

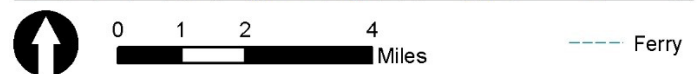
Introduction

The Thea Foss Waterway in Tacoma, Washington, was once part of a massive industrial hub; shipbuilders, manufacturers and other water-based facilities lined its shores. Today, the area has been transformed into a vibrant mixed-use waterfront area. This case study tells the story of the cleanup and reuse of the Thea Foss Waterway portion of the Commencement Bay Near Shore/Tide Flats Superfund site.

In the early 1980s, decades of disinvestment had left Tacoma's waterfront abandoned and blighted. Industrial activities contaminated soil, groundwater and sediments across more than 10 square miles of Commencement Bay and Tacoma. The City of Tacoma (the City), the Washington State Department of Ecology (Ecology), EPA and other stakeholders collaborated to engage the public, clean up the area, address liability issues, establish public-private partnerships, secure funding and revitalize the waterway.

Today, the cleanup of the Thea Foss Waterway is complete. A public esplanade extends along the shore, punctuated by public parks, apartment buildings, restaurants and diverse businesses. The Museum of Glass is home to a contemporary collection of artists from around the world, with the Chihuly Bridge of Glass connecting the museum to downtown Tacoma. New, state-of-the-art marinas and water-based businesses have established the Thea Foss Waterway as a major boating destination in the Puget Sound region.

The community first imagined this future for its waterfront in the 1970s. The City's dedicated pursuit of Superfund cleanup in coordination with redevelopment has helped the vision become a reality. "Superfund became the catalyst for other things – it's the best thing that's ever happened to Tacoma," said former Foss Waterway Development Authority executive director, Su Dowie. "It has changed the face of the city."



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo and the GIS User Community.

This case study explores the tools and partnerships that have led to successful cleanup and transformation of the Thea Foss Waterway. The following pages trace the evolution of cleanup and reuse efforts, highlighting innovative redevelopment tools, project partnerships, and coordination of remedy and reuse considerations. The case study provides information and lessons learned for parties interested in Superfund site reuse, public-private partnerships, and waterfront and mixed-use redevelopment.



The redeveloped waterfront (above) features the Museum of Glass, rebuilt marinas (top right), an esplanade (bottom right), and new commercial and residential facilities. Bird's-eye view image used with the permission of the City of Tacoma.

Site History, Contamination and Remediation

The Thea Foss Waterway is the westernmost of five waterways that make up Commencement Bay's industrial waterfront, and is located next to downtown Tacoma. Starting in the late 1800s, the area supported shipbuilding, oil refining, chemical manufacturing and other industries, as well as the western terminus of the Northern Pacific Railroad. Northern Pacific owned much of Commencement Bay's south shore, and created the Thea Foss Waterway by damming one arm of the Puyallup River.

Over time, industrial activities contributed to the contamination of soil, groundwater and bay sediment with heavy metals, phthalates, petroleum-based products, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and pesticides. Stormwater also contributed to sediment contamination; much of Tacoma's urban drainage pours into the Thea Foss Waterway.

In the early 1980s, Ecology identified sediment contamination in Commencement Bay and the U.S. Army Corps of Engineers studied the area. In 1983, EPA added the Commencement Bay Near Shore/Tide Flats site to the Superfund program's National Priorities List (NPL); it was one of the program's first sites. Encompassing 10 to 12 square miles of shallow water and land, and involving over a million cubic yards of contaminated sediments, it was also one of the program's first mega-sites. The Thea Foss Waterway contains three of the enormous site's eight contaminated sediment problem areas, which make up one of its four project areas.

With EPA oversight and support, cleanup of the Thea Foss Waterway proceeded in three parts. Ecology took on the upland source areas. The City of Tacoma (a lead potentially responsible party, or PRP) assumed responsibility for 80 percent of the in-water cleanup. A consortium of PRPs including Puget Sound Energy and PacifiCorp, known collectively as the Utilities, assumed responsibility for the remaining 20 percent, located at the head of the waterway.

EPA and Ecology coordinated a two-step cleanup approach – source control followed by sediment cleanup. EPA provided oversight, working closely with Ecology and the City on data collection, permitting and environmental reviews. Ecology identified upland sources of sediment contamination, used regulatory tools and discharge permits to control contamination sources, oversaw implementation of remedial actions, and declared source control complete in 2003. The City and the Utilities then dredged and capped sediments in the waterway; cleanup activities finished in 2006. Sediment cap maintenance, monitoring, stormwater management, and waterfront cleanup and redevelopment are ongoing.

Throughout these activities, EPA, Ecology and City of Tacoma staff members met regularly with community stakeholders to share information and updates and to incorporate community feedback into the Superfund process. The selected remedy enabled the area to be reused for public, commercial and residential uses, which EPA determined to be the area's reasonably anticipated future land uses.

Thea Foss, Tacoma Entrepreneur

In 1889, Norwegian immigrant Thea Foss opened a tugboat business in Tacoma. The business would eventually become Foss Maritime, an international harbor services and maritime transportation provider. In 1989, 100 years after her company's founding, the City of Tacoma renamed the City Waterway in honor of Thea Foss.



Thea Foss (left) in front of the Foss family home, Tacoma, 1910. Image used with the permission of the Washington State Historical Society.



Panoramic view of the Thea Foss Waterway, 1926. Image used with the permission of the Washington State Historical Society.

Project History

1983 – 1996

Putting the Pieces in Place

By the time of the site's Superfund listing in 1983, decades of disinvestment had left much of the Thea Foss waterfront in decline. A tribal claim to lands in the area created uncertainty for property ownership and made people less willing to make capital investments. Potential liability for Superfund cleanup created additional uncertainty; some owners abandoned their properties. In 1989, the Puyallup Land Claims Settlement Act resolved property title uncertainties and EPA finalized its cleanup plan for the site. However, the City still faced a lengthy cleanup, an abandoned waterfront and a challenging redevelopment project. "With all of the contamination left behind, no one was interested in developing anything in Tacoma," recalled Ecology project manager and inspector Marv Coleman.

The City realized that facing these challenges and revitalizing the Thea Foss Waterway would require strong partnerships; collaboration among EPA, Ecology and the City started early on. "This project was too big for any one agency or organization to take on alone," said EPA project manager Piper Peterson. "Everyone needed to work together to make this project work." To tackle the cleanup projects and spur interest in redevelopment, the City would need to create a compelling development plan, address developers' liability concerns and establish an organization to guide the redevelopment effort.



Aerial view of the Thea Foss Waterway, the 11th Street Bridge and downtown Tacoma, 1965. Image used with the permission of the Washington State Historical Society.

Context for Tacoma's Waterfront Plan

Tacoma's vision for a revitalized waterfront was born in the 1970s in part as a response to a state-wide resource planning regulation. Washington's 1972 Shoreline Act seeks to prevent the "uncoordinated and piecemeal development of the state's shorelines," requiring that localities plan for appropriate shoreline uses, protect environmental resources and preserve public access to waterways. Tacoma first outlined its redevelopment goals in its 1974 City Waterway Policy Plan. "That's when they really started envisioning a way to reclaim the heart of downtown," said City of Tacoma project manager Mary Henley.

Planning and Investing for the Future

The Tacoma Planning Commission started with the first of a series of planning efforts, resulting in the 1990 *Thea Foss Waterway Design and Development Plan*. The plan described a waterfront esplanade with parks and vibrant mixed-use development. Further design studies, master planning processes and public involvement efforts, including 50 public workshops, continued to refine plans for the area's redevelopment over the next several years.

In 1990, the City and Metro Parks Tacoma also purchased 27 acres of abandoned properties along the western edge of the waterway and asked Ecology to partner in their cleanup. Constrained by a city charter requirement that municipally-owned shoreline areas must be owned in perpetuity, the City designated land for a publicly owned esplanade along the shoreline, then transferred ownership of the inland portion of the properties to Metro Parks Tacoma. The esplanade would be a key feature of the redevelopment project, signaling the City's financial investment and commitment to the area, providing public access to the water and connecting new developments with one another and with the water. "The esplanade was a way of making this idea into reality – if we're going to create a public asset, the public should be able to access it," noted City of Tacoma project manager Mary Henley.

"The courage that Tacoma mustered up to do this was important. A lot of people thought they were crazy. A lot of cities would not have the collective courage to do something like that. It was a big risk."

– Marv Coleman, Ecology project manager and inspector

Tackling Environmental Liabilities

In 1994, the City, Ecology and Metro Parks Tacoma negotiated a first-of-its-kind area-wide consent decree for cleanup of the upland properties. The agreement allowed for the selection of site-specific cleanup plans from a set menu of options; development at each site would be part of the remedy, capping contamination in place. The agreement also indemnified purchasers of the properties against environmental liabilities associated with past site contamination. The area-wide agreement addressed several priorities – developers’ liability concerns, the need for a consistent approach to cleanups, direct communication with points of contact at Ecology for oversight of each cleanup, and the need for an efficient cost-effective process across all of the upland properties. Today, the consent decree remains a living document, updated to include new buyers, site-specific cleanup plans and environmental covenants over time.

Addressing Waterway Sediments

In 1994, the City also stepped up as the lead responsible party for completing the study and design for cleanup of waterway sediments. The City and other PRPs negotiated a cost-sharing agreement and then developed a cleanup plan to submit for EPA approval. Ultimately, the City completed the cleanup of 80 percent of the waterway, while the Utilities

Environmental Liability and Superfund Site Reuse

The consent decree negotiated by the City, Ecology and Metro Parks Tacoma was an innovative approach to addressing parties’ liability concerns. At other Superfund sites, Prospective Purchaser Agreements (PPAs) had been used to address these concerns. In 2001, Congress passed the Brownfields Revitalization Act to make the acquisition and redevelopment of contaminated properties like Superfund sites easier. Under the Act, a prospective purchaser need no longer negotiate a PPA with EPA and the federal government. In lieu of a signed agreement, the purchaser could meet requirements and qualify as a bona fide prospective purchaser (BFPP).

Based on several steps – documenting previous site owners, property uses and existing environmental conditions, for example – the Brownfields Revitalization Act provided designated BFPPs with limited liability protections. The Act also exempted contiguous property owners from Superfund liability and clarified appropriate inquiry for innocent landowners. For Thea Foss Waterway developers, the consent decree negotiated by the City, Ecology and Metro Parks Tacoma addressed liability concerns.

“There are two paths you can take – you can fight your obligations tooth and nail and spend money on lawyers or you can decide to move forward and frame it as an opportunity. The City of Tacoma had a lot of vision.”

– Mary Henley, City of Tacoma project manager

took on the cleanup of remaining sediments. The overall cleanup would be funded through surface water rates, Ecology grants, responsible party contributions and Washington State Department of Natural Resources funding. A collaborative approach to cleanup involved citizen and environmental groups as well as government agencies and PRPs. Citizens for Healthy Bay (CHB), a local citizen advocacy group, was invited to participate in technical meetings regarding the cleanup. When cleanup plans were ready for EPA review, CHB submitted letters in support. “There were challenges, of course, but getting all of the PRPs and other stakeholders on board and working together really helped move this project forward,” said EPA project manager Piper Peterson.

In 1996, the City established the Foss Waterway Development Authority (FWDA) to pursue the cleanup and redevelopment of the upland properties. FWDA takes a business-oriented approach to managing the property, securing financing, undertaking development and partnering with developers. The organization follows five guiding principles: ensure public access, attract investment, improve infrastructure, maximize external financial resources and promote environmental stewardship.

Tribal Involvement

The Puyallup Tribe of Indians and Muckleshoot Indian Tribe play important roles in the cleanup and restoration of the Commencement Bay Near Shore/Tide Flats site. The bay supports important recreational and tribal fisheries, and is in a tribal Usual and Accustomed fishing area. The tribes have provided input on cleanup decisions throughout the Superfund process. In addition, the tribes have collaborated with the National Oceanic and Atmospheric Administration (NOAA) and other natural resource trustees to implement the environmental restoration work in Commencement Bay. Habitat projects seek to restore intertidal mudflat and marsh habitats that support fish and other wildlife.

1997 – 2006

Waterfront Transformation

FWDA got to work, assuming control of nine of the 12 parcels held in trust by Metro Parks Tacoma and the City and replacing Metro Parks Tacoma as signatory in the consent decree. A suite of plans guided and informed redevelopment. The implementation strategy outlined in the *Thea Foss Design and Development Plan* focused resources on projects that would improve shoreline access, further mixed-use development and spur private investments.

The development's first success in 2002 – the opening of Tacoma's Museum of Glass and Chihuly Bridge of Glass near the southern end of the waterway – ushered in a new era. An idea raised in part by local artist Dale Chihuly 10 years earlier, the project had grown to be a key part of the redevelopment

Thea Foss Planning Resources

The City of Tacoma and FWDA used many planning tools to guide Thea Foss development, including:

- Tacoma Shoreline Master Program
- Thea Foss Waterway Programmatic Environmental Impact Statement
- Strategic Plan for the Thea Foss Waterway Environment and Redevelopment
- Thea Foss Waterway Design Elements Guideline
- Transportation Plan for Tacoma
- Thea Foss Waterway Conceptual Development Plan
- Thea Foss Waterway Marine Master Plan
- Thea Foss Design and Development Plan (and its updates)
- Thea Foss Environmental Master Plan

Timeline of Events

1980s	Discovery of sediment contamination in Commencement Bay
1982	EPA proposes the site for listing on the Superfund program's National Priorities List (NPL)
1983	EPA lists the site on the NPL
1989	Puyallup Land Claims Settlement Act EPA selects long-term cleanup remedy in site's Record of Decision
1990	Thea Foss Waterway Design and Development Plan City of Tacoma purchases the western shoreline along the Thea Foss Waterway
1994	The City takes a lead role in completing the study and design for sediment cleanup Ecology, the City and Metro Parks Tacoma sign consent decree for uplands cleanup
1996	The City establishes the Foss Waterway Development Authority (FWDA) EPA awards Brownfields grant to the City of Tacoma
2000	FWDA replaces Metro Parks Tacoma in the consent decree
2002	Museum of Glass opens Thea's Landing development opens
2003	Ecology completes source control Sediment removal begins
2004	The Utilities complete cleanup of 9-acre area The City constructs marina for use during cleanup of existing marinas Albers Mill development opens
2006	Sediment dredging, final waterway capping and habitat mitigation activities end
2008	Site cleanup recognized with Phoenix Award Esplanade Condos open
2011	Public workshops take place to update the 1990 development plan
2013	Foss Waterway Seaport opens
2014	Fish Peddler Restaurant & Market opens
2015	Henry apartment complex opens
2016	The City of Tacoma celebrates the cleanup's 10-year anniversary
2016+	Future projects will include a senior independent living center, a residential facility, a new marina and two parks

plan. The museum anchored the project, while the bridge connected the waterfront with downtown Tacoma.

Developers responded to FWDA’s marketing efforts and the City’s investment in the community’s vision. Thea’s Landing condominiums and apartments opened in 2002; ground floor commercial spaces in the building today support two restaurants. In 2004, Albers Mill lofts opened in a renovated cereal mill. “Developers have been wonderful to work with. They’re as excited about this as anyone, and being a part of it,” noted Marv Coleman. Throughout the development process, FWDA also pursued opportunities to bring the public to the waterfront; Tacoma hosted its first Tall Ships Festival in 2005.

After Ecology declared the upland source control complete in 2003, the City and Utilities began the sediment cleanup under EPA oversight. This work provided opportunities to integrate reuse considerations as part of the area’s remedial design. The City collaborated with property owners along the Thea Foss Waterway on a sediment dredging and capping plan that established water depths supportive of current and planned land uses. Shipbuilders required deeper water access, for example; other property owners did not. The City then coordinated with the firm Simpson Tacoma Kraft to consolidate 500,000 cubic yards of dredged material in the firm’s privately owned waterway nearby, transforming it into developable dry land. EPA reviewed and approved these plans and monitored the work’s progress.

“It doesn’t do any good to improve conditions if no one knows about it. You need a robust marketing program, particularly with a city with a bad reputation - you have to show people what you’re creating.”

– Marv Coleman, Ecology project manager and inspector

The cleanup also provided an opportunity to improve marina facilities in the waterway. Private marinas held hundreds of boats that would need to be moved to accommodate sediment cleanup work. The marinas were outdated – they had small slips, were not up to code and were in disrepair. FWDA was also interested in building a new marina. The City and FWDA provided funding for construction of the new marina, which the City used for several years for temporary boat storage during sediment cleanup. FWDA now owns the facility. The City reached agreements with the existing marinas, then pursued cleanup in stages, moving the boats to the new marina, deconstructing the old marinas, performing sediment cleanup, reconstructing new marina slips, and then moving the boats back. When sediment cleanup finished in 2006, the waterway featured state-of-the-art marinas that would be key to drawing additional economic development to the area.

Habitat Enhancements

The cleanup of the Thea Foss Waterway required improvements to habitat for threatened and endangered species of salmon. Once found throughout the Bay and its tributaries, fish populations have declined substantially. To compensate for damages done to environmental resources, which are accounted for as part of the Natural Resources Damages Assessment process, PRPs funded habitat restoration projects. To mitigate for habitat destroyed during cleanup work, the City created over 12 acres of new aquatic habitat at sites throughout the waterway. Cleanup planners also found opportunities to adjust the waterway banks to improve fish habitat and the new marinas incorporate fish-friendly design elements. “We walked the site inch by inch to find opportunities for bank softening,” said former EPA project manager Piper Peterson. “It was a great collaboration among project staff.”



Waterway banks, before and after improvements. Images used with the permission of the City of Tacoma.



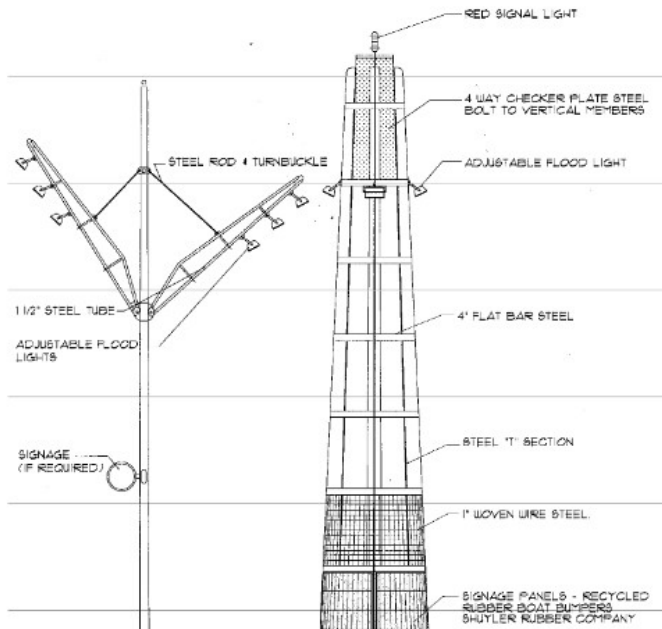
The Pallada, a 365-foot ship docked at the Foss Seaport as part of Tacoma's first Tall Ships Festival in July 2005. Image used with the permission of the Washington State Historical Society.



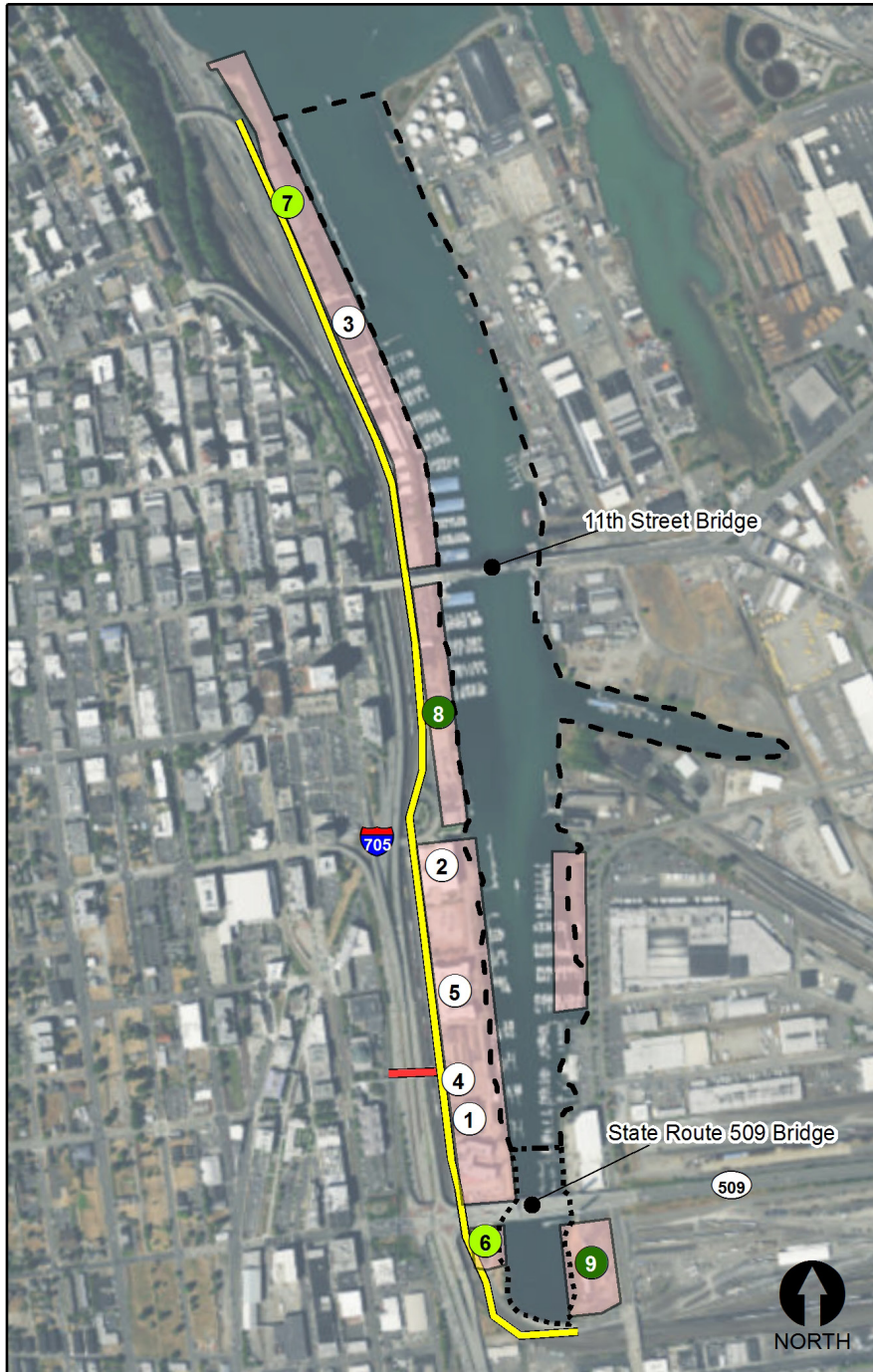
The Thea's Landing residential development, located next to the Museum of Glass.



In 2005, the American Society of Civil Engineers recognized the revitalization project with its "Outstanding Civil Engineering Achievement Award."



The Thea Foss Design and Development Plan includes design specifications for lighting and other esplanade features (left and above). Design drawing image used with the permission of the City of Tacoma.



Legend

- - - City of Tacoma Sediment Cleanup
- - - Utilities Sediment Cleanup
- Upland Development Properties
- Completed and Future Esplanade
- Chihuly Bridge of Glass

Development

- ① Albers Mill
- ② Esplanade Condos
- ③ Foss Seaport
- ④ Museum of Glass
- ⑤ Thea's Landing

Existing Parks

- ⑥ 21st Street Park
- ⑦ Thea's Park

Planned Parks

- ⑧ Central Park
- ⑨ Foss Waterway Park

0 500 1,000 2,000 Feet

Sources: Esri, DeLorme, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, AND, USDA, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, Tele Atlas, First American, UNEP-WCMC, USGS, Floyd Snider Engineering, Site 11 Esplanade Project Map, Metro Parks Tacoma and Foss Waterway Development Authority.

Redevelopment along the Thea Foss Waterway includes apartments, condos, parks and museums.

A combination of financial tools helped make development possible. In 1996, EPA supported the development of finance and marketing strategies with a \$200,000 Brownfields grant. Historic and residential tax abatements and new market tax credits also helped encourage development. Other development resources have included economic development bonds, local, state and federal grants, the City of Tacoma's Capital Improvements Program, private investors, and FWDA

revenues. In addition, FWDA has leveraged resources through development agreements with private investors, who have contributed to infrastructure projects, parks and events.

2007 – Present

Staying on Course

With the sediment remedy in place, the City and FWDA focused efforts on pursuing the cleanup and redevelopment of the remaining waterfront properties. However, outside forces brought development to a standstill; in 2008, the Great Recession caused private and public funding to dry up. FWDA adjusted its priorities, moving forward with capital improvements, preparing sites for redevelopment, building partnerships to draw more visitors to the waterfront, and prioritizing other work that could continue without private funding.

Innovative Cleanup Recognized Nationally

In 2008, the Thea Foss Waterway cleanup was recognized with a Phoenix Award. Presented at each year's Brownfields Conference, the award recognizes projects that "take on significant environmental issues, show innovation and demonstrate masterful community impact."

FWDA also continued to focus on community involvement and outreach, holding 12 public meetings per year. In 2011, as the recession eased, FWDA revisited the 1990 plan for the waterway in series of 29 workshops involving business owners, developers, residents, elected officials, the lending community and other stakeholders. In those sessions, community members recommitted to the idea of a waterway supporting mixed-use development, shoreline public access and environmental restoration. "The community made it clear that they wanted to stay the course with the original vision," recalled former FWDA executive director Su Dowie. "It's important to check in – if you lose community support, the project may not reach its full potential."

As the economy has improved, interest in redevelopment has returned. New development projects have included the Fish Peddler Restaurant & Market and the Henry apartment complex, which includes ground-level retail space. FWDA agreed to a long-term lease and development plan with Foss Waterway Seaport, a maritime heritage museum located in an old warehouse on the Balfour Dock; the facility's three-phase restoration has included rebuilding of 400 feet of rotting dock. FWDA has several more projects on the horizon, including a senior independent living center, another residential facility, a new marina and two new parks. One park will feature a rowing center with a boathouse and storage space for canoes, kayaks and paddleboards.

In July 2016, the community celebrated the sediment cleanup's 10-year anniversary with a waterway parade and presentations by Tacoma's former mayor and other speakers. An exhibit on the history of the cleanup at Foss Seaport featured the work of local students and provided information on how residents

"You have to recognize where the market is and the types of uses the market will support. It's not that you can't get everything you want – you just can't get it all at the same time."

– Su Dowie, former FWDA executive director

can help keep the water clean. "We looked at the 10-year anniversary as a point to celebrate, but also to remind people that 25 percent of the city drains to this waterway untreated," said City of Tacoma project manager Mary Henley. "It was an opportunity to remind residents to be thoughtful about how their individual actions can affect the water."

Addressing stormwater is vitally important; it has the potential to re-contaminate waterway sediments. With support from EPA and Ecology, the City has developed a robust and award-winning stormwater program. Its efforts include monitoring, line cleaning, investigation of potential contamination sources, and public education. As a result of Superfund cleanup outreach and the City's stormwater education efforts, the public is becoming well-informed about environmental issues. "There is an environmental consciousness in Tacoma that has grown as a result of this project," said Mary Henley. "It is a continuing effort."

Foss Waterway Seaport

The Foss Waterway Seaport and FWDA partnered to create a facility celebrating Tacoma's maritime heritage. Located in a recently restored warehouse on the waterfront, the Seaport provides exhibits, event space, a shop and guest boat mooring. Educational programs include museum field trips and boat excursions that expose students to marine and environmental science as well as maritime history.



View of the restored Foss Waterway Seaport facility.



An exhibit at the Foss Waterway Seaport celebrating the cleanup's anniversary (above).



Paddlers celebrating 10 years of cleanup on the Thea Foss Waterway (above). Image used with the permission of the City of Tacoma.



The Henry complex includes apartments and commercial space (left). Signs along the waterfront provide information about the cleanup (above).

Lessons Learned

City, Ecology, FWDA and EPA staff involved in the cleanup and redevelopment process emphasized several key factors that have been vital to the project's success:

- The Thea Foss Waterway is a valuable public resource with large waterfront acreage located in close proximity to downtown Tacoma.
- Cooperative PRPs worked through issues to move the project forward, rather than expending effort and resources on litigation.
- Long-term staff tenure in local agencies and Ecology has created continuity in the project team, minimizing resources spent on re-educating new key stakeholders.
- FWDA's establishment created a community-led organization that was nimble and focused on redevelopment, with deep expertise in waterfront regulations, financial tools and other complex redevelopment topics.
- EPA and Ecology are active partners who understand priorities for the site's redevelopment in the context of the ongoing cleanup.

“Change happened because the community wanted and demanded change and has been with FWDA all the way. Without that kind of community commitment, I’m not sure this project would have been as successful.”

– Su Dowie, former FWDA executive director



21st Street Park, near the head of the waterway.

Bigger Picture

While these factors created an ideal climate for the successful reuse of the Thea Foss Waterway, there are also a range of broader lessons learned that can help guide similar projects at contaminated lands across the country.

Local governments can play a unique leadership role in reuse planning projects.

As the organizations responsible for their communities' general welfare, local governments are particularly well-positioned to host redevelopment projects, bring together diverse stakeholders, and use planning tools and incentives to foster positive site outcomes. The City of Tacoma showed strong leadership and vision in purchasing the vacant and contaminated properties lining the waterway and taking a key role in remediation of the sediments and upland properties. As a municipal government, the City was able to alleviate developers' liability concerns and secure grant funding tools unavailable to private borrowers.

Collaborative state governments can provide critical resources and support.

State governments have an important role to play in supporting municipalities that take on complicated cleanup projects. Ecology collaborated closely with the City, providing crucial funding resources and technical expertise. “Ecology is a regulatory agency, but we are interested not just in cleanup, but a cleanup that will result in something better,” explained Ecology project manager and inspector Marv Coleman. “The regulatory agency needs to have the cooperative attitude to make it happen.” The agency provided \$21.5 million in grant funding for the cleanup. It has also worked closely with the City in the development of its stormwater management program and in the cleanup and redevelopment of the upland properties.



The Chihuly Bridge of Glass, which connects the Museum of Glass to downtown Tacoma.

While EPA provides tools and resources to support Superfund reuse, communities and public- and private-sector organizations make it happen.

EPA’s mission is to protect human health and the environment. EPA relies on engaged community stakeholders to bring their land use goals and priorities to the table to evaluate them in light of any constraints posed by the site. The City of Tacoma, other PRPs, FWDA and other stakeholders used creativity and innovation to pursue the cleanup and revitalization of the Thea Foss Waterway. Their efforts are nationally recognized and provide examples of community outreach, funding and redevelopment tools that can be applied to other cleanups.

Think long term.

It can take many years to remediate contamination that has accumulated over decades. Cleanup activities provide a time window for stakeholders to build partnerships and identify resources, coordinate with EPA and Ecology, and develop a strategy for returning a site to use while protecting future users. Even after a site is remediated, it can take time and the right economic climate to attract parties interested in reusing the area. Persistent outreach and long-term community support throughout all phases are both vitally important. Community planning for the Thea Foss Waterway began in the 1970s, and local agencies and organizations have partnered on a cleanup and redevelopment project that has spanned decades. Project partners weathered the economic downturn and other changing conditions, persistently pursuing long-term project goals.

Build on past experience.

Today, thanks to the BFPP provisions of the 2002 Brownfields Revitalization Act, environmental insurance and EPA tools such as Ready for Reuse Determinations, well-established resources are available to address stigma, liability and other site issues. Prospective purchasers can contact EPA site teams to learn more, or see the Sources and Resources section of this report for additional information.

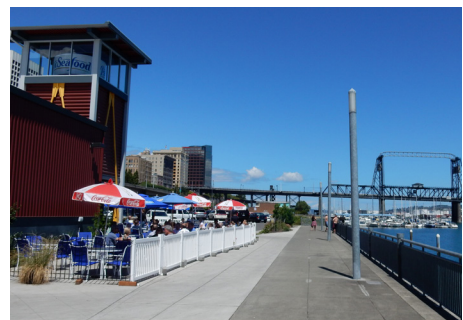
Look to the future, recognize the past.

The Thea Foss Waterway redevelopment embraces the waterway’s industrial past and context. The Foss Waterway Seaport brings the area’s history to life, while the esplanade has active port and manufacturing operations in neighboring waterways as its backdrop. The community imagined a new kind of marine environment for the future of the Thea Foss Waterway, one that includes a busy recreational boating destination, aquatic habitat, and vibrant commercial, residential and public spaces.

“For anyone with the privilege of being involved in these projects that catalyze community revitalization – it’s the most rewarding work you’ll ever do. It’s complex, challenging and just fun. I loved my job.”
– Su Dowie, former FWDA executive director



Condos and apartments line the waterway.



Waterway banks have been softened and planted with native vegetation (left, center). Thriving restaurants and other businesses along the waterfront (right).

Looking Forward

The next chapter of the Thea Foss Waterway story remains to be written. Planned waterway events include the 2017 Festival of Sail, which is expected to draw 250,000 visitors, building the area's profile as a regional and national boating destination. As the development matures and grows, FWDA, the City and the Port of Tacoma will continue to work together to manage infrastructure resources and make sure area land uses remain compatible.

The City is also planning connections between waterway resources and regional networks. "The community has started to think bigger picture – instead of just having the esplanade along the Thea Foss, the focus is on how that fits with a larger vision of a trail connecting the Dome to Point Ruston and on to Point Defiance," said Su Dowie.

Looking forward, the FWDA will disband following the full buildout of the redevelopment properties. The Thea Foss Waterway waterfront development will be self-sustaining, with maintenance of the esplanade and public areas funded by dues paid to the Foss Waterway Owners Association and parks maintenance funded through an account with the Greater Tacoma Community Foundation. EPA and Ecology will continue their oversight, ensuring that future development protects the in-water remedy. "The long-term success of the cleanup and the continued health of the waterway will require vigilance to ensure that the various parts of the remedy continue to work so that the waterway remains clean," noted EPA project manager Bill Ryan. "This will require monitoring now and in the future."

At the Thea Foss Waterway, EPA and Ecology have worked closely with the City, FWDA, developers and other community partners, providing support and oversight for a complex cleanup and redevelopment effort. The cleanup and transformation of Tacoma's blighted waterfront into a vibrant mixed-use boating destination illustrates how strong community leadership, collaborative partnerships, innovation and long-term planning can result in the protection of public health and the environment and the restoration of vital community assets.

EPA and Reuse: Lessons Learned

Since the inception of the Superfund program, EPA has been building on its expertise in conducting site characterization and remediation to ensure that contamination is not a barrier to the reuse of property. Today, consideration of future use is an integral part of EPA's cleanup programs from initial site investigations and remedy selection through to the design, implementation, and operation and maintenance of a site's remedy.

The Thea Foss Waterway cleanup has presented many opportunities for incorporating reuse considerations in the site's cleanup, which has been carried out by the City of Tacoma, Ecology and Utilities with EPA oversight. Selected from options provided in the 1994 consent decree, cleanup plans for upland properties use buildings, paved surfaces and other development features as part of the remedy, capping contamination in place. In designing the sediment cleanup plan, the City also coordinated closely with property owners to make sure that water depths resulting from dredging and capping efforts would be compatible with future land uses at each property.

EPA also works with site stakeholders to consider how future land use considerations can inform the implementation and long-term stewardship of site remedies as well as cleanup planning. At some sites, for example, reuse considerations can inform the future location of groundwater monitoring wells and other operation and maintenance equipment that might inadvertently hinder redevelopment efforts. At other sites, detailed site reuse plans have provided additional benefits that save time and reduce redevelopment costs. For example, future infrastructure corridors or building footers can be installed in coordination with site cleanup activities.



Concept plan for Central Park, which is planned for construction on the Thea Foss Waterway's western shore (left). Concept design for Foss Waterway Park, including a proposed boathouse facility (center). The future location of Foss Waterway Park (right). Concept plan and design images from Site Workshop courtesy of Metro Parks Tacoma.

Restoring and Revitalizing Waterfront Resources: Tacoma's Thea Foss Waterway

THE COMMENCEMENT BAY NEAR SHORE/TIDE FLATS SUPERFUND SITE IN TACOMA, WASHINGTON

Sources and Resources

Sources

Images and maps for this case study are from EPA Region 10, the Washington State Historical Society, the City of Tacoma and Metro Parks Tacoma.

Resources

EPA site profile page:

<https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=1000981&msspp=med>

EPA Superfund Redevelopment Initiative:

<https://www.epa.gov/superfund-redevelopment-initiative>

Washington Department of Ecology:

<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=2683>

City of Tacoma:

http://www.cityoftacoma.org/government/city_departments/environmentalservices/surface_water/restoration_and_monitoring/thea_foss_waterway_cleanup

Foss Waterway Development Authority:

<http://www.theafoss.com>

Citizens for a Healthy Bay:

<http://www.healthybay.org>

CERCLA liability and local government acquisitions:

<https://www.epa.gov/enforcement/state-and-local-government-activities-and-liability-protections>

Bona fide Prospective Purchaser Information:

<https://www.epa.gov/enforcement/bona-fide-prospective-purchasers>

Environmental insurance information:

<https://www.epa.gov/brownfields/brownfields-environmental-insurance-helps-ensure-redevelopment>



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