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Superfund Redevelopment Initiative Webinar Series: Aligning Remedies with Reuse: From Superfund Sites to Soccer Fields

Sponsored by: U.S. EPA, Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation

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Instructors:
Melissa Friedland, U.S. EPA, Superfund Program Manager for Redevelopment (friedland.melissa@epa.gov)
Bill Denman, US EPA Region 4, Superfund Redevelopment Coordinator & RPM (denman.bill@epa.gov)
Tom Bloom, US EPA Region 5, Superfund Redevelopment Coordinator (bloom.thomas@epa.gov)
Chris Thomas, US EPA Region 3, Land Revitalization Team Leader (thomas.christopher@epa.gov)
Greg Griffith, Director of Development, U.S. Soccer Foundation (ggriffith@ussoccerfoundation.org)
Moderator:
Michele Mahoney, U.S. EPA, Office of Superfund Remediation and Technology Innovation (mahoney.michele@epa.gov)

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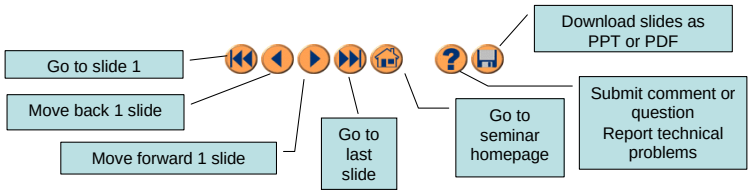

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Although I'm sure that some of you have these rules memorized from previous CLU-IN events, let's run through them quickly for our new participants.

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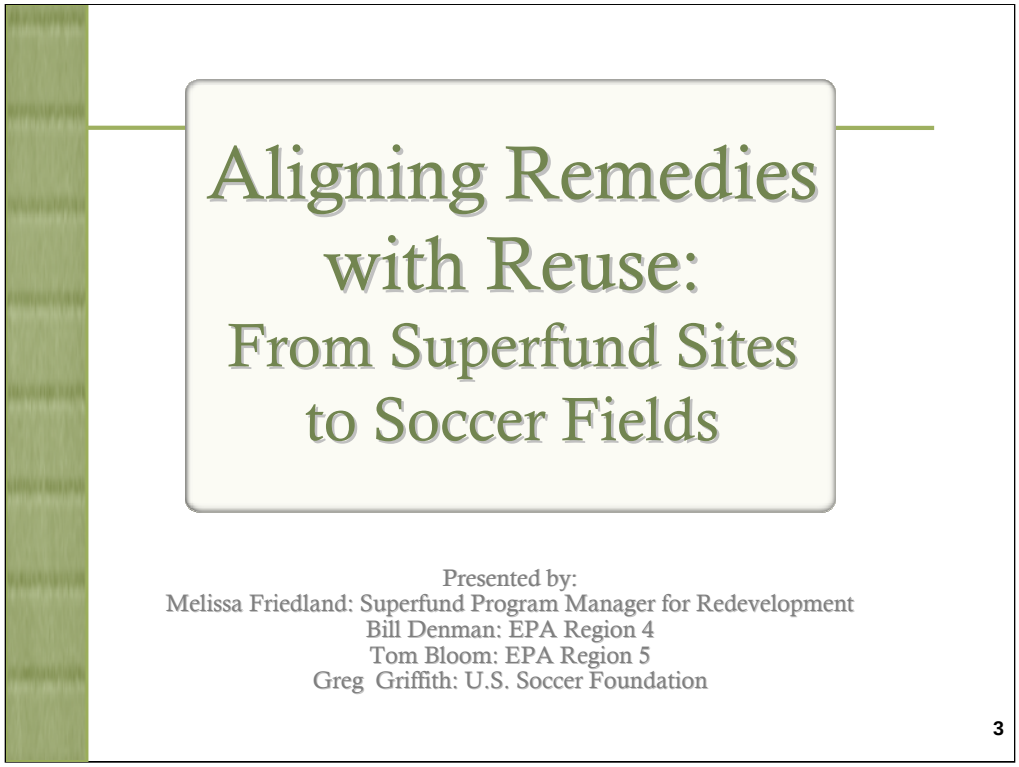
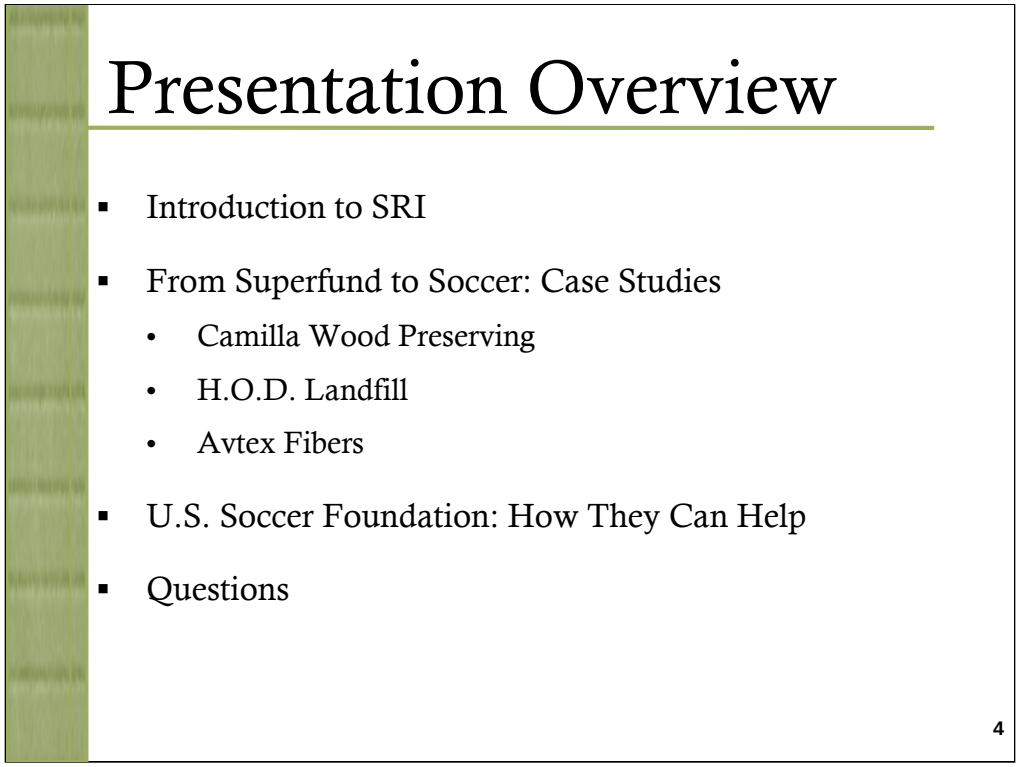
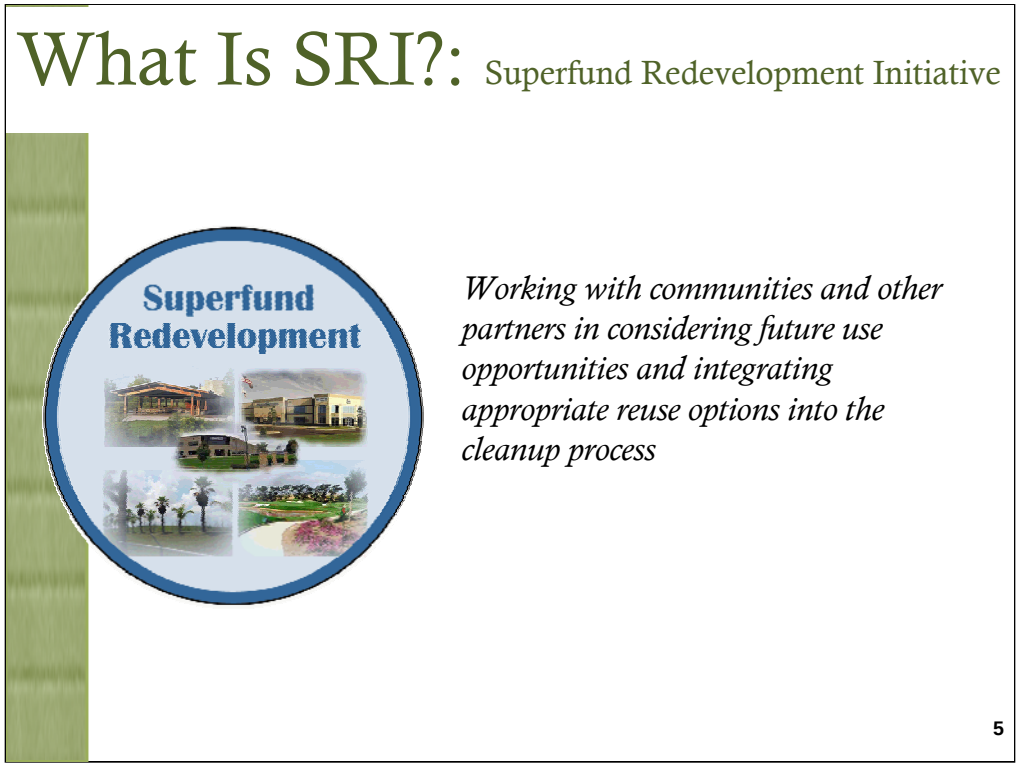


Hi and welcome to our first Superfund Redevelopment Initiative webinar of 2012!

My name is Melissa Friedland and I am the Superfund Program Manager for Redevelopment at EPA Headquarters. Frank Avvisato and I support EPA's Superfund Redevelopment Initiative. Today, I will be presenting with Bill Denman and Tom Bloom from EPA and Greg Griffith from the U.S. Soccer Foundation. And we will be talking about reusing cleaned up Superfund sites as soccer fields. Our goal is to provide you with some examples of sites that have been reused as soccer fields and take a close look at how the community worked to reuse these sites, and the key challenges and lessons they learned through the reuse process.



I'll begin today by spending just a few minutes talking about the Superfund Redevelopment Initiative (SRI) and the tools and resources we can provide communities and Regions to help reuse their Superfund sites. I will then hand things over to Bill Denman who will be talking about the soccer reuse at the Camilla Wood Preserving site in Georgia. We'll then hear from Tom Bloom about the soccer fields at H.O.D. Landfill in Antioch, Illinois. We will conclude our case studies with a look at the Avtex Fibers site in Front Royal, Virginia and the great work they accomplished there to construct much needed soccer fields. And I am thrilled that Greg Griffith from the U.S. Soccer Foundation is here with us today to talk a little about how the Foundation can support communities, particularly those in low-income urban areas, in need of soccer fields. Thank you all for joining us today!



Our mission at SRI, at both national and regional levels, is to work *with communities and other partners in considering future use opportunities and integrating appropriate reuse options into the cleanup process*

Reuse is not new - communities have been reusing cleaned up sites for many years.

Even though EPA has always been supportive of site reuse, it wasn't until 1999 that the Agency launched the Superfund Redevelopment Initiative (SRI). SRI works to develop tools for site stakeholders to help promote reuse and works with Regions to provide site-specific assistance.

PILOTS:
When we began in 1999, we picked the first 10 Superfund Redevelopment Pilots, negotiating $100,000 cooperative agreements with local governments that would allow the communities to participate more fully in the site cleanup and reuse process.

In 2002, we selected more Pilots but also introduced a new approach. We began offering the direct services of a team of land use professionals who were also knowledgeable about Superfund. Soon the team approach became the only way to go – it was simply more efficient and effective.

In 2004, we also developed the Return to Use Initiative, which focuses on cleaned up but vacant sites that usually need just a little help with some site reuse barriers. We'll talk a bit more about RTU later in the presentation. Since 2004, SRI has established 68 site-specific partnerships, called demonstration projects. These partnerships involve community groups, government officials, site owners and the parties responsible for cleaning up sites.

Promoting Reuse:
Ultimately, we have found that one of the most effective tools we have is to share the stories of what had been done at other sites. In order to spread the word about our successes, we developed numerous communicative tools and outreach programs. You'll hear more about these tools and how we learn and apply techniques across Superfund sites.

How SRI Can Help:

- Outreach
- Regional Seeds
- Return to Use Initiative

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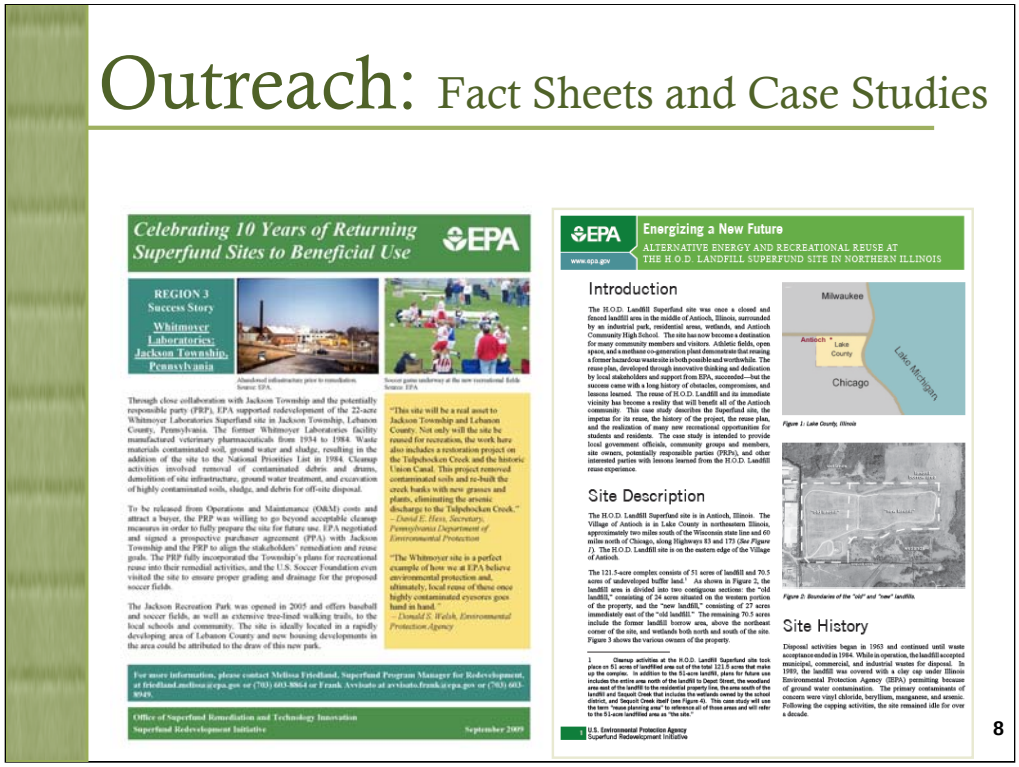
We have a number of new tools and resources available to help you and to promote general reuse. I will be touching on each of these in the upcoming slides.

Outreach: Fact Sheets and Case Studies



Communication is key. If a site is experiencing successful reuse, we want to make sure others who may be trying to implement reuse at their sites know about it. As I mentioned before, we have found that one of the most effective tools we have is to share the stories of what had been done at other sites.

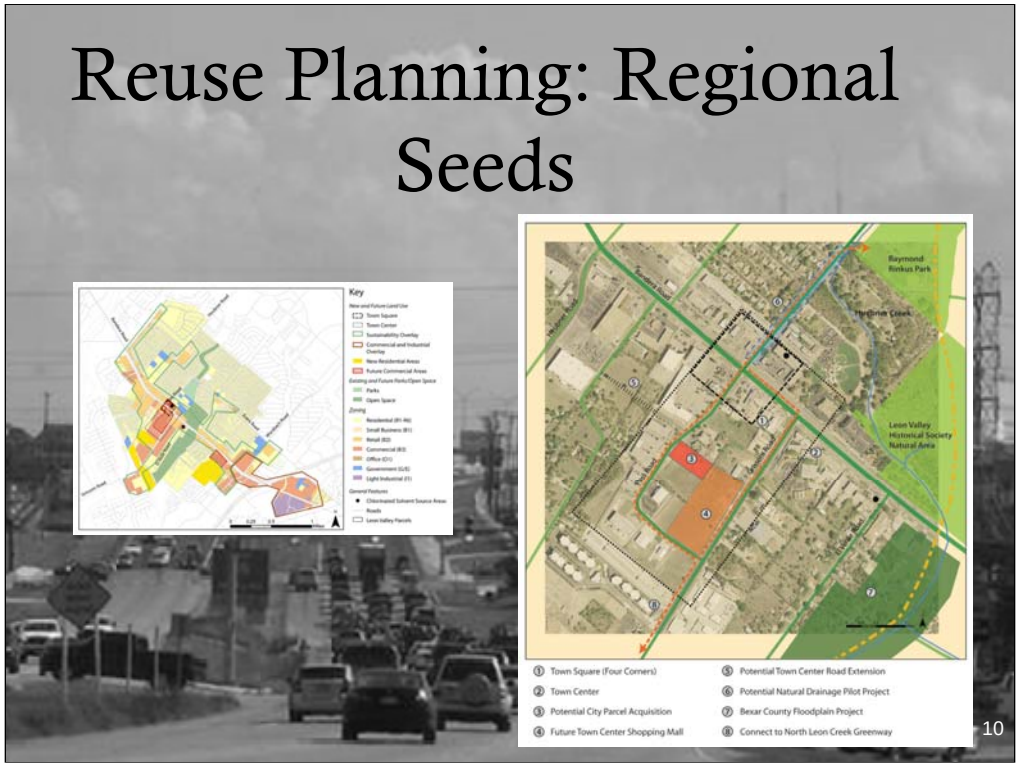
In order to spread the word, we developed fact sheets, case studies, videos and brochures and continuously update our SRI website with success stories and current information. In the past year, success stories have been completed for eight Regions.

We also have several in-depth, comprehensive case studies for anyone interested in understanding how the reuse process played out start to finish – if you visit our website, you can see stories for H.O.D. Landfill, Aerojet Corp., MDI and Milltown Reservoir sites, Midvale Slag and the Former Spellman Engineering site.

Outreach: Videos and Website

Our website is the hub for most of our tools. We use the website to display successes in the various ways mentioned so far, such as fact sheets and case studies but we also use it provide additional information and resources to anyone who might be interested in what we do at SRI.

The SRI videos have become increasingly useful! We post them on our website, provide them to stakeholders upon request and use them at trainings.



Through our Regional Seeds program, we provide start-up funding for reuse planning at Superfund sites. I'd like to take a few minutes to explain this process in more detail over the next couple of slides.

This information is on our website as well as a few examples of the reports generated through this process.

Displayed on the screen are a few of the maps and photographs that were part of the reuse plan for the Bandera Road Superfund site, which is located in the City of Leon Valley in San Antonio, Texas. Maps like these are instrumental in determining reasonable future land use.

Regional Seeds: Benefits

- Help remove barriers for reuse
- Encourage appropriate reuse
- Use site-specific tools and strategies

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To initiate planning projects, SRI provides Regional seed startup funds around the country. Through this work we have seen that that well-run, community-based reuse planning has the potential to dramatically improve community relations and the public's perception of the Agency; to streamline the remedial process by clarifying a site's reasonably anticipated future land use and integrating that with the site's remedial strategy; and to bring the Agency and communities together around more cost-effective remedies that produce the greatest long-term value for local communities.

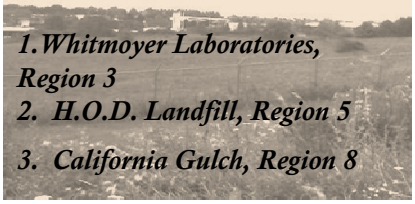
Regional seeds are resources provided by SRI to communities at the request of EPA Regional staff. The seed concept provides an initial investment to bring stakeholders to the table, clarify remedy constraints, and outline suitable reuse options for the local community to pursue. Additional resources to complete the Regional seed process are provided by each Region. As a reuse planning process gains momentum, communities can leverage the initial regional seed investment with local resources to continue the process of returning a local Superfund site to productive reuse.

SRI recognizes that there is no one-size-fits-all strategy to make reuse happen. Therefore, SRI offers several different types of Regional seeds to support reuse ranging from full reuse planning process support to small exploratory seeds to see if reuse is a viable option.

Return To Use Initiative:

The goal of the Return to Use (RTU) Initiative is to remove barriers to reuse that are not necessary for the protection of human health, the environment, or the remedy at sites where remedies are already in place.

RTU Projects that have highlighted sites with soccer fields:



1. Whitmoyer Laboratories, Region 3
2. H.O.D. Landfill, Region 5
3. California Gulch, Region 8

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The Return to Use Initiative is currently one of SRI's primary efforts. It is focused on construction complete sites, or sites that are partly cleaned up. The Initiative has one major purpose: to remove barriers to reuse that are not necessary for the protection of human health, the environment or the remedy at those sites where remedies are already in place.

As part of the Initiative, we capture the lessons learned at the site and create demonstration projects so other cleaned up sites can benefit from the experiences. We also make an effort to do what we can to address the barriers, and work with the Regions to figure out ways Headquarters could potentially help on a site-by-site basis. Examples include: providing regional seed resources; identifying and sharing examples that promote lessons learned; and helping Regions draft Ready for Reuse determinations.

Contact Information

Melissa Friedland
Superfund Program Manager for Redevelopment
friedland.melissa@epa.gov
(703) 603-8864

Frank Avvisato
Superfund Redevelopment Project Officer
avvisato.frank@epa.gov
(703) 603-8949

http://epa.gov/superfund/programs/recycle/

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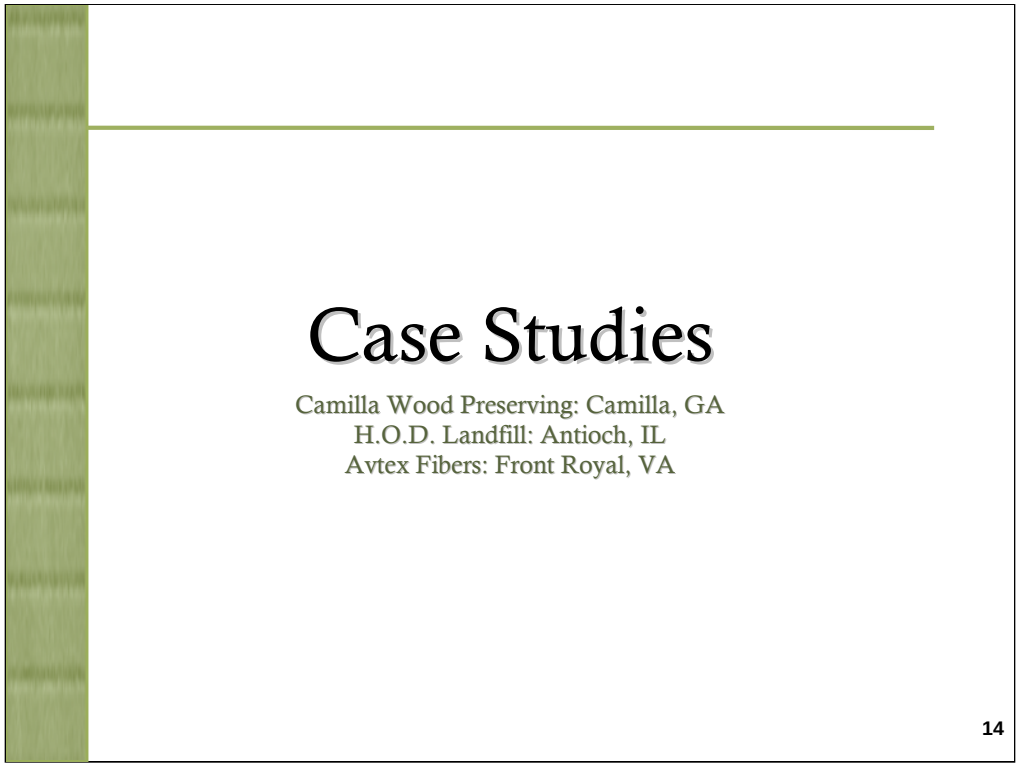
I'm going to stop here to leave as much time as possible for our presenters. If you would like more information about any of the tools and resources I've mentioned, please do not hesitate to contact me or to visit our website.



Now I'd like to hand things over to Bill who is going to talk about the recreational reuse at the Camilla Wood Preserving Company site.

Hello, my name is Bill Denman and I am the SRI Reuse Coordinator and an RPM in Region 4.

Site Background

- Location: Camilla, Georgia
- 40 Acres
- Wood preserving activities: 1947 to 1991

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Pictured: the site highlighted in red boundary

The Camilla Wood Preserving Company site is an 40-acre site located in Camilla, Georgia, a small town (pop. 5,700) located in southwestern Georgia, approximately 60 miles north of Tallahassee. Wood preserving activities at the site between 1947 and 1991 resulted in the contamination of site soils with dioxin, pentachlorophenol, creosote, and polyaromatic hydrocarbons.

Site Remediation

- From 1991 to 1997, EPA conducted emergency removal actions
- EPA removed contaminated soils in 2007
- In 2009, a Record of Decision selected the Site remedy

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From 1991-1997, EPA was involved in removal actions to abate immediate threats to human health and the environment at the site. Emergency removal actions included:

- Decommissioning and dismantling operations;
- Removing and solidifying on-site sources; and
- Removing and replacing contaminated soils from four residences.

In 2002, the City of Camilla initiated a community-based reuse planning process for the site utilizing support resources provided by EPA. The resulting reuse plan identified a community park as the most appropriate use of the site.

2006-2007: The community's updated reuse plan informed EPA's planned removal action for the site. Soils were excavated and remediated on-site to recreational standards. Remaining pole barns and contaminated soils lining the drainage ditch zone on the western half of the site were also addressed. Fencing was installed between the eastern and western halves of the site.

In 2009, EPA issued a ROD. The selected approach includes on-site stabilization/solidification of contaminated soils in the source area; on site stabilization/solidification of the top two feet of contaminated soils outside of the highly contaminated source area; sealing of highly porous subsurface features which are found to be sources of contamination spreading in ground water; installation of a vertical barrier wall around the perimeter of the source area in the surficial (upper-level) aquifer; monitored natural attenuation of the areas in the surficial aquifer that are located outside of the vertical barrier wall; implementation of storm water improvements; and on site chemical oxidation and/or bioaugmentation in the intermediate aquifer ground water contamination. In addition, institutional controls in the form of a restrictive covenant will be implemented to limit future land use to

Reuse Possibilities

- Community park
- Recreation and community facilities
- Fire and rescue training area
- Storm water management area
- Trees and bioswales

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2002-2003: The City of Camilla established and worked with a community-based Land Use Committee and a consultant team to develop a conceptual reuse framework plan. During the six-month project period, the Committee discussed and defined reuse priorities for the site, and concluded that the most appropriate reuse of the site would be a community park serving the needs of Camilla's residents and visitors.

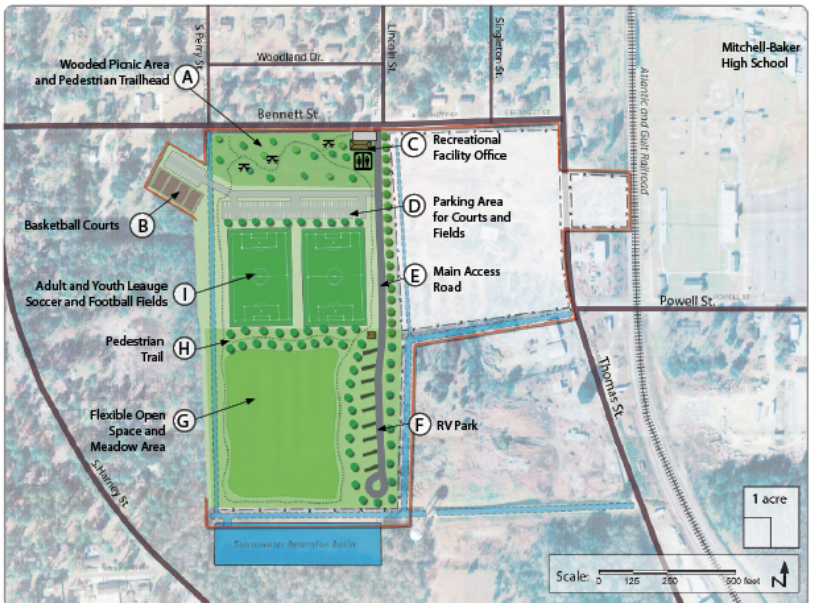
Site staff from EPA and the Georgia Environmental Protection Division provided site information and served as resources for the project's Committee.

The conceptual reuse framework plan, presented to Camilla City Council in June 2003, included the following components: a community park, recreation and community facilities, a fire and rescue training area, a stormwater management area, tree rows, and bioswales.

By 2006, several community conditions had changed. A fire and rescue training facility had been built in a nearby community, and a regional need for new soccer fields had grown rapidly.

Pictured: conceptual plan for soccer fields at the site

Remedial Design



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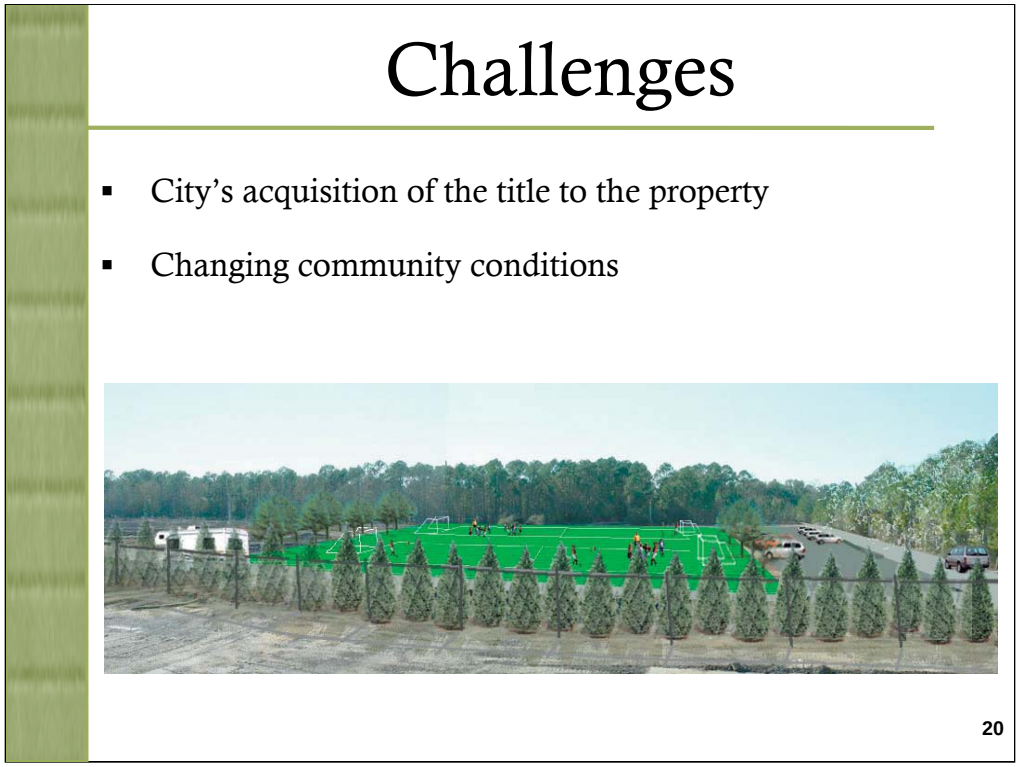
Final Revised Reuse Framework, March 2007

The Land Use Committee determined that the site would be an ideal location for a soccer complex, given its close proximity to major access roads, athletic fields, Mitchell-Baker High School, and residential neighborhoods.
The Committee also identified the need for basketball courts, walking trails, a flexible open space area, a small RV park, and the potential for use of the existing office building as the Mitchell County Parks and Recreation Department Headquarters.

In 2006, the community updated its reuse plans for the Camilla Wood Preserving Company Superfund site to reflect rapidly growing local demand for new soccer fields. Mitchell County's Parks and Recreation Department initiated a youth soccer program in 2004. Youth league registration has more than doubled to 120 participants. The community would also like to extend the youth league across Mitchell County and establish an adult soccer league. Area schools have also expressed interest in new soccer fields. The City of Camilla and Mitchell County have expressed interest in creating a new soccer field complex to host regional soccer tournaments.



Pictured: conceptual plan for soccer fields at the site

After evaluating different acquisition options, the City determined that involuntary acquisition, covered under an explicit liability exemption under CERCLA, would provide the best liability protection for the City. Two property tax foreclosure options were considered; one involving a judicial action and the other an administrative proceeding. While a judicial action would provide the City with unhindered title to the property, the lengthy legal process would likely have meant delaying the planned opening of the park – targeted for September 2007. Alternatively, an administrative proceeding would provide the City with title to the property immediately, but the property would be subject to redeemable interests for a 12-month period prior to the planned opening of the community park. In theory, this meant that any parties with a legal interest in the property could assert claims regarding ownership. Given that the property taxes owed significantly exceeded the market value of the land, the City felt that it was unlikely that any party would step forward. On that basis, the City concluded that proceeding with the construction of the park during the redemption period would be an acceptable risk. Ultimately, the City went forward with an administrative proceeding. Cooperation between the City and Mitchell County – which was also owed back property taxes – was critical to the foreclosure process. In August 2007, the City successfully took clear title to the property.

Key Stakeholders

- Community
  - City of Camilla
  - Community-based Land Use Committee
  - Mitchell County
  - Mitchell County's Parks and Recreation Department
- EPA, Region 4
- EPA, Headquarters

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Camilla Wood Preserving Company Land Use Committee
Michael Bankston, City Attorney
Bryant Campbell, City Council
Ike McCook, Recreation Director for Camilla and Pelham
Marilyn Royal, Mitchell County Development Authority
Michael Scott, City Manager

Funding for Reuse

- 2002 SRI Pilot Initiative Grant

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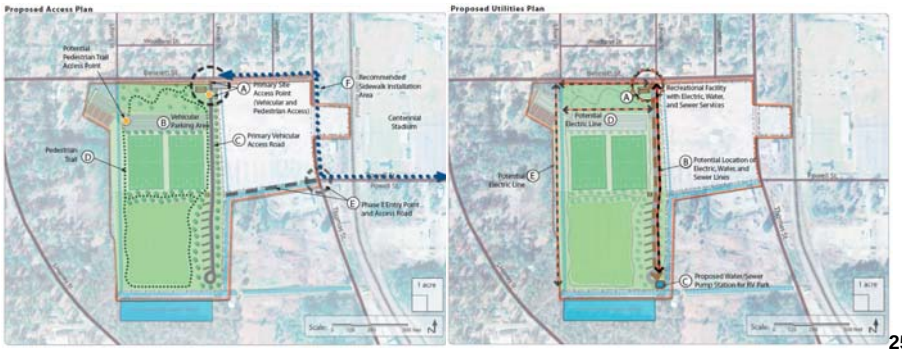
2002 – City of Camilla received SRI Pilot designation after Fire Chief Irwin requested SRI assistance to look into the possibility of using the site as a future fire and rescue training facility; Amount Awarded: $50,000 in Contractor Services

Pictured: the top image shows the pole barns submerged in a large body of water. This was taken during a large storm event, indicating the site's limited storm water capacity.

The community park with soccer fields and a small RV park opened in September 2007 as planned.
Mitchell County's Recreation Department operates the community park and plans to expand the sports complex on the eastern half of the site following future cleanup. It also moved its park management operations to a remaining building on the site. EPA's partnership with the community allowing the site cleanup and reuse to be integrated; the local government's innovative, flexible approach to site acquisition; and the County's cooperation were all key factors in providing new recreational opportunities for generations of residents and visitors.

Lessons Learned

- Reuse planning streamlines the remedial process and may reduce remedial costs
- Reuse planning brings the community and EPA together working towards a common goal



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Benefits of Reuse Planning

- Streamlines the remedial process
- Has the potential to provide alternate remedies and lower remedial costs
- Brings the community and EPA together working toward a common goal
- Allows community to think positively about the future

Pictured: Proposed access plan and proposed utilities plan

Contact Information

- Bill Denman
  - EPA Region 4
  - (404) 562-8939
  - Denman.bill@epa.gov

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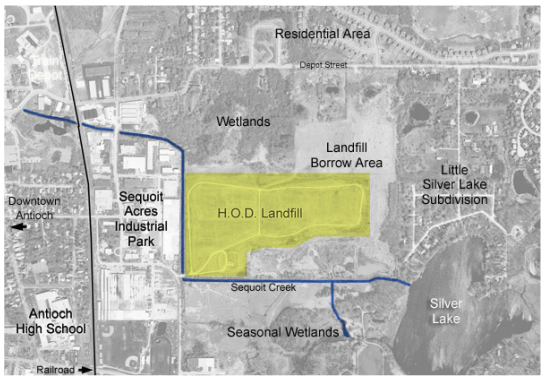
Thank you! Now Tom Bloom from Region 5 will present on HOD Landfill.

Hello, my name is Tom Bloom and I and the SRI Coordinator in Region 5. Today I'll be talking about reuse planning at HOD Landfill and the recreational reuse we were able to bring about there.

Site Background

- Location: Antioch, IL
- 121 Acres
  - Former landfill covered 51 acres
  - Remaining 70 acres include the former landfill borrow area and wetlands
- Disposal activities: 1963 to 1984
- Municipal, commercial, and industrial wastes



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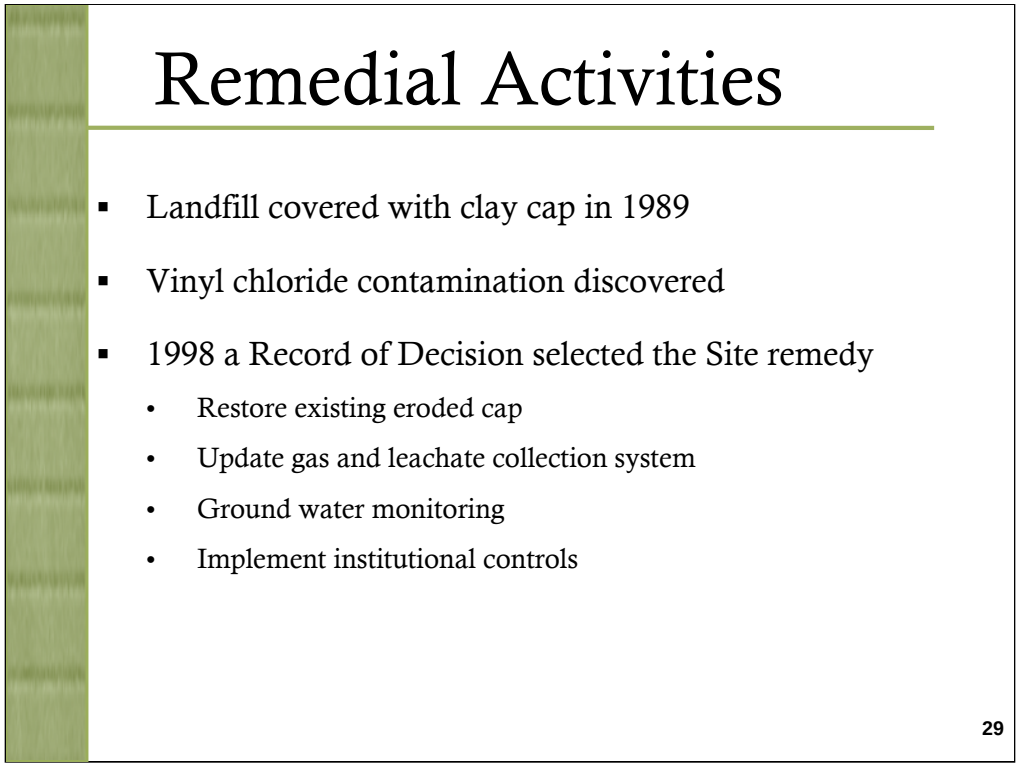
The H.O.D. Landfill Superfund site is a 121-acre site located in Antioch, Illinois. The former landfill covered 51 acres of the site, and the remaining 70 acres included the former landfill borrow area and wetlands. The landfill received municipal, commercial, and industrial wastes from 1963 to 1984.



The Illinois Environmental Protection Agency placed a clay cap over the landfill in 1989 when ground water contamination was discovered. In 1998 a Record of Decision was signed selecting the site remedy which included:

- Restoration of the existing cap
- Updating the gas and leachate collection system
- Ground water monitoring
- Implementation of institutional controls

Remedial Design: Thinking Ahead

- Re-graded the Site to sports-field specifications
- Placed gas extraction well heads in locations to allow recreational users to play above them
- Constructed the gas flare building to prevent interference with placement of sports fields

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Pictured: The flush mounting made the creation of fields easier. The top pictures was taken in 2003, the bottom shows fields under construction in 2007.

The Closed Sites Management Group of Waste Management met with the community to ensure they had interest in reusing the Site and determined how they wanted to reuse it. Because there was potential that the Site would be reused, Waste Management intentionally integrated remedial components that would be compatible with future recreational use of the Site. Even before EPA's involvement, Waste Management had made several key decisions to support the reuse of the site.

Reuse Possibilities

- Methane gas co-generation system
- Athletic fields for the high school
- Restored ecological habitat and education opportunities

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The School district saw the H.O.D Landfill, which was adjacent to Antioch High School, as a real opportunity to not only help address their need for more athletic fields, but also less conventional uses. Bill Alhers, business manager of Antioch Community High School suggested using the methane gas as an energy source for the school, way before alternative energy was “cool.” There were also ecologically sensitive wetlands located on the site that could be restored and offer possible education opportunities.

Challenges

- Superfund Site Stigma
- Site restrictions prohibiting recreational use
- Coordination between Antioch Township, Village, and the School District
- Funding for Reuse

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So even though Waste Management was as supportive a PRP as possible and had even implemented a remedy that would be compatible for recreational use, the reuse of the site wasn't the "slam dunk" everyone expected it would be.

Residents were concerned about using the Site for recreational purposes because contamination was left onsite. There was also barbed wire and signs around the perimeter that seemed to contradict EPA saying it was OK to be reused. The selected remedy called for the Site fence to be upgraded to prevent access by unauthorized individuals. In order to use the Site for recreation, the selected remedy required an update. This was really very illustrative of barriers EPA had put in place at the site that weren't necessary for protectiveness and were making it impossible for the community in a way consistent with the reasonably anticipated future land use.

Because three different groups in the community had interest in reusing the Site, and different ideas for its reuse. Coordination between groups was required to find a suitable reuse that would satisfy all needs in the most appropriate way possible. The coordination of these efforts also took a lot of time as a result of changing township and village members involved in the sites redevelopment process.

Funding was also needed to redevelop the Site.

Key Stakeholders

- Community
  - Antioch Community High School
  - Village of Antioch
  - Antioch Township
- Waste Management of Illinois
  - Closed Sites Management Group
- EPA, Region 5
- EPA, Headquarters

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The high school has interest in using methane from the Site, and when the school also showed interest in using the Site for athletic fields, the need for recreational areas in the Village and Township was also identified.

Waste Management is the PRP for the Site and some surrounding properties.

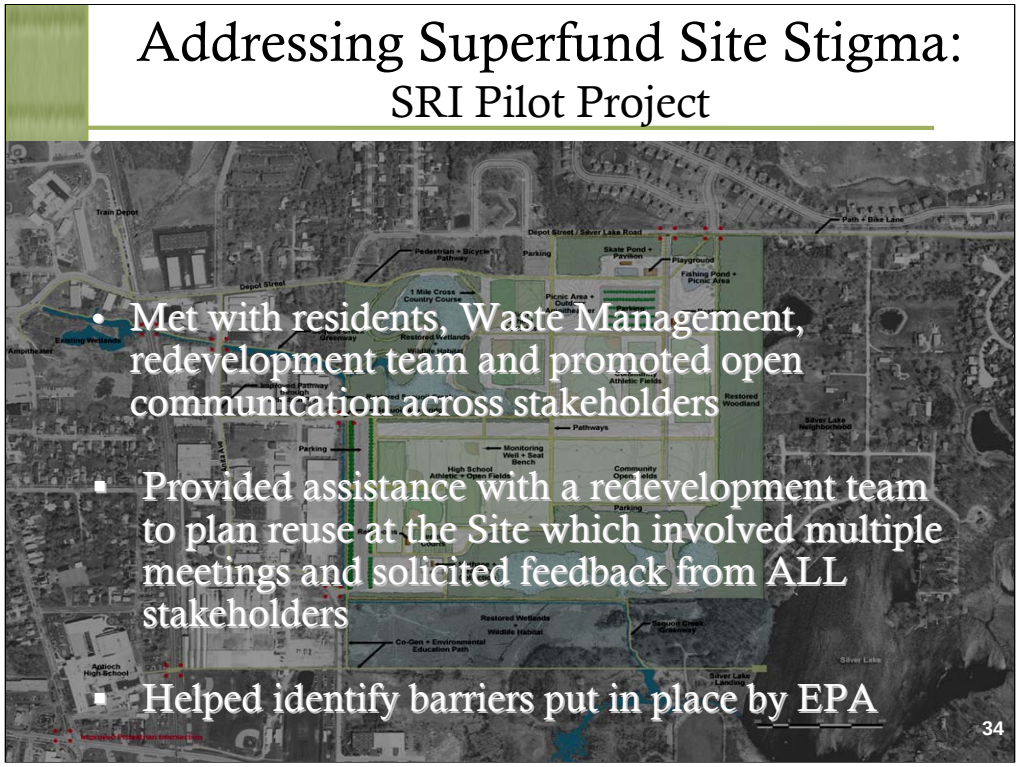
Tom Bloom, EPA, Region 5 helped manage the Site's cleanup and suggested it as a pilot project for the Superfund Redevelopment Initiative (SRI).

Although it was determined that the Site didn't qualify as and SRI pilot project, SRI representatives from EPA, Headquarters considered it a research project on how to approach reuse at construction complete sites.

SRI representatives worked with members of the community including, Mayor of the Village of Antioch, Taso Maravelas, Supervisor of Antioch Village, Stephen Smouse, and Business Manager of Antioch Community High School, Bill Alhers to discuss reuse.

Others

U.S. Soccer Foundation
Illinois Department of Commerce and Community Affairs
Wildlife Habitat Council



The Site was originally recommended to be a SRI pilot project, but did not initially qualify. However, SRI representatives saw the Site as an opportunity to investigate reusing sites that were construction complete. SRI representatives met with community stakeholders and determined Antioch would benefit from a reuse planning consulting team instead of getting a grant which could take time to get and use.

H.O.D. Landfill marked the first time EPA offered direct services for reuse efforts at a Superfund Site.

The consulting team included land use planners, landscape architects, a community involvement facilitator, a field design specialist, and an EPA redevelopment expert. The team worked with stakeholders, and kept communication open to ensure reuse plans included community input.

Addressing Superfund Site Stigma

- Ready for Reuse Determination

EPA

On this day, November 12, 2003,
the U.S. Environmental Protection Agency (U.S. EPA)

Determines that the

H.O.D. Landfill Superfund Site Is Ready for Recreational Reuse

U.S. EPA Region 5
Superfund Director

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To satisfy community concerns about using the Site for recreational purposes, EPA issued a Ready for Reuse Determination in November 2003 that stated the Site was ready for limited recreational use as long as the Site continued to be maintained in accordance with the ROD and Explanation of Significant Differences (ESD). These early efforts actually informed the development of the RfR determination guidance.

Explanation of Significant Differences: Removing Reuse Barriers

- Fence surrounding the Site as part of the remedy no longer required
- Institutional controls clarified

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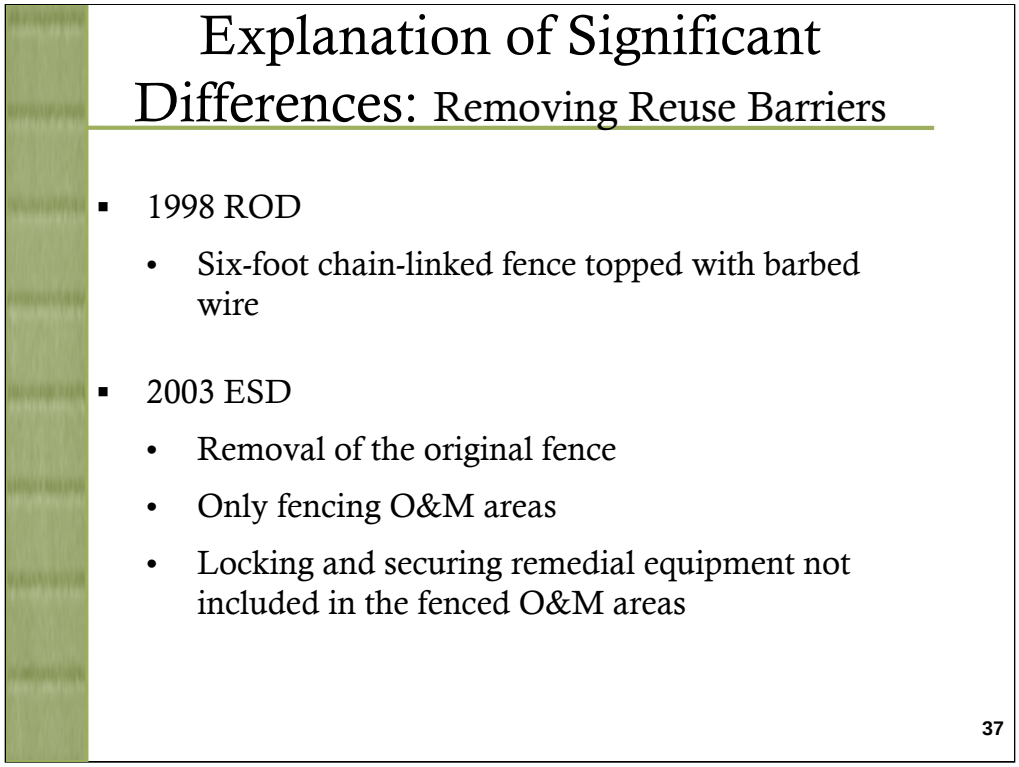
Pictured: Foundations for athletic fields were only installed within the 1 foot layer of clean topsoil covering the cap to ensure the reuse did not impact the remedy.

The selected remedy in the ROD originally called for the existing fence surrounding the Site to be upgraded to prevent access Site access. This not only added to Site stigma, but because it was required as part of the remedy, it made it difficult for any future reuse possibilities.

To address this issue, EPA issued an ESD, which would be used to remove the fence surrounding the entire Site and only require fencing to be around operation and maintenance areas that would be secured to provide limited access. The ESD also required any equipment outside of the new fenced area to be secured at all times when not in use. Restrictive covenants at the Site were also refined reflect safe uses of the Site that would not infect the integrity of the remedy.



The 1998 ROD required for the original fence at the site to be upgraded by constructing a new fence that was approximately six feet high with barbed-wire at the top to limit to completely enclose the site and restrict access to the site by unauthorized individuals. Institutional controls in the ROD required restrictive covenants on deeds to prevent or limit site use and development, and that site owners would be responsible for maintaining the restrictive covenants. Restricted ground water use as the site and required the use of the municipal water supply was also a required institutional control from the ROD.

The ESD modified the original selected remedy by changing the institutional control fence requirement. The changes included the removal of the current fence surrounding the site, and only placing a fence around operation and maintenance areas that would also include warning signs, and locking gates. Equipment used as part of the remedy that would not be included within the fenced in operations and maintenance area would locked and secured when maintenance and inspection activities were not being completed.

Reuse Coordination

- Antioch Community High School, the Village of Antioch, and Antioch Township
  - Each had individual ideas for using the Site
  - The planning process took more time than anticipated

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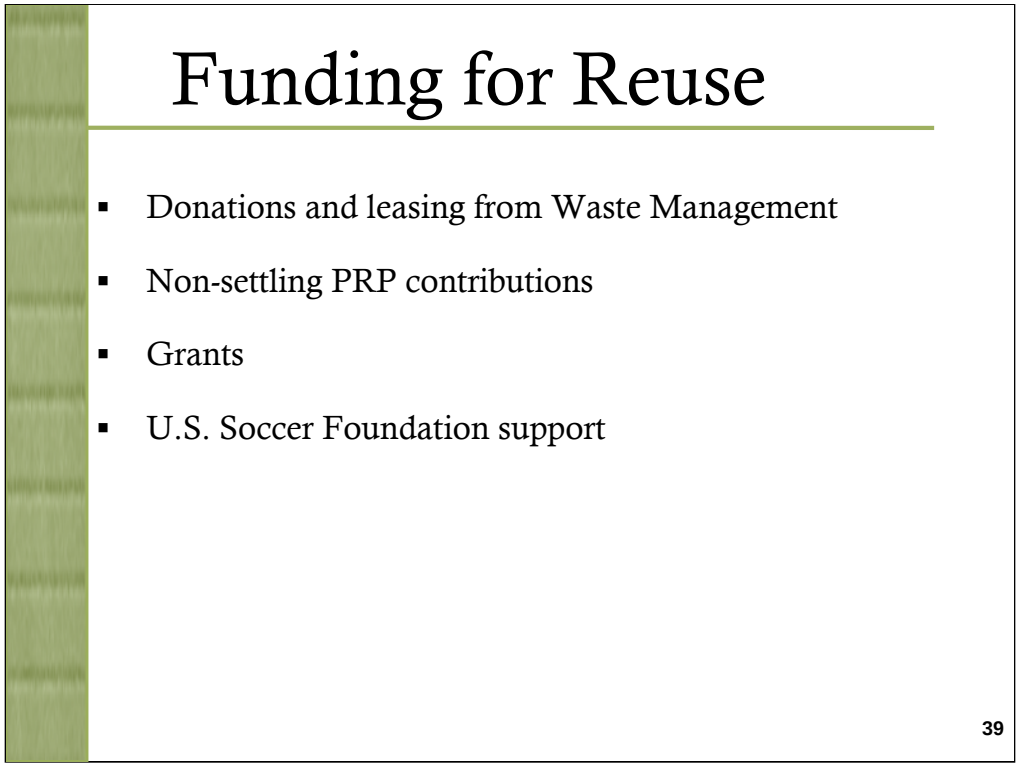
The Township, Village, and School envisioned combining multiple parcels into one main recreational unit. The community met with the reuse planning team to discuss redevelopment options. The community saw the benefits of the approach to redevelopment, however, conflicts arose during planning, which delayed the redevelopment process. Eventually, the School decided to move forward with redevelopment plans on the western portion of the Site, and the Township and Village worked together to redevelop the eastern portion of the Site.



To help in the reuse process, Waste Management leases the western portion of the landfill surface to the School district for $1 per year. Waste Management donated the former borrow area to the Township.

Waste Management also encouraged non-settling PRPs to contribute to support reuse at the Site. In turn, approximately $215,000 was contributed, and Waste Management provided $100,000 to the School District to help fund the cost of construction for reuse components.

An alternative energy grant provided $550,000 to the development of the methane co-generation plant. $850,000 in revenue bonds has been provided by the Illinois Department of Commerce and Community Affairs towards the development of the plant.

The U.S. Soccer Foundation brought the Clark Company to the site to assist in designing the soccer fields. Karen Irish, the U.S. Soccer Foundation's Director of Private-Public Partnerships also worked at the site to get local sports organizations involved with the site. The U.S. Soccer Foundation also donated soccer equipment for the new soccer fields at the site.

Before Reuse

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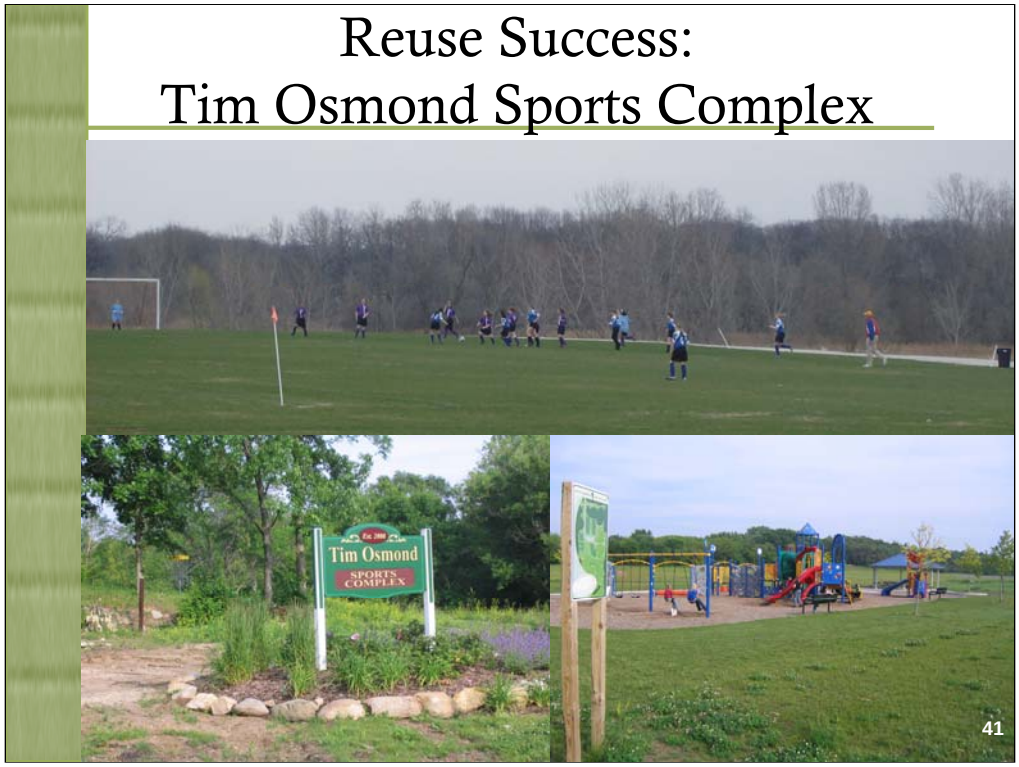
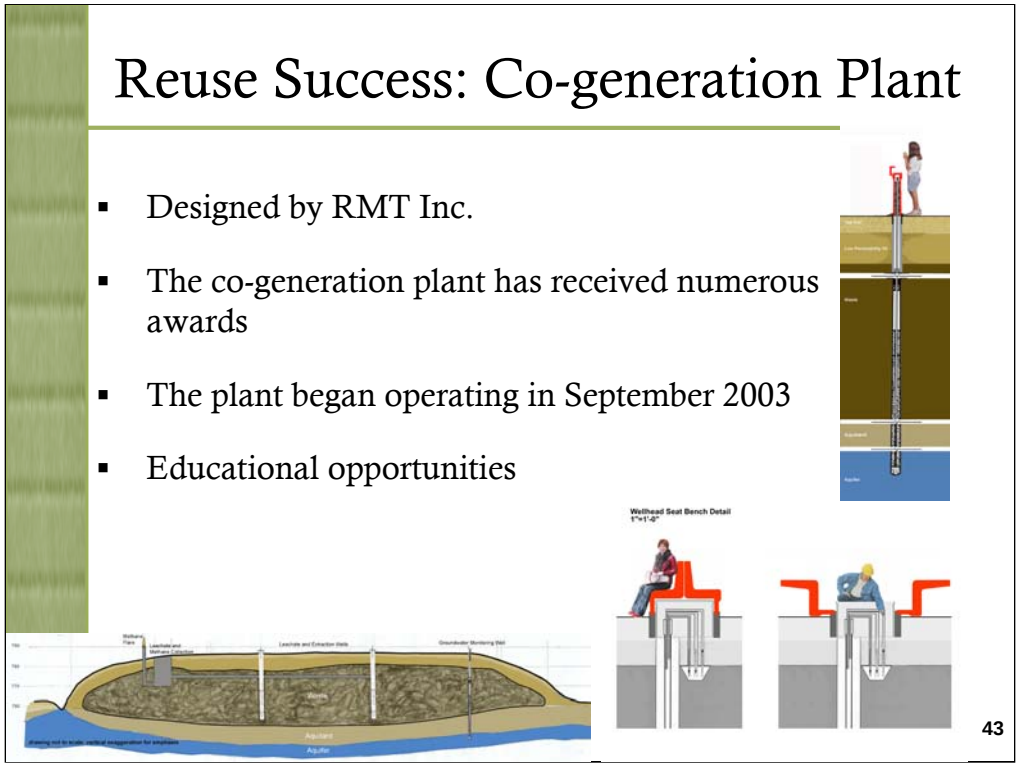


Tim Osmond Sports Complex: Opened in April 2008 by the Village and Township. The complex consists of 80 acres and includes fields for football, baseball, softball, and soccer, as well as picnic tables and a playground. There are also plans to add a disc golf course.

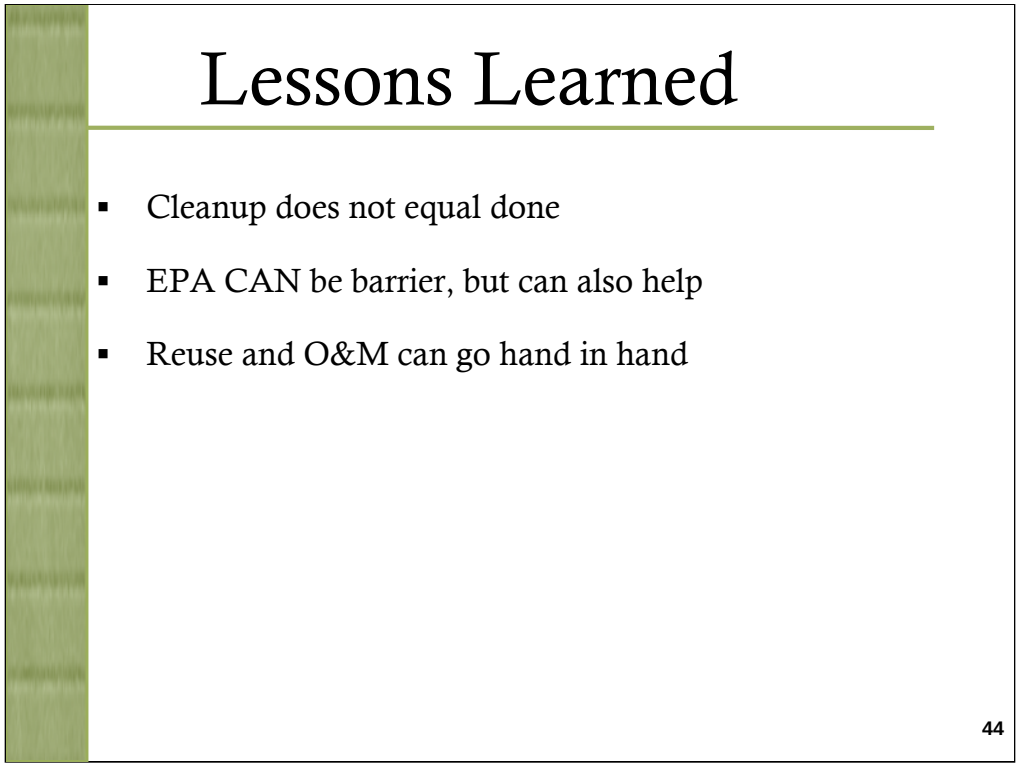
McMillen Park: Opened in May 2008 by the School District. The Park contains tennis courts and soccer fields, a softball field, a hockey field, and a concession stand.



RMT Inc. is the environmental management, engineering, and construction services firm that designed the methane co-generation system. The design of the co-generation system has received several awards including the 2004 "National Honor Award" from the American Council of Engineering Companies (ACEC), the 2004 "Engineering Excellence Grant Award" from the Wisconsin ACEC, and 2003 Landfill Methane Outreach Program "Project of the Year Award."

The co-generation plant has been operating since September 2003. Waste Management donates the methane for the plant, and this provides 90% of the high school's energy needs for electricity, heat, and hot water. The school district projects a savings of $100,000 per year by reducing their energy costs.

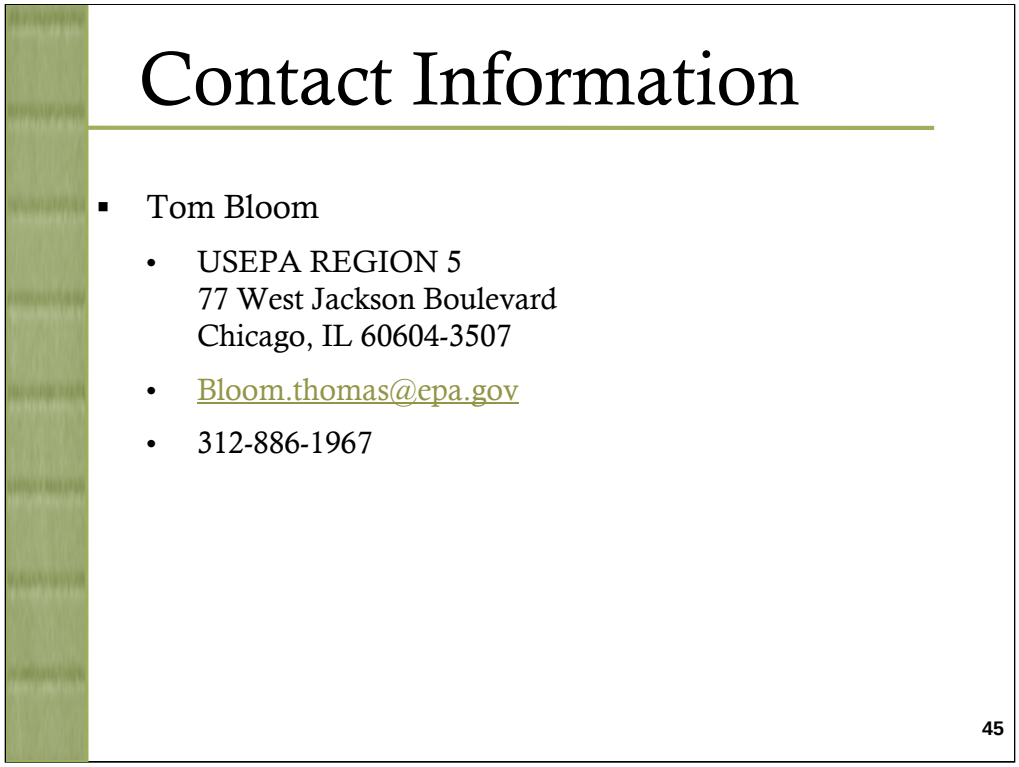
The design engineer from RMT Inc. meets with students from the high school to explain the design and operation of the co-generation plant, and the students also analyze energy production data from the plant as part of their course work.



Although the selected remedy was completed at the site, there was still a lot work left to be done before it could be reused as athletic fields. The site was surrounded by a fence discouraging use, the community had concerns about the safety of using the site, and a reuse plan needed to be developed to ensure reuse would work with the selected remedy.

EPA did not fully consider site reuse when selecting the remedy at the site. However, in cases such as H.O.D. landfill, where the remedy was already implemented, it was possible for EPA to modify the original remedy using and ESD, so that the site could be compatible with reuse.

By tying reuse and O&M together, plans can be made so that only the necessary remedial components are locked and secured leaving the rest of the site open for potential reuse. Keeping the site maintained can be passed along to the members of the community providing opportunities for stewardship. This can include cutting the grass regularly and performing minor repairs at the site.



Thank you! Please don't hesitate to be in touch if I can answer any questions about this site or provide more information.

Avtex Fibers Case Study

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Site Background

- Location: Front Royal, Virginia
- Size: 440 Acres
  - Rayon manufacturing wastes and by-products were disposed on-site in 23 impoundments and fill areas covering 220 acres.
- Manufacturing activities: 1940-1989

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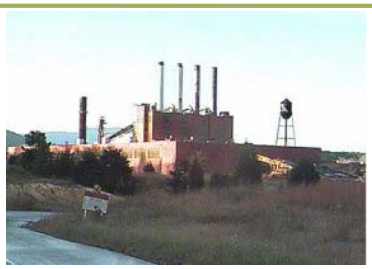
The Avtex Fibers plant in Front Royal, Virginia, was once the largest manufacturer of rayon in the United States. Built on a 440-acre site along the South Fork of the Shenandoah River by the American Viscose Corporation in the late 1930s, the plant officially began operations in 1940. During World War II, the plant also manufactured parachutes and jumpsuits for the Defense Department. FMC Corporation purchased the plant in 1963, and later contracted with NASA to produce synthetic fibers for the space program. Avtex Fibers Inc. purchased the plant from FMC in 1976 and continued manufacturing operations until the plant's closing in1989.

Site Cleanup



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The site was added to the Superfund National Priorities List in 1986. The plant was abandoned in 1989 and removal and remedial actions were initiated. Cleanup activities included removal of contaminated soil, building demolition, debris treatment and removal, sewer excavation, landfill capping. A proposed cleanup option for the site's ground water and surface water contamination and on-site disposal basins.

Between 1989 and 1998, the EPA served as the lead organization. During this period, the EPA removed more than 740,000 square feet of building space, addressed water quality degradation, and removed tons of hazardous substances. Cleanup actions focused on operating the wastewater treatment system to protect the South Fork Shenandoah River from untreated discharges, and removing or treating thousands of gallons of chemicals left in the deteriorating process lines, vessels and laboratories. EPA also removed storage impoundments. The severe deterioration of 17-acres of the manufacturing process area of the facility ultimately led EPA to determine that cleanup activities would be best accomplished by large-scale mechanical demolition of buildings to remove the remaining chemical residuals.

In 1999, FMC sorted, segregated and characterized demolition debris and waste materials generated during EPA's demolition activities. Most of these materials were either cleaned for reuse on-site or transported off-site for recycling or disposal. Material that could not be treated successfully was sent off-site for disposal. FMC decontaminated the remaining above ground buildings and excavated the sewers.

Moving Toward Reuse

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In 1998, the Town of Front Royal, Warren County, and the Economic Development Authority developed an eight-month public participation process in conjunction with North American Realty Advisory Services to prepare a comprehensive plan for the site's redevelopment and reuse. These organizations invested $175,000 in the process. These local organizations then continued the multi-stage public participation process to address each of the comprehensive plan's elements. The process utilized the "Standard Guide to the Process of Sustainable Brownfields Development" created by the American Society of Testing and Management. The "Guide" offers an adaptable framework that actively engages property owners, developers, government agencies and the community in conducting economic evaluation, design and re-use plans for the project. Between Fall 1999 and Spring 2000, eight Multi-Stakeholder Group meetings were held to prepare the plan for the 240-acre Conservancy Park. In Fall 2000, similar meetings were held to design the 170-acre business park.

Avtex SoccerPlex

September 2006 marked the opening of the 33-acre Skyline Soccerplex, the first completed redevelopment at the site. "One of the biggest needs for Warren County Parks and Recreation was having an adequate and permanent facility for youth and adults to play the growing sport of soccer," Warren County Administrator Doug Stanley said at opening ceremony. It took the county, town, the Economic Development Authority, the Environmental Protection Agency, and U.S. Soccer Association and FMC Corp. working together to get it done. The US Soccer Foundation donated $10,000 to the first phase of the project and provided expertise in supporting the design of the facility. EPA's Superfund Redevelopment Initiative named Avtex one its Pilot projects and provided a $100,000 Pilot grant to support reuse.

Additional Reuse Plans

Bald eagle on the banks of the Shenandoah River.

Vegetation growing around the reconstructed Turtle Pond.

The redesigned Avtex building.

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Front Royal's Redevelopment Conceptual Plan also calls for:
Eco-Business Park: 183 acres
Technology/Business Use: 126 acres
Hotel & Conference Center: 22 acres
Commercial Use: 10 acres
Recreational Use: 25 acres
Conservancy: 241 acres (wildlife refuge)
Rivermont Acres: 71 acres (secondary park)

The EDA is moving forward with redevelopment efforts for the 160-acre commercial/industrial park east of the railroad tracks and a nature conservation area west of the tracks. The EDA selected the former Avtex administration building as a demonstration model to set the "green"
standard for the development of the entire park. Various sustainable and renewable strategies have been implemented, including natural lighting,
low VOC paints and finishes, xeriscaping and other techniques. The EDA became the first tenants in the renovated "Ad Building" in
April 2002.The renovation of the entire 440-acre, mixed-use complex is scheduled for completion in by 2013.

Lessons Learned

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First, the community must be integrally involved in the creation of a vision for the reuse of a contaminated site. This vision must be created by a broad range of stakeholders and must be championed by local elected officials. Second, contaminated sites are complex. Resources must be secured from a variety of local, state and federal agencies to manage redevelopment successfully. Efforts must be made to assemble an intergovernmental team that meets regularly to evaluate project needs. Finally, economic development can be generated using non-traditional techniques like comprehensive redevelopment with sustainable building practices.

Now, to conclude I'd like to turn things over the Greg Griffith from the US Soccer Foundation.

U.S. Soccer Foundation

Our Role

The Major Charitable Arm of Soccer in the United States

Mission:

To enhance, assist and grow the sport of soccer in the United States, with a special emphasis on programs and projects serving vulnerable communities

The Story So Far…

During our First 15 Years:

- $55 Million in grants and financial support
- Supported construction of 1,100 fields
- Impacted 4.9 million total players
- Awarded Grants in all 50 states to 600 organizations

Let's Move!
Engaging National Challenges

Places to Play

- Engage community in identifying vacant or underutilized spaces
- Lack of play spaces cited as a key reason for obesity and juvenile crime

L.A. Red Shield - Before

L.A. Red Shield - After


THE CHILDREN'S AID SOCIETY
DUNLEVY MILBANK CAMPUS

Soccer Success at Superfund

California Gulch Superfund site

Abandoned mine shacks at the California Gulch Superfund site

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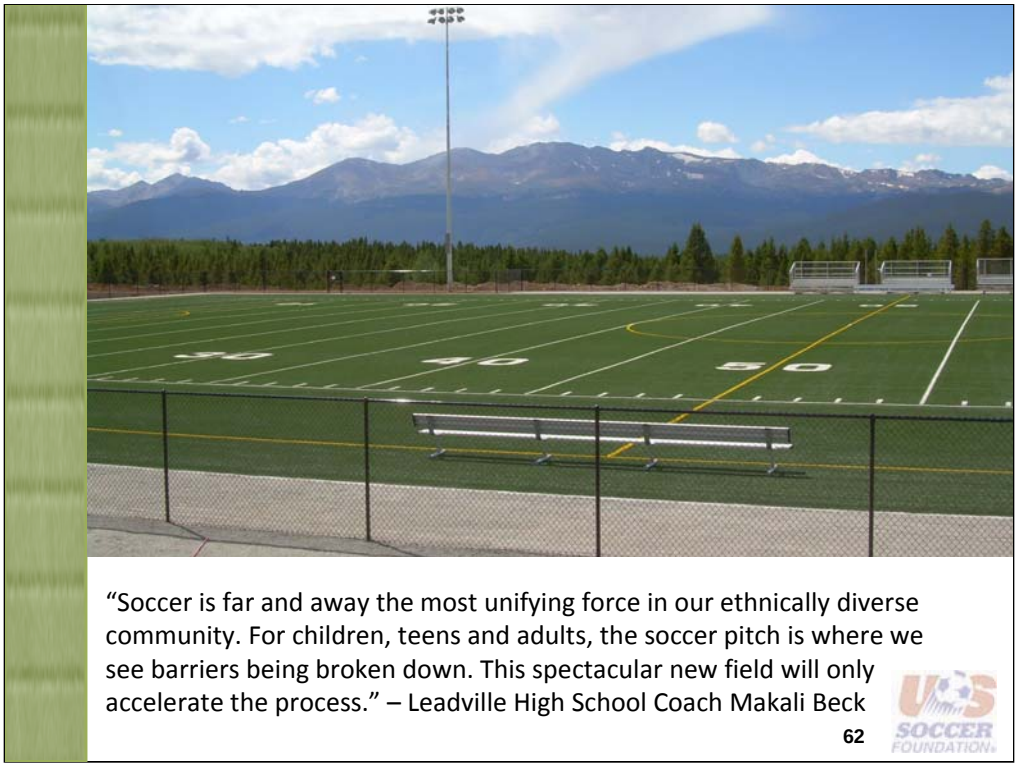
Once a booming mining town, Leadville, Colorado, attracted people from across the country in search of silver and prosperity during the Colorado Silver Boom in the late 19th century. In 1880, the city had the second largest population in the state with over 40,000 residents. In 2005, the population of Leadville was estimated to have shrunk to 2,821 – nearly a 93 percent decrease. The decline in mining drove most of the population away and devastated the city's economy, which were weighty problems in addition to the contamination issues on the Superfund site.

Today, although the majority of the cleanup has been completed and people have continued living and working in Leadville throughout the cleanup process, Leadville is still one of the poorest areas in Colorado. Leadville needed ways to jumpstart its economy and began exploring options to promote its historical relevance (to encourage tourism) and to expand its capacity for outdoor recreation.

This desire to bolster outdoor activity motivated Leadville to apply for a Planning Grant with the U.S. Soccer Foundation, and in 2007, it became one of five recipients of the grant. Clough Harbour & Associates (CHA), the Foundation's Partner for Soccer Facility Design and Planning Services, played a vital role in the process.



CHA began working with Leadville to build a field in the city's Lake County Community Park. In August 2009, just two years after receiving the grant, Leadville celebrated the opening of its new field in the Lake County Community Park and Sports Complex. The completed facility features the highest elevation lighted synthetic turf field in the world, restrooms and an adjacent playground. The field hosts a variety of outdoor sports leagues and allows the local high school and middle school students to practice on a lighted field.

The community, who raised the remaining funds necessary to build the recreational complex that included the soccer field, CHA and EPA worked together to ensure that the cleanup remedy would be protective and that the field design would not interfere with the remedy.

For more information about the Foundation and the resources we have available, please visit our website or feel free to contact me.

Melissa: I'd like to thank Greg, ___, ____, and ____ for sharing all these wonderful stories with us today. We have left some time for questions, does anyone on the line have a question they would like to ask of one of our presenters?

I'd like to thank you all for your participation. Greg, the US Soccer Foundation has truly been a wonderful resource for communities at Superfund sites and we look forward to working together on future projects. Thanks very much for sharing with us all about the Foundation and available resources.

Our next SRI webinar will address Superfund redevelopment opportunities from the perspective of Mayors. The webinar will be held on March 21st and will share the different opportunities and challenges to redevelopment that Mayors have faced and how they ultimately succeeded in returning their Superfund sites to beneficial use. Stay tuned for more information in March, we hope to speak with you all then!

Resources & Feedback

- To view a complete list of resources for this seminar, please visit the **Additional Resources**
- Please complete the **Feedback Form** to help ensure events like this are offered in the future

Need confirmation of your participation today?

Fill out the feedback form and check box for confirmation email.

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