smaller pools." The USGS report is currently in final review and will be published on-line by September 30, 2007.
- It would be helpful to Park City and Summit County if the final mapping from the assessment were made available in GIS format.

EPA and its contractors obtained access agreements from landowners present whose property will be sampled during Phase I. Other Phase I landowners will be contacted to sign access agreements.

Summit County Plans for Lower Silver Creek

Jami Brackin, Deputy County Attorney, outlined Summit County's progress toward creating an overlay zone and developing a soils ordinance for LSC.

A temporary overlay zone which mirrors the study area for the Tetra Tech assessment will be finalized within the next week, and will be distributed to work group members.

A draft soils ordinance will be on the agenda for the County Board of Commissioners meeting in the next few weeks. It is not known yet whether they plan to hold a public hearing. The soils ordinance as currently drafted has the simple objective of putting everyone on notice regarding the potential for future soil remediation:

- Property owners who want to develop before the final overlay zone and final soils ordinance are in effect may need to conduct an independent soil study to characterize the nature and extent of contamination (or no contamination) on their property. If no contamination is found, nothing more will be required. If contamination is found, the property owner will need to conduct a cleanup under the Utah Voluntary Cleanup Program or other regulatory authority.
- Development approvals issued during this temporary period will require a plat note warning that remediation may be required at a future time.
- Building approvals will not be given during this temporary period unless the property owner demonstrates that there is no contamination on the property, or any contamination is cleaned up under a regulatory program acceptable to the County.
- Property owners who have no current development plans do not need to do anything during this temporary period.
- Criminal penalties for violations, and civil remedies for specific enforcement.

The final soils ordinance, to be enacted once the Tetra Tech assessment has been completed, will most likely not contain specific soil cleanup goals. The County will rely on other programs, such as the Utah Voluntary Cleanup Program, to oversee and approve property owners' cleanup activities.

Next Work Group Meeting

The next Lower Silver Creek work group meeting will be scheduled in coordination with the completion of Tetra Tech's Phase I study, anticipated to be in late August / early September 2007. We will schedule the next meeting when the Phase I report is ready. Agenda items for the next meeting include:

- Phase I sampling results;
- Phase II draft plan;
- Group brainstorm discussion about remedial action options and resources available / required.

Instructions for Connecting to Tetra Tech FTP Site:

1. Be connected to the Internet.
2. Open your Internet Browser (ie Microsoft Internet Explorer).
3. Type in ftp://ftp.ttrmc.com (in some email systems you can just click on the link at the start of this step).
4. You will be requested to enter a User Name and Password
   User Name is Public_Documents
   Password is silver_creek (this password is case sensitive).
5. The Public_Documents folder will open.
6. Within the Public_Documents folder are the files
7. Copy the PowerPoint file to your desired hard drive or network location. Double-clicking on the maps should open them directly from the website.

If you are using Internet Explorer 7.0, then please read the following additional instructions:

> Microsoft has changed the way FTP sites are browsed in the newest edition of IE 7. If you are seeing the message **"Internet Explorer cannot display the webpage"** ... once you receive the "cannot display webpage" message click the "Page" drop-down menu in the upper right-hand corner and choose "Open FTP site in Windows Explorer". You will be prompted a second time for your credentials. Once this is done, the familiar explorer view will open and you will login to the correct directory.

Please note that the maps require a long time to download.

Problems or concerns, please contact:
Brianna Shanklin, brianna.shanklin@tetratech.com.

"Michele Straube"
<mstraube@mindspring.com
>

10/09/2007 12:58 PM

To "Sally Elliott" <selliott@co.summit.ut.us>, <tom@parkcity.org>, <chuckz@pureutah.com>, <lford@parsonsbehle.com>, <abalmanno@hbcalaw.com>,
cc "Nora Shepard" <nshepard@co.summit.ut.us>, Kathryn Hernandez/EPR/R8/USEPA/US@EPA, <jbrackin@co.summit.ut.us>
bcc

Subject Lower Silver Creek -- Incentives Discussion

A suggestion was made at the end of the 9/18/07 Lower Silver Creek work group meeting to have a smaller group explore opportunities for remediation offsets and/or incentives in the Lower Silver Creek area. We have found a date and time that works for both Summit County folks and EPA to have this conversation with interested landowner representatives.

We will be meeting to brainstorm ideas on **Friday, November 16, 2007 from 10:30 - noon at the Snyderville Basin Special Recreation District Trailside Offices, Park Room** (same place as the last work group meeting). **Please RSVP by reply e-mail** whether you are interested in joining us. If there are support materials you think would be helpful (e.g., maps?), please let me know so I can try to have them available.

Please call me with any questions or concerns.

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

"Longwell, Daryl" <Daryl.Longwell@tetratech.com>
10/02/2007 02:19 PM

To "Marshall, Bruce" <Bruce.Marshall@tetratech.com>, "Ludwig, Jon" <jon.ludwig@tetratech.com>
cc Kathryn Hernandez/EPR/R8/USEPA/US@EPA
bcc
Subject FW: Lower Silver Creek Development Plans ...

Below is a message from Michelle Straube, regarding the potential future land use of property within the Lower Silver Creek Watershed study area, that she gathered at the last public meeting.

Daryl

Daryl L. Longwell, P.E. | Senior Project Manager
Tel 303.447.1823 | Fax 303.447.1836
Cell 303.588.0902 | Email daryl.longwell@tetratech.com

Tetra Tech
4900 Pearl East Circle, Suite 300W | Boulder, CO 80301

From: Michele Straube [mailto:mstraube@mindspring.com]
Sent: Tuesday, October 02, 2007 2:06 PM
To: Longwell, Daryl
Subject: Lower Silver Creek Development Plans ...

... such as they are, kind of from north to south, listed by landowner and plat nos:

- Silver Creek Estates -- Summit County showed this as SS-28/SS-27 vicinity, but my records show SCO-C-AM-8, SS-43-B-1 -- 18 (?) lots of single family residential approved
- (b) (6), 280 acres, SS-29, SS-44, SS-51-A, SS-49 -- I got somewhat different stories from different participants
  - Anderson Development prefers to build residential in the upland areas, but has not firm plans yet (I'll put the map that Eric Bishop of Anderson drew circles on in the mail to you)
  - Alain Balmanno (attorney for Anderson Development) gave three options for this large area -- open space, residential development, or a transfer station. The Summit County folks said "no" to the transfer station idea, though.
- Silver Creek, Robert Larsen Investors -- Summit County showed this as west of SS-28-A-X and SS-44 -- pending application for mixed use village center
- South Summit School District, SS-51-C-2-X -- future school site (no date under discussion)
- (b) (6), SS-56-A-1 -- Pace Meadows currently being used for livestock grazing, and want to keep doing that
- (b) (6), SS-47, SS-50, SS-56 -- no development plans at this time; may sell property in future
- (b) (6), SS-65-A, SS-65-A-2-B, SS-65-A-5, SS-65-A-6, SS-65-A-2-B -- some portion of this has been approved for industrial construction

If you need more specificity than this, it might be worth your while to have someone meet with Nora Shepard or her staff at Summit County, with the map and list of landowners / plat nos. in front of you. I've attached my list of stakeholders for the Lower Silver Creek work group, which includes landowners by plat no., FYI. I'll be updating the contact information in the next day or two -- let me know if you need the updated version.

If there are landowners / specific plat nos. that you need information about, but they didn't attend the meeting, I can try to contact the landowners by telephone. Just let me know.

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)

mstraube@mindspring.com lower silver creek membership.wpd

"Michele Straube"
<mstraube@mindspring.com
>
09/10/2007 12:53 PM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA, "Mo Slam" <mslam@utah.gov>, "Kari Lundeen" <klundeen@utah.gov>, "Sally Elliott" <selliott@co.summit.ut.us>, "Nora Shepard"
cc
bcc
Subject RSVP: Lower Silver Creek Mtg 9/18 1-3:30 pm

FINAL REMINDER: Since several of you were out-of-town when I sent the first reminder, here it is again. **Please RSVP for the September 18 meeting by reply e-mail** (if you have not already done so), so I can make sure we have adequate seating and handout copies.

The next Lower Silver Creek work group meeting has been scheduled for **Tuesday, September 18, 1-3:30 pm**, at the Snyderville Basin Special Recreation District Trailside Offices (Park Room). This is the same location as the last meeting, different room (Park Room can be accessed directly from the outside). The purpose of the meeting will be for Tetra Tech to present the results of the Phase I sampling, as well as their Phase II sampling plan. We also will set aside time for the group to brainstorm about local resources available / needed for any future cleanup activities. An agenda is attached.

Tetra Tech's PowerPoint presentation from the last meeting and the maps showing Phase I sampling plans are available for download at the following location: ftp://ftp.ttrmc.com. User name = Public_Documents; password = silver_creek (case sensitive). More detailed instructions can be found on the last page of the meeting summary.

Link to meeting location:
http://www.mapquest.com/maps/map.adp?searchtype=address&country=US&addtohistory=&searchtab=home&formtype=address&popflag=0&latitude=&longitude=&name=&phone=&level=&cat=&address=5715+Trailside+Drive&city=Park+City&state=UT&zipcode=

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

Michele Straube, Mediator / Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)

mstraube@mindspring.com agenda.lower silver creek.091807.doc

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Tuesday, September 18, 2007 – 1-3:30 pm

Snyderville Basin Special Recreation District Trailside Offices
(Park Room)
5715 Trailside Drive, Park City

Agenda

Facilitator: Michele Straube, CommUnity Resolution, Inc.
mstraube@mindspring.com; 801-583-6362

Meeting Objectives:

- Present Phase 1 sampling results
- Present proposed Phase 2 sampling and alternatives assessment plan
- Initiate discussion on remedial resources needed and available, to extent possible with limited information about nature and extent of contamination, and incomplete wetlands delineation

Introductions and Welcome	Michele Straube
Scope and Purpose of EPA Lower Silver Creek Project	Kathy Hernandez, EPA
Phase 1 Sampling Results Q/A	Tetra Tech
Phase 2 Conceptual Monitoring Plan Q/A	Tetra Tech
Local Remedial Resources -- initiate discussion	Group Discussion
Next steps	Kathy Hernandez, EPA

Invited:

Name	Agency
Kathryn Hernandez	EPA Region 8
John Dalton	EPA Region 8 / Community Involvement
Dan Wall	EPA/FWS
Mo Slam	UDEQ / DERR
Dave Allison	UDEQ / Community Relations
Kari Lundeen	UDEQ / DWQ
Bill Rees	UDEQ / Voluntary Cleanup Program
Brent Ovard	Summit County Health Dept
Sally Elliott	Summit County Commission
Nora Shepard / Lisa Fitzgerald	Summit County Community Development
Jami Brackin	Summit County Deputy County Attorney
Derrick Radke	Summit County Engineer
Chris Cline	US Fish & Wildlife
Pam Kramer / Paul Burnett	UT Div Wildlife Resources
Hollis Jencks / Jason Gipson	US Corps of Engineers
John Knudson	UT Dept of Natural Resources / Parks
Briant A. Kimball	USGS
Kerry Gee	United Park City Mines
John Tuerff	Citizens for Responsible Growth
Leo Williams / Doug Evans	Mountain Regional Water District
Senta Beyer	Snyderville Basin Recreation District
Chris Donaldson / Kimber Gabryszak	Basin Open Space Advisory Committee
Barbara Carey	Uinta Headwaters RC&D Council
Carol Potter	Mountain Trails Foundation
Brendan Waterman	Upper Weber River Watershed Coordinator
LANDOWNERS/DEVELOPERS:	
Tom Bakaly / Dana Williams	Park City Municipal Corporation
Mike Luers / Michael Boyle	Snyderville Basin Water Reclamation District
Standley Pace / Mike Pace	Standley B and Beverly F Pace
Chuck Zuercher / Gale Pace	Angus and Ella Pace
Dwayne Pace	Pace Family Investments
Joe Tesch, Esq.	Silver Creek / Robert Larsen Investors
Lindsay Ford, Esq.	Florence J. Gillmor
Alain Balmanno, Esq.	Nadine Gillmor Fausett Trustee
Siv Gillmore	Edward L. Gillmor
Mike Dalley	Jack B. Parson Companies
Tony Christofferson	Geneva Rock Products, Inc.
	Lynn M and Cynthia G Gaufin
	Silver Creek Properties LLC
	Summit County A Municipal Corporation
	Municipal Bldg Authority of Park City
	BVD Properties LLC
	Forestdale Investments LLC
	Byer Excavating Inc.
Bob Burton / Dan Burton	Stoly Associates LLC
Richard N. Reese	Richard N. Reese Family LP
Dave Burbidge	RDB LLC; Richard D. Burbidge
	Johnson International, Inc.
	Lacy Limited Liability Co.
	Park City Auto Center
	Sundborn LLC
	Qwest Corp.

Walt Plum / Spencer White	Silver Gate Ranches
Eric Bishop	Anderson Development
Jeramy Green	Pivotal Promontory Development LLC
	Park City Fire District
Zane K. Woolstenhulme / Barry Walker	South Summit School District
Daniel J. Olabarri	Olabarri Investment Company [no current address available]
Patricia Ford	American Ins. Co / Fireman's Fund Insurance
Elliott Christensen	Property Reserve, Inc.
	Jordanelle Storage Park, LLC
	Helene Barfuss, et al [no current address available]
Dick Burbidge	Burbs LLC

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group

Tuesday, September 18, 2007 – 1-3:30 pm
Snyderville Basin Special Recreation District Trailside Offices
(Park Room), 5715 Trailside Drive, Park City

Meeting Summary

Meeting Attendees

Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
John Dalton	EPA	dalton.john@epa.gov
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Kari Lundeen	UDEQ / DWQ	klundeen@utah.gov
Bill Rees	UDEQ / VCP	brees@utah.gov
Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Lisa Fitzgerald	Summit County Planning	lfitzgerald@co.summit.ut.us
Jami Brackin	Summit Co. Deputy Attorney	jbrackin@co.summit.ut.us
Brent Ovard	Summit County Health	bovard@utah.gov
Bob Swensen	Summit County Health	bswensen@utah.gov
Derrick Radke	Summit County Engineering	dradke@co.summit.ut.us
Chris Cline	FWS/SLC	chris_cline@fws.gov
Briant A. Kimball	USGS	bkimball@usgs.gov
Kerry Gee	United Park City Mines	kcgee@unitedpark.com
Gary Hill	Park City Municipal	ghill@parkcity.org
Mike Luers	Snyderville Basin Water Reclamation District	mluers@sbwrd.org
Chuck Zuercher	Angus & Ella Pace, Pace Family Investments	chuckz@pureutah.com
Lindsay Ford	Florence Gillmor	lford@parsonsbehle.com
Zane K. Woolstenhulme	South Summit School District	zw@ss.k12.ut.us
Alain Balmanno	Nadine Gillmor Fausett, Trustee	abalmanno@hbcalaw.com
Siv Gillmor	Edward L. Gillmor	
Eric Bishop	Anderson Development	eric@and-dev.com
Richard Burbidge	Richard R. Burbidge	(b) (6) [redacted]
Vaughn Burbidge	RDB LLC	vburbidge@bcpumping.com
Daryl L. Longwell	Tetra Tech / EPA contractor	daryl.longwell@tetratech.com
Mike Egan	Tetra Tech / EPA contractor	mike.egan@tetratech.com
Jon Ludwig	Tetra Tech / EPA contractor	jon.ludwig@tetratech.com
Michele Weidner	Tetra Tech / EPA contractor	michele.weidner@tetratech.com
Janna Simonsen	Tetra Tech / EPA contractor	janna.simonsen@tetratech.com
Michele Straube	Facilitator	mstraube@mindspring.com

Deleted:

EPA Lower Silver Creek Project -- Phase 1 Sampling Results and Phase II Conceptual Plan

Handout – Maps showing Phase I surface soil sampling results

On-line access to documents: Portable Document Format (PDF) and PowerPoint slides are available for download at the following location[1]: ftp://ftp.ttrmc.com (Tetra Tech FTP Site)

Additional documents (e.g., water sampling results) will be loaded to this site as they are available, and e-mail notice will be provided.

For hard copy, contact the facilitator.

Daryl Longwell, the new project manager for EPA's contractor Tetra Tech, described the Phase I sampling activities and presented soil sample results. He also outlined the plans for the Phase II sampling and remedial alternatives assessment that will be undertaken over the fall and winter. This meeting summary contains only a few highlights from the presentation and subsequent discussion – readers should visit the Tetra Tech FTP site to view the full presentation and look at the maps showing soil sample results.

Phase I sampling included the collection of soil and groundwater samples along six transects (lines crossing perpendicular to Lower Silver Creek and including upland and lowland areas). Soil samples were collected from the surface (0 to 6-inch depth) and at depths of up to 10 feet in locations where borings were advanced with the tractor mounted drill drig (geoprobe). Surface soil sample results for lead were presented during the meeting and are found on the maps at the Tetra Tech FTP site. Groundwater sample results are still being analyzed and will be uploaded to the Tetra Tech FTP site when they are available. Preliminary wetlands delineations still need to be confirmed with the Army Corps of Engineers. Final wetlands delineations will be made available to work group participants, following review by, and consultation with, the Army Corps of Engineers.

Deleted: , surface

Deleted: S

Deleted: Surface and g

Deleted: ;

Deleted: final

Phase II is anticipated to include low-flow surface water sampling and additional soil and groundwater sampling. In addition, a computer model will be used to identify and quantify point and non-point sources, as well as evaluating the potential effectiveness of various remediation options on improving Lower Silver Creek water quality. Using actual data where available and relevant assumptions, the computer model should help determine which are the most significant conditions causing contamination in Lower Silver Creek – Is it clean surface or groundwater being contaminated by flowing through tailings? Is it contaminated sediments moving into the Lower Silver Creek area from upstream? Is it irrigation water flowing through tailings?

Deleted: will

Deleted: , surface

Deleted: , as well as creation of a

Deleted: to simulate the impact

Deleted: of various remediation options

[1] Instructions for accessing the Tetra Tech FTP site are on a separate page at the end of this meeting summary. Note that the User ID and Password have changed since July.

Work group participants provided the following information to assist Tetra Tech in its LSC assessment:

- USGS's experience in the Lower Silver Creek area has been that there are not high flow / low flow conditions, there are only "flow" conditions. USGS did their surface water sampling in April, because that was a time of year when there was "flow" to sample.
- USGS has observed that much of the chemical reaction results from solids in the water; the computer model should include this assumption.
- Tailings materials in Richardson Flats were variable in terms of their potential to generate acid. Tailings materials in Lower Silver Creek may have similar variability, and remedial options may need to take this into account.
- Some irrigated areas have created wetlands. Are these wetlands areas jurisdictional?
- There are discrete tailings deposits in uplands areas. These areas will need to be addressed as development plans arise.

Remedial Action Categories

Mr. Longwell outlined the categories of remediation options that will be considered in Tetra Tech's remediation alternatives assessment. Kathy Hernandez (EPA) stated that, by the end of Phase II, data should be available to better understand the sources of contamination and identify on a property-by-property basis, whether impacts are related to infiltration, which may require remediation more extensive than capping or surficial removal. This will help the group identify whether there are remedial actions that will need to be implemented uniformly across the Lower Silver Creek area, or whether different remedial actions can be taken on different properties.

Deleted: infiltration issues

Current information about Lower Silver Creek landowners' development plans is critical to a comprehensive evaluation of remediation options, as future land use may affect the extent and level of cleanup required. **If you did not speak with Michele Straube (facilitator) at the 9/18 meeting about your development plans (if any), please contact her directly with that information.**

Work group participants provided the following information to assist Tetra Tech in its evaluation of these remediation options:

- Several participants raised questions about the possibility of remediating the streambed itself and isolating the flowing water from the contaminated tailing materials. Suggestions included:
  - raising the streambed,
  - dropping the streambed,
  - realigning the channel out of the floodplain,
  - and/or lining the streambed with natural materials.

  Remedial activity in the streambed could also improve the existing vertical banks and undercuts, which allow tailings to move into the stream during high flow events.

- Any activity to isolate the stream channel would have to be timed with remediation in the watershed upstream of Lower Silver Creek, as the water flowing into Lower Silver Creek is already contaminated.
- Any work on the main stream channel should also consider irrigation channels and groundwater, and their impact on the main stream.
- Questions were asked about what the relevant standard would be for any remediation's impact on wetlands. Would "no net loss" be the relevant standard, and if so, over what geographic area? Does the functional value, or existing health, of the wetlands factor in to wetlands mitigation requirements? EPA is having ongoing discussions with the Corps of Engineers about these issues and relevant permit requirements.

Deleted: What value would be assigned to the wetlands in Lower Silver Creek?

- The "hole" created by removing contaminated material from the floodplain could be left to fill in naturally with groundwater, thus creating a new wetland area with higher benefit; this created wetland could possibly be used as a "no net loss" trade-off.
- EPA plans to work with landowners who are irrigating their Lower Silver Creek land to explore best management practices to reduce contaminated water flowing into the stream, and potential funding for necessary changes to implement the best management practices.
- EPA also plans to evaluate potential funding options for owners not currently pursuing or considering development, who may need financial assistance. One option discussed involved EPA financing remediation, with the potential for reimbursement of these costs in the future if the property is developed.

Formatted: Bullets and Numbering

- Cleanup levels will be based on an assumed residential land use. If the future land use will be purely commercial, landowners can work with the state's Voluntary Cleanup Program to see whether alternative cleanup levels are possible.
- Are there any potential downstream impacts on water rights? For example, if a remedial option or future development changes water quantity and/or flow patterns, will that reduce the amount of water available from existing wells in the Lower Silver Creek area? Water rights will need to be protected, although the source of water may change.
- There may be capacity and engineering issues with taking contaminated materials removed from the Lower Silver Creek area to Richardson Flats. An additional repository may be necessary. There was some discussion about whether there may be opportunities for waste disposal in Wasatch County.

Some discussion focused on the possibility of creating incentives to encourage landowners to take steps necessary to implement remediation. One example given was providing incentives for a landowner to host a repository within the Lower Silver Creek area. A subgroup of this work group will be formed to explore the issue of incentives.

Next Steps

Anticipated future schedule:

- Additional soil and water samples – October / November 2007
- Additional "low flow" stream samples – Spring 2008

- Completed Phase II alternatives assessment available 60-90 days after the "low flow" stream samples
- Summit County final soils ordinance possibly in place by end of 2008

The next Lower Silver Creek work group meeting will be scheduled in coordination with the Phase 2 work by Tetra Tech. We will schedule the next meeting in the December 2007 / January 2008 timeframe. Agenda items for the next meeting include:

- Complete Phase I sampling results;
- Wetlands delineations;
- Phase II sampling results, as available;
- High-flow computer model of Lower Silver Creek stream system.

Instructions for Connecting to Tetra Tech FTP Site – current as of 10/3/07:

1. Be connected to the Internet.
2. Open your Internet Browser (e.g., Microsoft Internet Explorer).
3. Type in ftp://ftp.ttrmc.com .
4. You will be requested to enter a User Name and Password
   User Name is **Silver_Creek** (case sensitive)
   Password is **maps** (case sensitive).
5. The Silver_Creek folder will open.
6. As of 10/3/07, the Silver_Creek folder contains the following files:
   - PowerPoint slides from 7/17/07 meeting
   - Power Point slides from 9/18/07 meeting
   - Map showing Phase 1 soil sampling results – north section
   - Map showing Phase 1 soil sampling results – south section
7. Copy the PowerPoint file to your desired hard drive or network location. Double-clicking on the maps should open them directly from the website – be patient, they take a while to load.

If you are using Internet Explorer 7.0, then please read the following additional instructions:

- Microsoft has changed the way FTP sites are browsed in the newest edition of IE7.
- If you are seeing the message **"Internet Explorer cannot display the webpage"** ... once you receive the "cannot display webpage" message click the "Page" drop-down menu in the upper right-hand corner and choose "Open FTP site in Windows Explorer".
- You will be prompted a second time for your credentials.
  - User Name is **Silver_Creek** (case sensitive)
  - Password is **maps** (case sensitive)
- Once this is done, the familiar Explorer view will open and you will login to the correct directory.

Problems or concerns, please contact:
Brianna Shanklin, brianna.shanklin@tetratech.com.

"Longwell, Daryl"
<Daryl.Longwell@tetratech.com>

11/27/2007 09:13 AM

To "Michele Straube" <mstraube@mindspring.com>

cc Kathryn Hernandez/EPR/R8/USEPA/US@EPA, "Marshall, Bruce" <Bruce.Marshall@tetratech.com>, "Ludwig, Jon" <jon.ludwig@tetratech.com>, <kcgee@unitedpark.com>

bcc

Subject RE: Lower Silver Creek -- FYI and Questions

Michele - The following bullets address the questions raised in your email.

- The quantity of clean fill needed is a bit uncertain at the moment, but it will likely be much less than 1,000,000 cubic yards. We currently anticipate that removal within the floodplain would not require any (or very little) clean fill as backfill. We would plan on requiring that the underlying clean soil be replanted with appropriate wetland species. The Phase II data will help determine the suitability of the underlying soils for this purpose. Clean fill may be desirable for use in upland areas, where elevated metals concentrations may exist. Again, the Phase II data will provide more information on these areas. Clean fill will be required for the repository cover or cap (150,000 to 250,000 cy). Depending on the type of remediation selected, particularly along the stream channel and within the floodplain, additional clean fill will be required, in addition to rock for riprap, but we haven't advanced any plans far enough to develop a refined estimate. Given our current understanding and approach, I would anticipate that the volume of clean soil potentially required is more likely in the 250,000 to 500,000 cy range. The repositories themselves could also be a source of clean fill, assuming that some excavation will be necessary to construct the repository.
- I can confirm that the 1.5 million cubic yards is our current preliminary estimate of contaminated materials that may need to be removed <u>from the floodplain areas</u> and disposed of. We are planning some additional work that will help firm up our estimate of contaminated materials within the floodplain and the Phase II surface soil sampling data will help quantify upland soils with elevated metals concentrations. In non-wetland upland areas capping may also be a suitable remedy, and therefore, removal will not necessarily be required.
- The 60 acres for the repository is probably an absolute minimum (80 to 100 acres would be better), but, if a single large area is not available several smaller repositories could be an option. Ideally, we would like to be able to construct a repository in conjunction with non-residential (commercial or possibly recreational) development plans. Under this scenario, the capacity of a potential repository will depend on existing site topography, existing subsurface conditions (e.g., depth to bedrock and/or groundwater), and the development plans (final site topography and location of structures). All four of the areas that were discussed, and which you mentioned in your 11/17 email look like very good candidates. These include: SS-47 - the Florence Gillmor property east of Home Depot; SS-57-1 - the PRI property owned by the church (although isn't this the property already being developed for commercial uses?); the Bob Larson properties (including SS-30-A & B) north of the existing commercial development at Silver Summit); and the land locked BLM property near the Promontory development.

To assist us in identifying geologically suitable areas for the lower Silver Creek repositories, we will likely need to collect some geologic/geotechnical data from the uplands areas. With the recent development that has occurred in the area, we would imagine that some data might be available from the stakeholders in the form of geotechnical borings performed as part of their site design. Would it be possible to ask the Stakeholders Group for any data that they have on their properties in the form of geotechnical reports, geological reconnaissance reports, etc.?

Thanks, Daryl

Daryl L. Longwell, P.E. | Senior Project Manager

Tel 303.447.1823 | Fax 303.447.1836
Cell 303.588.0902 | Email daryl.longwell@tetratech.com

Tetra Tech
4900 Pearl East Circle, Suite 300W | Boulder, CO 80301

From: Michele Straube [mailto:mstraube@mindspring.com]
Sent: Monday, November 26, 2007 3:26 PM
To: Longwell, Daryl
Cc: Kathy Hernandez
Subject: Lower Silver Creek -- FYI and Questions

Daryl: I'm going through my notes from the "incentives" meeting a week or so ago and found the following info from Jami Brackin (Deputy Summit County Attorney):

- Plat SS-27-B-1 (Silver Gate Ranches, (b) (6) [redacted]), now subdivided, used to be heavily irrigated
- Plats SS-27 and SS-28 (Phase II) -- a soils study was submitted with the plat notice, but probably only for the highest ground

Questions: Are these statements accurate (for purposes of the meeting summary)?

- Estimated volume of clean fill that might be needed in LSC: 1 million yards
- Estimate of volume of contaminated materials that may need to be disposed in a repository: 1.5 million yards
- Estimated minimum size of repository: 60 acres

Thanks. Mich.

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com
www.active.com/donate/huntsman08/GoMichGo

"Michele Straube"
<mstraube@mindspring.com
>
11/27/2007 01:16 PM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA, "Mo Slam" <mslam@utah.gov>, "Kari Lundeen" <klundeen@utah.gov>, "Sally Elliott" <selliott@co.summit.ut.us>, "Nora Shepard"
cc <daryl.longwell@tetratech.com>
bcc
Subject Lower Silver Creek Work Group -- Updates

Lower Silver Creek Work Group members -- Two updates and a request. I will let you know when we schedule the next work group meeting, in the January/February time frame.

1. A subgroup of Lower Silver Creek stakeholders met earlier this month to explore the opportunities around two components of any future remediation: creation of a collection area / transfer station for clean fill and a repository for contaminated tailings materials. A summary of the discussion is attached. The meeting summary also includes information gathered later:
- repository siting guidelines (also attached separately to this e-mail)
- Tetra Tech's preliminary input on possible suitable locations near Lower Silver Creek to site a repository (also copied in below)

2. The aerial photograph / map used at the 11/16/07 meeting is now available on Tetra Tech's FTP site. (Instructions for accessing the FTP site are included at the end of the meeting summary.) Tetra Tech's FTP site now includes the following information:
- "July 17, 2007 presentation" (PowerPoint) -- Phase 1 sampling plan
- "XRF.data pts north" (pdf) -- map showing Phase 1 sampling transects
- "XRF.data pts south" (pdf) -- map showing Phase 1 sampling transects
- "Sept 18, 2007 presentation" (PowerPoint) -- Phase 2 sampling results
- "XRF.transect tables" (pdf) -- chart of Phase 1 soil sampling preliminary results
- "public_meeting" (pdf) -- aerial photograph / map overlaid with landowner information, used in the 11/16/07 meeting

3. To assist in identifying geologically suitable areas for the lower Silver Creek tailings repositories, EPA and its consultants will likely need to collect some geologic/geotechnical data from the uplands areas. With the recent development that has occurred in the area, some data might be available from the stakeholders in the form of geotechnical borings performed as part of their site design. **Please share any geological/geotechnical data you have on Lower Silver Creek properties (geotechnical reports, geological reconnaissance reports, etc.) by sending to Daryl Longwell at Tetra Tech:**

Daryl L. Longwell, PE
Tetra Tech
4900 Pearl East Circle, Suite 300W
Boulder, CO 80301-6118
303-447-1823
daryl.longwell@tetratech.com

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com
www.active.com/donate/huntsman08/GoMichGo

NOTE: After the meeting, EPA's contractors reached the following preliminary conclusions about possible ideal repository siting locations:

- The best locations appear to be located on the west side of Silver Creek. They should be planned for commercial, industrial or recreational (ie golf courses). The capacity and suitability of any specific location will depend on existing topography, existing subsurface conditions (e.g., depth to bedrock and/or groundwater), and the development plans (final site topography and location of structures).
- Potential candidate locations include: SS-47 [redacted]), SS-44 [redacted]), SS-29 ([redacted]), SS-30A ([redacted]), SS-29BX (Snyderville Basin Water Reclamation District) and others.
- The LDS property (SS-57-1) looks like it will be commercial and therefore would be ideal, but it is unclear how far along they are in construction.
- Also Promontory golf course looks good; but it is unclear which of the planned four golf courses are complete and which could accept material beginning next spring.
- Bob Larsen properties (including SS-30-A and SS-30-B) north of the existing commercial development at Silver Summit.
- Landlocked BLM property near the Promontory development.

Repository Site Evaluation Criteria.1107.doc mtg summary 111607.incentives.lower silver creek.doc

Repository Site Evaluation Criteria

GENERAL SITE FEATURES
- Size of Site (acres)
- Estimated Capacity
- Elevation of Site
- Slope
- Visual Compatibility
- Access to Site – Transportation
- Operations and Maintenance

GEOLOGY
- Surficial Material
- Type of Bedrock
- Depth to Bedrock
- Repository Base Characteristics
- Proximity to Faults, Unstable Slopes
- Sulfide Mineralization/Acid Potential
- Non-sulfate Sulfur
- Acid/Base Potential

HYDROGEOLOGY
- Depth to Groundwater
- Hydraulic Conductivity
- Run-on/Run-off Characteristics
- Land Application Area

MATERIALS
- Embankment Materials Availability
- Permeable Backfill Availability
- Coversoil Availability and Quality
- Soil Properties
  - Shear Strength
  - Consolidation
  - Slope Stability
  - Chemical Properties

ENVIRONMENTAL
- Avalanche Potential
- Disturbance Area/New Roads
- Wildlife
- Aspect
- Vegetation Type
- Wetlands Area/Occurrence

Here are the Repository Location Criteria (GIS Layers) that we used for initial screening.

Soil/geotech information for showing or indicating areas of unstable ground or high ground water. Exclude these areas.

Geologic/geophysical information that show alteration zones, fault patterns, and ground water structural control. Use 300 feet buffer zone around these areas.

Map all streams and use 300 feet buffer zone.

Make a GIS slope layer and as a first cut, exclude all slopes over 20%.

Make a layer showing existing transportation systems and any planning data for roads such as road obliteration.

Get with your eco or veg person for vegetative information that indicates high ground water.

Geochemical information that shows surface and ground water degradation characteristics (so that we do not locate repositories near the sources of the problem areas).

T&E/sensitive species information layer. Again exclude these areas from repo consideration.

Cultural resource information layer. Again exclude these areas from repo consideration (at least as first cut).

Excluding the areas noted above shows favorable repository areas. We or our consultants then conduct field work to further evaluate the areas selected.

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group
Incentives Subgroup

Friday, November 16, 2007 – 10:30 am -- noon
Snyderville Basin Special Recreation District Trailside Offices
(Park Room), 5715 Trailside Drive, Park City

Meeting Summary

Meeting Attendees

Sally Elliott	Summit County Commissioner	selliott@co.summit.ut.us
Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Jami Brackin	Summit Co. Deputy Attorney	jbrackin@co.summit.ut.us
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Ty Howard	UDEQ / DERR	thoward@utah.gov
Kerry Gee	United Park City Mines	kcgee@unitedpark.com
Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
Chuck Zuercher	Angus & Ella Pace, Pace Family Investments	chuckz@pureutah.com
Eric Bishop	Anderson Development	eric@and-dev.com
Alain Balmanno	Nadine Gillmor Fausett, Trustee	abalmanno@hbcalaw.com
Lindsay Ford	Florence Gillmor	lford@parsonsbehle.com
Dan Byer	Park City Ranches LLC	danbyer2006@yahoo.com
Aaron Rust	Park City Ranches LLC	aaron@leanicapital.com
Michele Straube	Facilitator	mstraube@mindspring.com

Available at Meeting: Poster-size aerial photograph of Lower Silver Creek study area and surrounding uplands, overlaid with property ownership information. This photograph / map is also available on the TetraTech FTP site. (Instructions for accessing the FTP site are at the end of this document.)

Interested Lower Silver Creek stakeholders met to explore opportunities for remediation offsets and/or incentives in the Lower Silver Creek area. Assuming a worst case scenario regarding cleanup options for purposes of the discussion (a need to remove and dispose of virtually all the tailings materials in the Lower Silver Creek area), the group brainstormed a variety of options for incentivizing landowners to provide the necessary infrastructure. The discussion focused on two components of any future remediation activity in Lower Silver Creek: a collection area / transfer station for clean fill and a repository for contaminated tailings materials.

The following meeting summary captures discrete points made by individual participants, as well as relevant information identified after the meeting (as noted). No decisions were made.

Clean Fill Transfer Station

A variety of clean fill materials will be needed as part of any remediation activities, including:

- Rip-rap
- Fine grade materials (e.g., to use as a barrier to human or surface water contact)
- Topsoil / organic materials

These types of clean fill materials are often generated during construction activities, and are not always reused at the construction site. Interested developers could segregate and classify appropriate clean fill materials during construction. The classified and segregated materials could be stockpiled for use as cover material in areas of Lower Silver Creek where removal and/or cover of contaminated materials will be required. Clean fill stockpiles could be maintained at each construction site, or one central transfer station site could be developed and operated by an interested landowner.

Back-of-the-envelope estimate of volume of clean fill that might be needed in Lower Silver Creek (estimate generated since the meeting):

- 250,000 – 500,000 cubic yards

Construction activities in and around Lower Silver Creek that may be generating clean fill in the foreseeable future:

- Burbidge
- Wasatch County
- West Hills

Potential staging (transfer station) areas (upland and of adequate size):

- Property Reserve, Inc. (LDS Church)
- Park City Heights
- Walt Plum property (southwest corner)

Ways the county can encourage stockpiling of clean fill materials and/or creation of a clean fill transfer station:

- Reduce County Building Department permit application fee, if the developer agrees to stockpile clean fill
- Mandate use of a central clean fill transfer station site
- Offer other incentives to encourage developers to stockpile clean fill now

Repository for Contaminated Materials

Back-of-the-envelope estimate of volume of contaminated materials from the Lower Silver Creek area that may need to be disposed in a repository:

- 1.5 million cubic yards

Estimated minimum size of repository:

- 80-100 acres (back-of-the-envelope estimate generated since the meeting)
- may be able to construct multiple smaller repositories

Potential locations within or near Lower Silver Creek for siting a repository identified during the meeting:

- Use as fill in a golf course (Promontory ?)
- Florence Gillmore property (behind Home Depot)
- Property Reserve, Inc. (LDS Church)
- Bob Larsen property
- In New Jersey, municipal codes require buildings to be built deeper into the ground to create the need for soil buffers; contaminated materials are used in the buffers.

Kathy Hernandez agreed to find and distribute siting requirements for a repository for contaminated tailings from Lower Silver Creek. [NOTE: The relevant siting requirements have been pasted in at the end of this meeting summary.]

NOTE: After the meeting, EPA's contractors reached the following preliminary conclusions about possible ideal repository siting locations:

- The best locations appear to be located on the west side of Silver Creek. They should be planned for commercial, industrial or recreational (ie golf courses). The capacity and suitability of any specific location will depend on existing topography, existing subsurface conditions (e.g., depth to bedrock and/or groundwater), and the development plans (final site topography and location of structures).
- Potential candidate locations include: SS-47 (Gillmore), SS-44 (Dwayne Pace), SS-29 (Angus and Ella Pace), SS-30A (Larsen), SS-29BX (Snyderville Basin Water Reclamation District) and others.
- The LDS property (SS-57-1) looks like it will be commercial and therefore would be ideal, but it is unclear how far along they are in construction.
- Also Promontory golf course looks good; but it is unclear which of the planned four golf courses are complete and which could accept material beginning next spring.
- Bob Larsen properties (including SS-30-A and SS-30-B) north of the existing commercial development at Silver Summit.
- Landlocked BLM property near the Promontory development.

Long-term liability and responsibility for monitoring a repository will need to be considered.

- For landowners with cleanup responsibility, indemnification may be a part of the agreement negotiated with an agency closure program (e.g., Utah Voluntary Cleanup Program)
- Any company that wishes to run a repository as a business, without being a landowner with cleanup responsibility, will have to work with their lawyer to address any liability issues.

Landowners could form an association to operate a repository.

Ways the County can encourage property owners to host a repository:

- Provide $$ credit / fees
- Allow increased density, to be used off-site
- Allow a money-making land use
- Impose / collect no tax from the repository land
- Allow open space / recreational re-use

CommUnity Resolution Inc. Phone 801-583-6362 Fax 801-582-2043 mstraube@mindspring.com

- **Instructions for Connecting to Tetra Tech FTP Site:**

1. Be connected to the Internet.
2. Open your Internet Browser (ie Microsoft Internet Explorer).
3. Type in ftp://ftp.ttrmc.com (in some email systems you can just click on the link at the start of this step).
4. You will be requested to enter a User Name and Password
   User Name is **Silver_Creek** (case sensitive)
   Password is **maps** (case sensitive).
5. The Silver_Creek folder will open.
6. Within the Silver_Creek folder are the files
7. Copy the PowerPoint file to your desired hard drive or network location. Double-clicking on the maps should open them directly from the website.

If you are using Internet Explorer 7.0, then please read the following additional instructions:

> Microsoft has changed the way FTP sites are browsed in the newest edition of IE 7. If you are seeing the message **"Internet Explorer cannot display the webpage"** ... once you receive the "cannot display webpage" message click the "Page" drop-down menu in the upper right-hand corner and choose "Open FTP site in Windows Explorer". You will be prompted a second time for your credentials. Once this is done, the familiar explorer view will open and you will login to the correct directory.

Please note that the maps require a long time to download.

Problems or concerns, please contact:
Brianna Shanklin, brianna.shanklin@tetratech.com.

Repository Site Evaluation Criteria

GENERAL SITE FEATURES
- Size of Site (acres)
- Estimated Capacity
- Elevation of Site
- Slope
- Visual Compatibility
- Access to Site – Transportation
- Operations and Maintenance

GEOLOGY
- Surficial Material
- Type of Bedrock
- Depth to Bedrock
- Repository Base Characteristics
- Proximity to Faults, Unstable Slopes
- Sulfide Mineralization/Acid Potential
- Non-sulfate Sulfur
- Acid/Base Potential

HYDROGEOLOGY
- Depth to Groundwater
- Hydraulic Conductivity
- Run-on/Run-off Characteristics
- Land Application Area

MATERIALS
- Embankment Materials Availability
- Permeable Backfill Availability
- Coversoil Availability and Quality
- Soil Properties
  - Shear Strength
  - Consolidation
  - Slope Stability
  - Chemical Properties

ENVIRONMENTAL
- Avalanche Potential
- Disturbance Area/New Roads
- Wildlife
- Aspect
- Vegetation Type
- Wetlands Area/Occurrence

Here are the Repository Location Criteria (GIS Layers) that we used for initial screening.

- Soil/geotech information for showing or indicating areas of unstable ground or high ground water. Exclude these areas.
- Geologic/geophysical information that show alteration zones, fault patterns, and ground water structural control. Use 300 feet buffer zone around these areas.
- Map all streams and use 300 feet buffer zone.
- Make a GIS slope layer and as a first cut, exclude all slopes over 20%.
- Make a layer showing existing transportation systems and any planning data for roads such as road obliteration.
- Get with your eco or veg person for vegetative information that indicates high ground water.
- Geochemical information that shows surface and ground water degradation characteristics (so that we do not locate repositories near the sources of the problem areas).
- T&E/sensitive species information layer. Again exclude these areas from repository consideration.
- Cultural resource information layer. Again exclude these areas from repository consideration (at least as first cut).

Excluding the areas noted above shows favorable repository areas. We or our consultants then conduct field work to further evaluate the areas selected.

"Michele Straube"
<mstraube@mindspring.com
>

03/06/2008 07:10 AM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA, "Mo Slam" <mslam@utah.gov>, "Kari Lundeen" <klundeen@utah.gov>, "Sally Elliott" <selliott@co.summit.ut.us>, "Nora Shepard"
cc "Jeff Schoenbacher" <jschoenbacher@parkcity.org>, <daryl.longwell@tetratech.com>, Maureen OReilly/ENF/R8/USEPA/US@EPA
bcc
Subject Fw: Lower Silver Creek report on the web

Rather than double-checking that Briant had the most current distribution list for Lower Silver Creek stakeholders, I've forwarded the announcement again. Sorry for the duplication for many of you.

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com
www.active.com/donate/huntsman08/GoMichGo

----- Original Message -----
From: Briant A Kimball
To: Michele Straube ; Kathy Hernandez ; Mo Slam ; Kari Lundeen ; Sally Elliott ; Nora Shepard ; Chris Cline ; Scott Adams ; Richard Burbidge ; John Tuerff ; Hollis Jencks ; Dana Williams ; Tom Bakaly ; Jeramy Green ; Mike Pace ; Briant A. Kimball ; Brendan Waterman ; Carol Potter ; Barbara Carey ; Kimber Gabryszak ; Chris Donaldson ; Senta Beyer ; Doug Evans ; Paul Burnett ; Pam Kramer ; Derrick Radke ; Jay Aguilar ; Jami Brackin ; Lisa Fitzgerald ; Brent Ovard ; Bill Rees ; Dave Allison ; Dan Wall ; John Dalton ; John Knudson ; Chuck Zuercher ; Gale Pace ; Mike Luers ; Michael Boyle ; Joe Tesch ; Patricia Ford ; Lindsay Ford ; Alain Balmanno ; Elliott Christensen ; Mike Dalley ; Dave Burbidge ; Tony Christofferson ; Kerry Gee ; Spencer White ; Eric Bishop ; Zane K. Woolstenhulme ; Jason Gipson ; Bob Swensen ; Vaughn Burbidge ; Ty Howard ; Dan Byer
Sent: Tuesday, March 04, 2008 1:09 PM
Subject: Lower Silver Creek report on the web

Good news. The USGS report has been served to the web. I am using one of Michele's mailing lists to send this news out. The pdf file can be downloaded from the following URL.

The report titled: "**Principal Locations of Metal Loading from Flood-Plain Tailings, Lower Silver Creek, Utah, April 2004**" has been released.

The URL is:
http://pubs.usgs.gov/sir/2007/5248/

Briant A. Kimball
U.S. Geological Survey
2329 W Orton Cir
West Valley, UT 84119-2047
Phone: 801-908-5047
Fax: 801-908-5001
Email: bkimball@usgs.gov

"Michele Straube" <mstraube@mindspring.com >

12/05/2007 04:00 PM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA, "Mo Slam" <mslam@utah.gov>, "Kari Lundeen" <klundeen@utah.gov>, "Sally Elliott" <selliott@co.summit.ut.us>, "Nora Shepard"

cc

bcc

Subject Lower Silver Creek – Next Meeting Date Still Uncertain

Lower Silver Creek work group members: Several of you have asked whether the group will be meeting in January to review and discuss the Tetra Tech Phase 2 sampling results and alternatives assessment. I have learned from Tetra Tech that the data analysis and computer modeling will not be completed until late January at the very earliest, and that setting a date certain right now is probably premature. If you have additional questions or want to check the status of things in the future, please contact either of these two people directly:

- Daryl Longwell, Tetra Tech, 303-447-1823, 303-588-0902 (cell), daryl.longwell@tetratech.com
- Kathy Hernandez, EPA, 303-312-6101, 720-352-7497 (cell), hernandez.kathryn@epa.gov

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com
www.active.com/donate/huntsman08/GoMichGo

"Michele Straube"
<mstraube@mindspring.com
>

12/03/2007 03:31 PM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA, John Dalton/OCP/R8/USEPA/US@EPA, Dan Wall/EPR/R8/USEPA/US@EPA, "Mo Slam"
cc Maureen OReilly/ENF/R8/USEPA/US@EPA
bcc
Subject Silver Creek Watershed Stakeholder Group - Update

Dear Silver Creek Watershed Stakeholder Group members:

For some of you, this is the second time you're receiving this news -- my apologies. The attachment is different.

1. I have just learned that the contract I have with EPA to facilitate the Silver Creek Watershed stakeholder process will come to an end on December 31, 2007. Historically the contract funding and end date have automatically been extended, but I have been told that EPA is experiencing difficulties providing contracting support to the dispute resolution and other programs ... which means that both the funding and the contract lapse at the end of this year, with no current possibility of EPA providing continued facilitation support for this collaborative effort.

I encourage the group to think creatively about whether and how you want to continue facilitation for your efforts. I wonder whether stakeholders other than EPA have facilitation capabilities that they can offer to the group. I also understand that historically some stakeholders jointly paid for facilitation support. The facilitation services I would recommend for the group include: scheduling and developing agendas for stakeholder group meetings, ensuring coordination and open flow of information between meetings, and facilitation of meetings.

I have attached the contact information I have for the Silver Creek Watershed Stakeholder Group, to help each of you stay in touch with each other.

2. The website for the Silver Creek Watershed Stakeholders Group (http://www.silvercreekpc.org/) is in the process of being updated. There is a newly created "Lower Silver Creek" page. During the month of December, I will provide the webmaster with additional information to ensure that the Lower Silver Creek portion of the site is totally up-to-date. In addition, I plan to have the webmaster post historical information about the full watershed group and the soils ordinance work group that I have in electronic format, so that the website can serve as "institutional memory" for this multi-year stakeholder group effort. Thank you to Julie Zamora of United Park City Mines for her webmaster talents.

I have been honored to work with each of you involved with the Silver Creek Watershed stakeholder group over the past couple of years. I challenge each stakeholder group member to ensure that the spirit of collaboration continues as you move forward. Good luck! In the meantime, feel free to contact me in the next month with any questions or concerns you have.

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)

801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

www.active.com/donate/huntsman08/GoMichGo silver creek watershed group membership.1207.doc

"Michele Straube"
<mstraube@mindspring.com
>

12/03/2007 02:41 PM

To "Chris Cline" <Chris_Cline@fws.gov>, "Nora Shepard" <nshepard@co.summit.ut.us>, "Sally Elliott" <selliott@co.summit.ut.us>, "Kari Lundeen"
cc "Jeff Schoenbacher" <jschoenbacher@parkcity.org>, <daryl.longwell@tetratech.com>, Maureen OReilly/ENF/R8/USEPA/US@EPA
bcc

Subject Lower Silver Creek Work Group - Update

Dear Lower Silver Creek Work Group members:

1. I have just learned that the contract I have with EPA to facilitate the Silver Creek Watershed stakeholder process, including the Lower Silver Creek work group, will come to an end on December 31, 2007. Historically the contract funding and end date have automatically been extended, but I have been told that EPA is experiencing difficulties providing contracting support to the dispute resolution and other programs ... which means that both the funding and the contract lapse at the end of this year, with no current possibility of EPA providing continued facilitation support for this collaborative effort.

I encourage the group to think creatively about whether and how you want to continue facilitation for your efforts. I wonder whether stakeholders other than EPA have facilitation capabilities that they can offer to the group. I also understand that historically some stakeholders jointly paid for facilitation support. The facilitation services I would recommend for the group include: scheduling and developing agendas for work group meetings, ensuring coordination and open flow of information between meetings, and facilitation of meetings.

I have attached the contact information I have for the Lower Silver Creek work group, to help each of you stay in touch with each other.

2. A revised meeting summary for the 11/16/07 incentives subgroup meeting is attached. It has been pointed out to me that I did not fully reflect all comments made during the meeting. I have added the following sentence at the end of the meeting summary: "Kerry Gee brought up the possibility that a CERCLA removal action might be a way to address problems in Lower Silver Creek." For those of you unfamiliar with the CERCLA (Superfund) removal program, you may want to start with this EPA document: http://www.smallbiz-enviroweb.org/pub_video/epadocs/ddocs/d07.pdf.

3. The website for the Silver Creek Watershed Stakeholders Group (http://www.silvercreekpc.org/) is in the process of being updated. The newly created "Lower Silver Creek" page contains direct links to the maps Tetra Tech has created (including the map / aerial photograph overlaid with landowner information used in the 11/16/07 meeting), without the need to go through the ftp site. During the month of December, I will provide the webmaster with additional information to ensure that the Lower Silver Creek page is totally up-to-date (meeting minutes, sampling results that I have access to, maps, etc.). In addition, I plan to have the webmaster post historical information about the full watershed group and the soils ordinance work group that I have in electronic format, so that the website can serve as "institutional memory" for this multi-year stakeholder group effort. Thank you to Julie Zamora of United Park City Mines for her webmaster talents.

I have been honored to work with each of you involved with the Lower Silver Creek work group over the past year and a half, and have been impressed with how each of you has approached the difficult issues the group needs to address with an open and creative mind. I challenge each work group member to ensure that this spirit of collaboration continues as you move forward. Good luck! In the meantime, feel free to contact me in the next month with any questions or concerns you have.

Michele Straube, Mediator/Facilitator
CommUnity Resolution, Inc.
2915 E. Oakhurst Drive
Salt Lake City, UT 84108
801-583-6362 (o); 801-582-2043 (fax)
801-582-2043 (h); 801-455-5789 (cell)
mstraube@mindspring.com

www.active.com/donate/huntsman08/GoMichGo lower silver creek membership.doc

mtg summary 111607.incentives.lower silver creek.120307 revision.doc

Silver Creek Watershed Stakeholders' Group
Lower Silver Creek Work Group
Incentives Subgroup

Friday, November 16, 2007 – 10:30 am -- noon
Snyderville Basin Special Recreation District Trailside Offices
(Park Room), 5715 Trailside Drive, Park City

Meeting Summary
(12/3/07 Revision)

Meeting Attendees

Sally Elliott	Summit County Commissioner	selliott@co.summit.ut.us
Nora Shepard	Summit County Planning	nshepard@co.summit.ut.us
Jami Brackin	Summit Co. Deputy Attorney	jbrackin@co.summit.ut.us
Muhammed Slam	UDEQ / DERR	mslam@utah.gov
Ty Howard	UDEQ / DERR	thoward@utah.gov
Kerry Gee	United Park City Mines	kcgee@unitedpark.com
Kathy Hernandez	EPA	hernandez.kathryn@epa.gov
Chuck Zuercher	Angus & Ella Pace, Pace Family Investments	chuckz@pureutah.com
Eric Bishop	Anderson Development	eric@and-dev.com
Alain Balmanno	Nadine Gillmor Fausett, Trustee	abalmanno@hbcalaw.com
Lindsay Ford	Florence Gillmor	lford@parsonsbehle.com
Dan Byer	Park City Ranches LLC	danbyer2006@yahoo.com
Aaron Rust	Park City Ranches LLC	aaron@leanicapital.com
Michele Straube	Facilitator	mstraube@mindspring.com

Available at Meeting: Poster-size aerial photograph of Lower Silver Creek study area and surrounding uplands, overlaid with property ownership information. This photograph / map is also available on the TetraTech FTP site. (Instructions for accessing the FTP site are at the end of this document.)

Interested Lower Silver Creek stakeholders met to explore opportunities for remediation offsets and/or incentives in the Lower Silver Creek area. Assuming a worst case scenario regarding cleanup options for purposes of the discussion (a need to remove and dispose of virtually all the tailings materials in the Lower Silver Creek area), the group brainstormed a variety of options for incentivizing landowners to provide the necessary infrastructure. The discussion focused on two components of any future remediation activity in Lower Silver Creek: a collection area / transfer station for clean fill and a repository for contaminated tailings materials.

The following meeting summary captures discrete points made by individual participants, as well as relevant information identified after the meeting (as noted). No decisions were made.

Clean Fill Transfer Station

A variety of clean fill materials will be needed as part of any remediation activities, including:

- Rip-rap
- Fine grade materials (e.g., to use as a barrier to human or surface water contact)
- Topsoil / organic materials

These types of clean fill materials are often generated during construction activities, and are not always reused at the construction site. Interested developers could segregate and classify appropriate clean fill materials during construction. The classified and segregated materials could be stockpiled for use as cover material in areas of Lower Silver Creek where removal and/or cover of contaminated materials will be required. Clean fill stockpiles could be maintained at each construction site, or one central transfer station site could be developed and operated by an interested landowner.

Back-of-the-envelope estimate of volume of clean fill that might be needed in Lower Silver Creek (estimate generated since the meeting):

- 250,000 – 500,000 cubic yards

Construction activities in and around Lower Silver Creek that may be generating clean fill in the foreseeable future:

- Burbidge
- Wasatch County
- West Hills

Potential staging (transfer station) areas (upland and of adequate size):

- Property Reserve, Inc. (LDS Church)
- Park City Heights
- Walt Plum property (southwest corner)

Ways the county can encourage stockpiling of clean fill materials and/or creation of a clean fill transfer station:

- Reduce County Building Department permit application fee, if the developer agrees to stockpile clean fill
- Mandate use of a central clean fill transfer station site
- Offer other incentives to encourage developers to stockpile clean fill now

Repository for Contaminated Materials

Back-of-the-envelope estimate of volume of contaminated materials from the Lower Silver Creek area that may need to be disposed in a repository:

- 1.5 million cubic yards

Estimated minimum size of repository:

- 80-100 acres (back-of-the-envelope estimate generated since the meeting)
- may be able to construct multiple smaller repositories

Potential locations within or near Lower Silver Creek for siting a repository identified during the meeting:

- Use as fill in a golf course (Promontory ?)
- Florence Gillmore property (behind Home Depot)
- Property Reserve, Inc. (LDS Church)
- Bob Larsen property
- In New Jersey, municipal codes require buildings to be built deeper into the ground to create the need for soil buffers; contaminated materials are used in the buffers.

Kathy Hernandez agreed to find and distribute siting requirements for a repository for contaminated tailings from Lower Silver Creek. [NOTE: The relevant siting requirements have been pasted in at the end of this meeting summary.]

NOTE: After the meeting, EPA's contractors reached the following preliminary conclusions about possible ideal repository siting locations:

- The best locations appear to be located on the west side of Silver Creek. They should be planned for commercial, industrial or recreational (ie golf courses). The capacity and suitability of any specific location will depend on existing topography, existing subsurface conditions (e.g., depth to bedrock and/or groundwater), and the development plans (final site topography and location of structures).
- Potential candidate locations include: SS-47 (b) (6)), SS-44 ((b) (6)), SS-29 ((b) (6)), SS-30A ((b) (6)), SS-29BX (Snyderville Basin Water Reclamation District) and others.
- The LDS property (SS-57-1) looks like it will be commercial and therefore would be ideal, but it is unclear how far along they are in construction.
- Also Promontory golf course looks good; but it is unclear which of the planned four golf courses are complete and which could accept material beginning next spring.
- (b) (6) properties (including SS-30-A and SS-30-B) north of the existing commercial development at Silver Summit.
- Landlocked BLM property near the Promontory development.

Long-term liability and responsibility for monitoring a repository will need to be considered.

- For landowners with cleanup responsibility, indemnification may be a part of the agreement negotiated with an agency closure program (e.g., Utah Voluntary Cleanup Program)
- Any company that wishes to run a repository as a business, without being a landowner with cleanup responsibility, will have to work with their lawyer to address any liability issues.

Landowners could form an association to operate a repository.

Ways the County can encourage property owners to host a repository:

- Provide $$ credit / fees
- Allow increased density, to be used off-site
- Allow a money-making land use
- Impose / collect no tax from the repository land
- Allow open space / recreational re-use

Kerry Gee brought up the possibility that a CERCLA removal action might be a way to address problems in Lower Silver Creek.

- **Instructions for Connecting to Tetra Tech FTP Site:**

1. Be connected to the Internet.
2. Open your Internet Browser (ie Microsoft Internet Explorer).
3. Type in ftp://ftp.ttrmc.com (in some email systems you can just click on the link at the start of this step).
4. You will be requested to enter a User Name and Password
   User Name is **Silver_Creek** (case sensitive)
   Password is **maps** (case sensitive).
5. The Silver_Creek folder will open.
6. Within the Silver_Creek folder are the files
7. Copy the PowerPoint file to your desired hard drive or network location. Double-clicking on the maps should open them directly from the website.

If you are using Internet Explorer 7.0, then please read the following additional instructions:

> Microsoft has changed the way FTP sites are browsed in the newest edition of IE 7. If you are seeing the message **"Internet Explorer cannot display the webpage"** ... once you receive the "cannot display webpage" message click the "Page" drop-down menu in the upper right-hand corner and choose "Open FTP site in Windows Explorer". You will be prompted a second time for your credentials. Once this is done, the familiar explorer view will open and you will login to the correct directory.

Please note that the maps require a long time to download.

Problems or concerns, please contact:
Brianna Shanklin, brianna.shanklin@tetratech.com.

Repository Site Evaluation Criteria

GENERAL SITE FEATURES
- Size of Site (acres)
- Estimated Capacity
- Elevation of Site
- Slope
- Visual Compatibility
- Access to Site – Transportation
- Operations and Maintenance

GEOLOGY
- Surficial Material
- Type of Bedrock
- Depth to Bedrock
- Repository Base Characteristics
- Proximity to Faults, Unstable Slopes
- Sulfide Mineralization/Acid Potential
- Non-sulfate Sulfur
- Acid/Base Potential

HYDROGEOLOGY
- Depth to Groundwater
- Hydraulic Conductivity
- Run-on/Run-off Characteristics
- Land Application Area

MATERIALS
- Embankment Materials Availability
- Permeable Backfill Availability
- Coversoil Availability and Quality
- Soil Properties
  - Shear Strength
  - Consolidation
  - Slope Stability
  - Chemical Properties

ENVIRONMENTAL
- Avalanche Potential
- Disturbance Area/New Roads
- Wildlife
- Aspect
- Vegetation Type
- Wetlands Area/Occurrence

Here are the Repository Location Criteria (GIS Layers) that we used for initial screening.

- Soil/geotech information for showing or indicating areas of unstable ground or high ground water. Exclude these areas.
- Geologic/geophysical information that show alteration zones, fault patterns, and ground water structural control. Use 300 feet buffer zone around these areas.
- Map all streams and use 300 feet buffer zone.
- Make a GIS slope layer and as a first cut, exclude all slopes over 20%.
- Make a layer showing existing transportation systems and any planning data for roads such as road obliteration.
- Get with your eco or veg person for vegetative information that indicates high ground water.
- Geochemical information that shows surface and ground water degradation characteristics (so that we do not locate repositories near the sources of the problem areas).
- T&E/sensitive species information layer. Again exclude these areas from repository consideration.
- Cultural resource information layer. Again exclude these areas from repository consideration (at least as first cut).

Excluding the areas noted above shows favorable repository areas. We or our consultants then conduct field work to further evaluate the areas selected.