

# REUSE FRAMEWORK

Picayune Wood Treating Superfund Site, Picayune, Mississippi

June 2014



## OVERVIEW

The 32-acre Picayune Wood Treating Superfund Site closed operations in 1999 and has been undergoing investigation and cleanup by the U.S. Environmental Protection Agency (EPA) since 2004. In 2005, EPA's Superfund Redevelopment Initiative (SRI) supported a reuse planning assessment for the site. In 2013, soil cleanup is complete and EPA sponsored a second planning process to update the future use plan based on current remedial features, community goals, and surrounding land use. In addition, EPA's Technology Innovation and Field Services Division (TIFSD) sponsored a pilot project to develop a Superfund environmental education curriculum for the adjacent elementary school. This report summarizes the outcomes of the planning process, including reuse goals, remedial considerations, a future use concept plan and next steps for implementation.

## PROCESS

To initiate the planning process, a site visit was conducted in January 2013 to tour the site and identify local reuse goals. Next, the SRI team evaluated the site features, remedial components and surrounding land use, resulting in a reuse suitability assessment. A working session was held in June 2013 with city staff and elected officials to review a draft suitability assessment, refine a reuse framework, identify potential funding sources and refine a Superfund environmental education curriculum.

In July 2013, EPA hosted a public availability session to answer questions about the site cleanup and solicit input on the revised reuse framework. The framework reflects the ideas and recommendations of city staff, elected officials and community members and is provided as a tool for returning the site to a safe and productive use. This framework offers a flexible, long-term planning tool that can be adapted as new information becomes available.

## OUTCOMES

This report summarizes the outcomes of the process and includes:

|                         |        |
|-------------------------|--------|
| Remedial Features       | p. 2   |
| Site Suitability        | p. 3   |
| Reuse Goals             | p. 4   |
| Reuse Concept Plan      | p. 5   |
| Environmental Education | p. 6-7 |
| Next Steps and Contacts | p. 8   |



The planning process included an initial stakeholder meeting in January 2013 (top), June 2013 working session and site tour (middle), and July 2013 public availability session (bottom).

## Superfund Redevelopment Initiative

EPA's Superfund Redevelopment Initiative (SRI) and EPA Region 4 help local communities return contaminated Superfund sites to safe and productive uses. EPA is working with communities and local stakeholders to consider reuse opportunities and to integrate appropriate reuse options into the cleanup process.



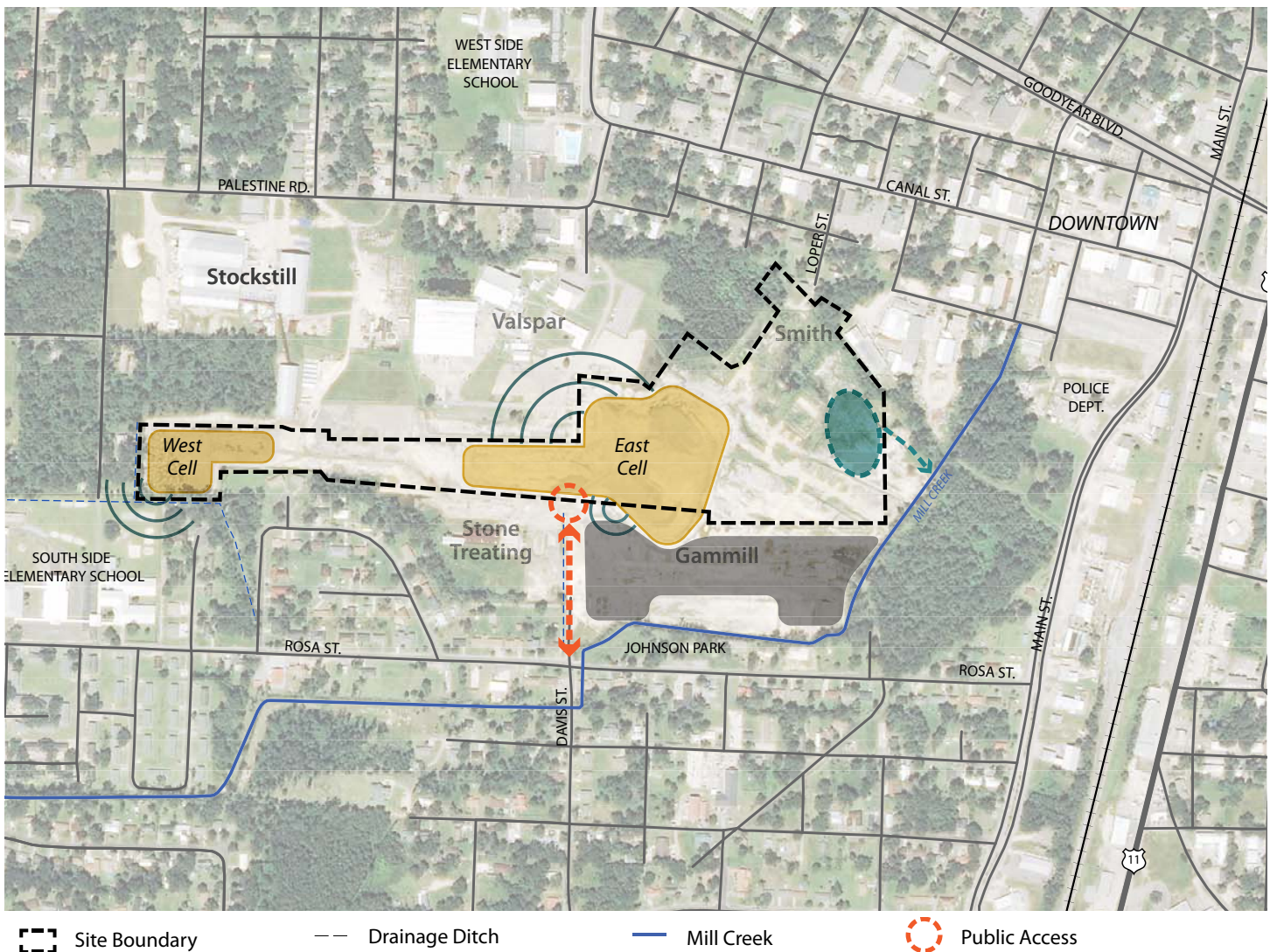
# SITE OVERVIEW

## REMEDIAL FEATURES

The Picayune Wood Treating Superfund site is approximately 32 acres. Figure 1 below highlights the remedial features that need to be considered during reuse planning and implementation. In addition to the remedial components, land use restrictions will be placed on the effected properties to ensure the remedial components stay protected and restrict residential use and groundwater access. Active manufacturing and light industrial border the site to the north and an elementary school, residential community, vacant land and a small community park border the site to the south. The site is in close proximity to downtown. Currently, the primary site access is via Davis Street.

-  Containment Cells: contaminated soils from former industrial use have been contained on site in two capped cells, maximum 15 feet high. Institutional controls will prohibit residential development and limit the types of construction permitted on the cells.
-  Retention Pond: pond has been constructed on eastern portion of the site to handle stormwater.
-  Ground Water Monitoring Wells: wells will be installed to treat contaminated ground water in the near team. Monitoring will be on-going and access to the wells will be needed.
-  Concrete slabs: up to 2 feet thick slabs remain in place as part of remedy.

Figure 1: Remedial features on the site





## SITE SUITABILITY

Site characteristics and remedial components inform the types of redevelopment that can occur on the Picayune Wood Treating site. The map below identifies reuse zones based on site suitability.

-  Zone 1:  
Few development restrictions (includes private property)
-  Zone 2:  
Adjacent property with concrete slabs to remain in place as part of remedy
-  Zone 3:  
Elevated cells (max 15ft.), no structural development
-  Zone 4:  
Stormwater management



East Containment Cell (prior to seeding)

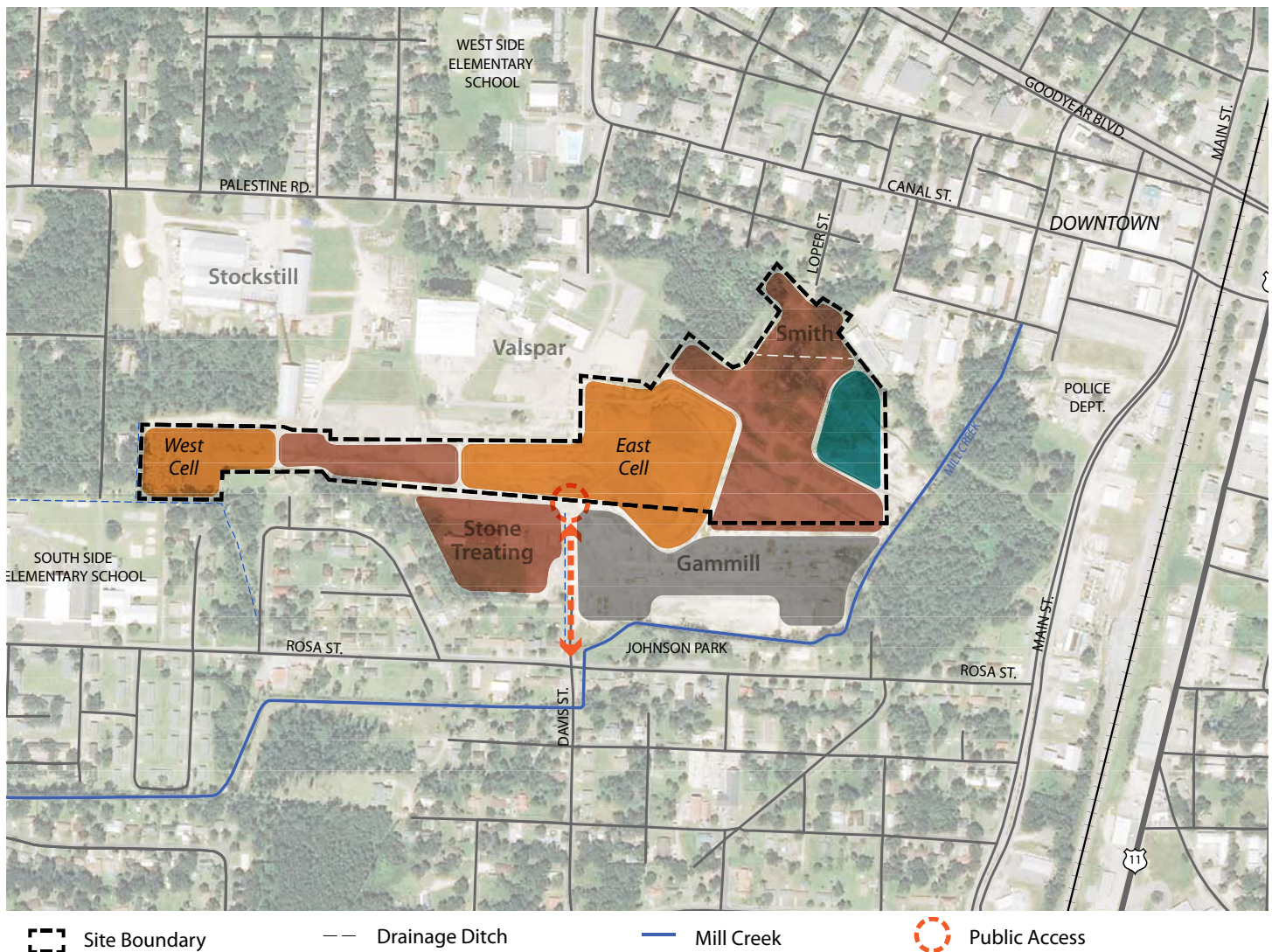


Concrete slabs on adjacent property.



Retention Pond

Figure 2: Site reuse zones





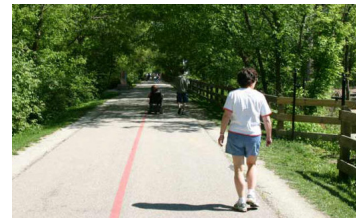
# PLANNING FOR THE FUTURE

## REUSE GOALS

In January 2013, City representatives expressed interest in acquiring the site ownership from the State. During the working session in June 2013, city staff and stakeholders identified the following set of goals to guide future use planning for the site. Picayune School Board and South Side Elementary School representatives provided additional information during a meeting held in February 2014.

### A. Access and Circulation

- Improve pedestrian access between South Side Elementary school and site.
- Ensure school access to the site is secure and public access is restricted during school hours and activities.
- Enhance pedestrian and vehicular access at Davis St. site entrance.
- Improve connectivity through on-site, well-lit biking and walking trails.
- Increase connectivity to downtown and Main Street.



### B. Community Hub

- Support community activities and programs, such as community center, community pool and/or splash pad, farmer's market, outdoor amphitheater and gathering and play spaces. A community center could provide activities and programs for youth, indoor theater, computer room and all-purpose rooms. Additional recreational features could include soccer fields, basketball courts, dog park, skateboard park and disc golf.
- Incorporate heritage tourism opportunities, such as interpretive kiosks and walking trails celebrating the area's history.
- Explore locating school facilities and activities on western portion of site property.



### C. Open Space and Environmental Education

- Enhance and connect recreational opportunities through trails, gathering areas and habitat viewing areas.
- Provide educational opportunities for school children, such as learning-oriented playground, outdoor lab space, covered amphitheater or meeting area for outside lessons and shaded teaching area.
- Provide public environmental education programs, such as signage and themed nature walks.
- Support and promote eco-tourism opportunities.
- Provide community gardening opportunities.





## REUSE CONCEPT PLAN

The concept plan below illustrates how the reuse goals could be integrated on the site to align with remedial considerations and other site characteristics. Once implemented, this concept plan will benefit the community by providing recreational and community amenities that connect the site to downtown and surrounding neighborhoods. The future use of the adjacent Valspar property (currently for sale) may present additional opportunities for supporting the reuse concept plan goals.

Figure 3: Concept plan



View towards retention pond area that could provide forest and wetland trail opportunities in the future.

### LEGEND

#### A. Access and Circulation

Improve access to and through the area

- Pedestrian Access --- Biking/Walking Trails
- Vehicular Access --- Vehicular Access Route

#### B. Community Hub

Support community activities and programs

- Community Use ○ Community Facilities
- ✱ Gathering Area (high point of site)

#### C. Open Space and Environmental Education

Connect and enhance recreation and habitat opportunities

- Meadow Trail --- Forest Trail
- Wetland Trail ■ Outdoor Classrooms



## SUPERFUND ENVIRONMENTAL EDUCATIONAL LEARNING SERIES

Located adjacent to South Side Elementary School, the Picayune Wood Treating Superfund site could offer a unique outdoor classroom opportunity where students can experience hands-on learning about environmental issues. This section outlines potential environmental educational learning ideas and considerations that were discussed with Picayune School Board and South Side Elementary School representatives.

Since the site is surrounded by several schools spanning the entire pre-K to high school range, the environmental education program could offer learning for every grade level and follow students through their entire educational experience.

- South Side Lower Elementary School (K-2 grades) and the South Side Upper Elementary School (3-6 grades) are directly adjacent to the site.
- Additional schools within a half-mile of the site include a preschool, middle school and high school.

The structure of the environmental education program could include:

- Extension of existing year-round classroom subjects, which include science, art, math, economics and physical education
- Afterschool activities
- Groups or clubs
- Summer camp

### Potential Future Amenities to Support Learning Series

The site could support a range of amenities as part of an environmental education learning series. Top priorities include:

- Learning-oriented playground
- Outdoor lab space allowing soil and water collection
- Covered amphitheatre or meeting area for outside lessons and shaded teaching area

*Additional activities could include:*

- Raised bed community gardens
- Composting area, water/irrigation for gardens
- Native plant learning garden
- Butterfly and hummingbird gardens
- Open space with native vegetation, bat and birdhouses and water features, especially those supporting habitat for endangered species in Pearl River County, Mississippi
- Areas for ecological recreation – bird watching, plant identification, nature walking trail system.
- Space for student created art installation

### Considerations

- Secure areas designed specifically for school children to restrict public access during school hours and activities.
- Ensure teachers and students are educated about how the remedy protects users from contamination.
- Identify grant opportunities to incorporate environmental education and outdoor learning into existing curriculum.
- Collaborate with City on future use and access agreements and to explore funding opportunities.
- Coordinate with Crosby Arboretum to explore potential extension of the Arboretum on the site.



## Possible Activities

- Soil study – learn about past soil contamination and cleanup methods, collect soil samples, perform soil experiments, learn about the chemical properties of soil and the implications on vegetation, compost food waste from the school.
- Water study – learn about past ground and surface water contamination and cleanup methods, study the flow of contaminants through water, learn about how water moves over and underground, collect water samples, study the water cycle, learn about water usage and how to conserve water at the school and home.
- Butterfly study - research appropriate plants for food, shelter and breeding needs, plant garden, study life cycle, understand the role of butterflies, collect and catalog butterfly data, monitor future butterfly garden results.
- Raised bed gardening study – learn about gardening and promote healthy eating habits, plant a raised bed garden and learn safe urban gardening techniques.
- Benefit study – Identify different habitats on the site, learn about the benefits provided by ecosystem services, investigate the costs of these services not provided by nature.
- Bird study – study the adaptation and characteristics that allow birds to live in specific habitats, go on a birding hike and observe bird behavior, participate in creating habitat that will attract birds.
- Reuse and recovery in motion – study the site as a whole and observe how cleanup and reuse efforts change the look, feel and access of the site. Spend time exploring and mapping the site. Learn about the site history from photographs and background information; make suggestions for future site improvements.

## Existing EPA Curricula

EPA offers a variety of educational materials for students and teachers. The learning series could build from existing EPA Superfund classroom activities and environmental education lesson plans.

EPA's Superfund Classroom Activities includes resources to help teachers and educate students (grades 2-12) about the Superfund Program. It includes several activities, environmental cleanup videos, and a participatory program in which classrooms collect weather data for EPA.

EPA has also developed Haz-Ed, an educational program for students in the seventh through twelfth grades. The Haz-Ed website contains warm-up exercises, activities and fact sheets ("fact flashes"), as well as resources for further research. Students develop skills in critical thinking, problem solving and decision making while learning about the complex scientific, technical and policy issues related to hazardous waste sites and the Superfund program. The content presented in the Haz-Ed classroom resources could be modified for elementary school students and comply with Mississippi Common Core standards for Kindergarten through 6th grades.

EPA's school program shares steps parents, schools and communities can take to promote healthy school environments, free from contamination. The program offers curriculum about environmental health including lessons on community gardens and climate change. EPA's healthy school environment resources page provides information on school recycling programs, facility operations and maintenance practices as well as many other topics that may be useful to school administrators and facility managers.

**For more information on EPA curricula and education programs, please visit:**

EPA's Superfund Classroom Activities: [http://www.epa.gov/superfund/students/clas\\_act/index.htm](http://www.epa.gov/superfund/students/clas_act/index.htm)

EPA's Haz-Ed Program: [http://www.epa.gov/superfund/students/clas\\_act/haz-ed/hazindex.htm](http://www.epa.gov/superfund/students/clas_act/haz-ed/hazindex.htm)

EPA's school program: <http://www.epa.gov/schools/programs.html>

Community Garden lesson plans: <http://yosemite.epa.gov/ochp/ochpweb.nsf/content/lesson8.htm>

Climate Change lesson plans: <http://yosemite.epa.gov/ochp/ochpweb.nsf/content/lesson5.htm>

EPA's healthy school environment resources page: <http://cfpub.epa.gov/schools/index.cfm>

# LOOKING AHEAD

## PHASING OPTIONS

Early phasing could focus on improving site access from Davis Street, Main Street and downtown; connecting and enhancing open space and environmental education opportunities on-site; and establishing short-term parking. The map below shows how early phases could support reuse goals and allow for future expansion.

Later phasing could include transforming surrounding Gammill and Stone Treating properties to support community hub activities, as shown in the map on page 5.

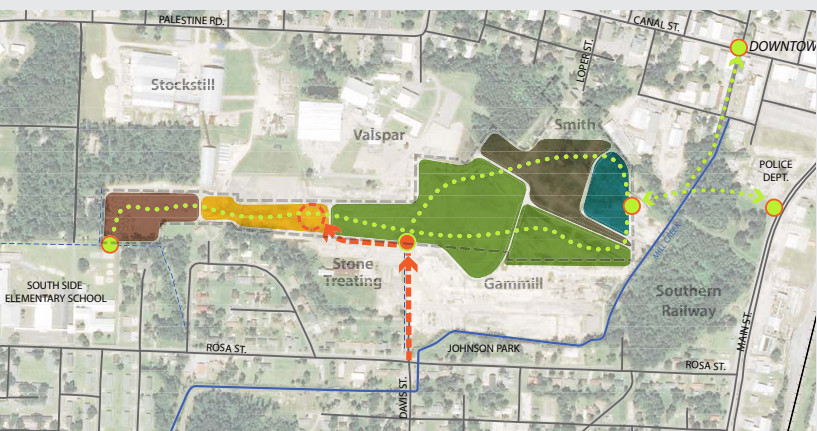


Figure 4: Phasing and future expansion

## NEXT STEPS

During the working session held in June 2013, and follow up discussions, stakeholders identified the following action steps to transition the site into reuse.

- Coordinate with the City and State to define maintenance roles and responsibilities.
- Coordinate with the State and local authority to place required institutional controls on the property.
- Transfer property ownership from the State to the City.
- Coordination between City and School to expand school activities on site.
- Explore opportunities with adjacent city-owned properties and other available parcels to improve access and connection to downtown.



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