

Daylighting and Restoring Streams in Rural Community City Centers: Case Studies

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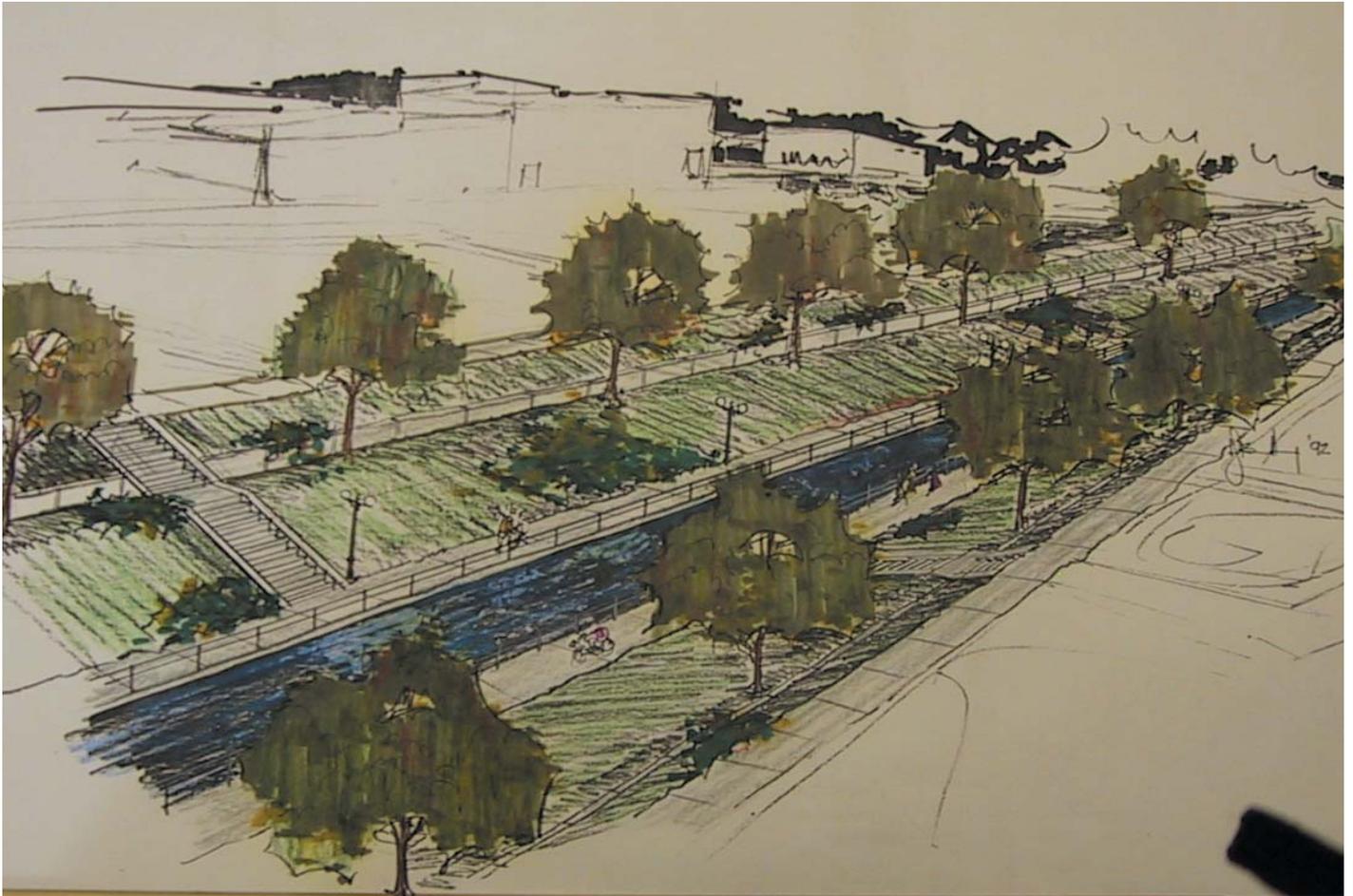


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Cover Drawing: Artist’s Rendition of daylighted Cow Creek, Hutchinson, Kansas (reprinted with permission).

“A community can choose the option of consigning an urban stream to an open or closed storm sewer, or it can decide to manage the stream as a community amenity....A stream can be used as a dynamic economic feature to draw shoppers and tourists to a business district.”

— Ann Riley, *Restoring Streams in Cities*¹

Introduction

Community leaders in Caldwell, Idaho (population 28,000), face a challenge in the new millennium that other communities around the nation have also confronted. Experiencing the economic and social deterioration of its downtown core area, Caldwell’s leaders have decided that it’s time to restore the downtown to an area of civic pride and economic vitality. Evidence of the downtown area’s demise have been obvious: low building-occupancy rates and abandoned properties, low property-tax revenues, and a lack of use by the community’s residents all underscore the need for change. The city’s leaders are now developing a revitalization program tailored to their community’s culture, landscape, and needs. The goal of this effort is to reclaim the downtown area as a community asset, instead of allowing its continued decline as a liability.

Caldwell’s vision for its downtown area is a “pedestrian-friendly downtown” that encourages a sense of place for the city’s residents and visitors. As part of the revitalization process, community leaders have identified “daylighting²” Indian Creek as a potential goal. This stream historically ran through the heart of Caldwell and is currently buried under the downtown’s buildings and city streets. The community hopes daylighting Indian Creek will enhance the city’s physical environment, broaden support for the revitalization project, restore a natural resource within the city, and enhance the economic and social environment of downtown.

Like many urban streams, Indian Creek was buried under the downtown area in the 1950s, when concerns about water pollution and the physical degradation of the stream led the city of Caldwell to encase it in concrete pipes. Project managers channeled a 900-foot reach of Indian Creek into a closed, concrete, box culvert. The city subsequently grew over Indian Creek, relegating the stream to the community’s collective memory.

Now, a half-century later, the city’s current leaders are finalizing plans to restore Indian Creek as a focal point of Caldwell’s downtown. However, before Caldwell began daylighting Indian Creek, the community wanted to evaluate the social impacts and economic, cultural, and environmental benefits of such projects in other communities. They wanted to know whether such daylighting projects in other small- to medium-sized communities, primarily in rural areas, have helped those communities revitalize the economic and civic spirit of their respective downtown areas. This report attempts to answer such questions.

¹ *Restoring Streams in Cities*, Ann L. Riley, Island Press, Washington D.C., 1998.

² “Daylighting” means exposing a previously covered stream to the open environment. *National Park Service – Rivers, Trails, and Conservation Assistance Program, Seattle*

These case studies review the efforts of five medium-sized cities (population 25,000–80,000) that have restored or daylighted streams within their urban areas. All of the communities profiled here were motivated by concerns similar to Caldwell’s. They wanted to address problems associated with deteriorating downtown areas and, in some cases, problems associated with flooding. These communities all experienced low commercial occupancy rates within their downtown areas, declining property values, diminished economic vitality, rising crime, and a sense that their downtown areas were no longer assets to their community, but instead had become liabilities.

Neal Smith, Director of the St. Charles Downtown Association, described the process that St. Charles, Illinois, experienced when restoring the St. Charles/Fox River downtown area: “It seems that downtown areas need to get really bad before anything is done about them.” This observation, although not always so succinctly stated, was a consistent theme for all of the communities profiled here. Such downtown areas appear to devolve in a recognizable pattern before the necessary resources and public support can be marshaled to begin reclaiming and restoring the core areas. This pattern of decline typically culminated in a near crisis for most of these communities before changes occurred. Once each of these communities decided to focus on transforming their respective downtown areas, however, major changes did take place—often in a relatively short period of time.

Only two of the five communities profiled here actually undertook stream *daylighting* projects. The other three communities *restored* streams that ran through their downtown areas. Some of these communities pursued stream restoration because local leaders perceived the threats that their respective streams would be buried underground in the near future. The fact that only two communities profiled in this report actually daylighted their streams is indicative of how few small- to medium-sized communities are currently pursuing stream daylighting projects.

Most daylighting stream projects in downtown areas are occurring in large metropolitan areas, such as St. Paul, Minnesota; Portland, Oregon; and Seattle, Washington. This appears to be primarily a function of economics. It can be very expensive to purchase highly valuable downtown real estate; move or remove commercial buildings and other components of the built infrastructure; and engineer the design and construction of a daylighted stream to meet flood control parameters, water quality and habitat needs, and park or natural amenity needs for a city’s center. Such costs can be more challenging for smaller communities to meet. As this report shows, however, the communities profiled here were creative in locating funding or developing alternative means to achieve their goals. And the residents in these communities were unequivocal in describing the gains to their respective communities as a result of these projects.

The methods these communities used to change their downtown core areas from liabilities to assets, and the role that stream restoration or daylighting played in these efforts, can be applicable to other communities contemplating downtown revitalization programs tied to local streams, regardless of whether a community’s goal is to restore or daylight a stream. The revitalized areas profiled here now include streams that provide social, cultural, and, in

many instances, environmental amenities for their respective communities. For most, these restored streams have also become focal points for ongoing economic revitalization activities in the community.

The communities profiled here were picked because of their demographic and situational similarities to Caldwell, Idaho. All of them except one are rural communities with populations between 25,000 and 80,000 (the exception is Kalamazoo, Michigan, which is more urban). All of them had experienced deteriorating downtown areas, and all of them anchored their downtown revitalization efforts either to daylighting a stream that had previously been buried underground, or to restoring a stream that had been neglected and become an eyesore or a public health hazard, or was threatened with burial under future urban development.

The introductory section of this report provides an overview of the components that these communities used in planning and gaining public support for their stream and downtown revitalization projects. This section also includes the reasons most communities decided to restore their streams. The second, and larger, section of the report provides more detailed profiles of individual restoration or daylighting projects in each of the chosen cities.

The case studies include information, where available, about how many feet of restored stream were involved in the project, costs associated with the daylighting or restoration project, each community's specific goals for their project, and how well the project met those goals.

Finding "before" and "after" photos of these projects has been difficult. In fact, officials involved in many revitalization projects noted that one area where they wished they had performed better in their project planning was in documenting the evolution of the project from the beginning, pre-construction phase, to the completed, restored stream and greenway area. City officials noted that such documentation would have been helpful both for their historical archives and as a marketing tool for attracting new business and residents to their area. These officials recommended that any community deciding to engage in a stream daylighting or restoration project linked to a downtown revitalization effort would do well to include photographic documentation as part of the planning process.

Economic Considerations

Downtown revitalization projects that are linked to urban stream daylighting or restoration efforts are like most urban revitalization efforts: the sponsoring agency or forum needs to define the strategies that will help maintain, or re-establish, the community's long-term economic vitality. According to Ken Nacci, director of the Downtown Development Agency in Kalamazoo, Michigan, understanding how an urban daylighting project will improve the economic basis for the community *before* work begins is critical to achieving success. Nacci also advocates obtaining commitments from local businesses, agencies, and corporations to make investments and place infrastructures near a daylighted or restored stream before work begins. For Kalamazoo, this was an important factor in its successful daylighting project.

“Don’t do a daylighting project on a ‘build it and they will come’ basis,” Nacci cautioned. As will be seen in the Arcadia Creek case study, the City of Kalamazoo obtained contracts from a number of local businesses and corporations before the daylighting project began. By doing so, Kalamazoo’s daylighting project increased its likelihood of success and had broader support from the larger community.

The communities cited here used various economic analyses to assess the benefits and costs associated with restoring or daylighting a stream. Kalamazoo used “before” and “after” assessments to quantify the changes in property values and economic activity surrounding its daylighting/revitalization project. Hutchinson, Kansas, assessed the costs for flood control associated with replacing existing (and deteriorating) underground pipes, and compared those costs to the costs of restoring or daylighting the stream. Through this analysis, the city’s engineers found surprising cost savings in bringing the stream out of the buried pipes and creating a new open space, greenway, and park as an amenity and flood-control measure. This project also became the anchor to revitalizing Hutchinson’s downtown area.

Other economic analyses are based on quantifying the expenditures associated with recreational or cultural uses of the restored stream—such as cultural events, bike and skate rentals, and pedestrian-friendly business development such as new restaurants, clothing stores, and gift shops. Where possible, the author has tried to note these values, although quantifying them is much more challenging.

Finally, costs associated with stream daylighting or restoration varied widely between the communities cited here. Kalamazoo, Michigan, for instance, has spent approximately \$18 million on its daylighting and downtown revitalization project. Hutchinson, Kansas, has kept costs to \$1.25 million. Obviously costs are dictated by the scope of the downtown revitalization effort and the number of buildings, streets, and facilities that must be removed to daylight a stream. If multiple properties need to be purchased and buildings removed, as in Kalamazoo, costs increase. Leveraging other funding and in-kind support, looking for grants with a small local match, and other tactics can help keep costs down.

Creating Public Support

All the communities cited in this report, plus other communities researched but not reported here, achieved successful stream daylighting or restoration and urban revitalization by including in their overall process a strong public education and involvement component.

The communities profiled here all expressed a strong commitment to involving a broad cross-section of the public *early* in the daylighting or restoration planning process. Most of the communities cited in the report gained public support for their projects by holding early public meetings and workshops to educate the community about the issue, explain the costs and trade-offs involved with different options, and solicit the public’s ideas on how to improve the concept and proceed toward realizing a shared goal. Many communities also developed support in the local business sector by soliciting businesses’ ideas on how they

could envision using a revitalized downtown core that included a daylighted stream, greenway, park, or other amenities associated with a restored urban stream.

Some communities literally turned their storefronts around. In San Luis Obispo, for example, the storefronts originally opened onto the street. The backs of buildings were turned away from San Luis Obispo Creek, providing an easy means of refuse disposal, and indicating the town's indifference to the creek. Now, San Luis Obispo has changed the building layouts so that storefronts and commercial buildings open *onto* the restored stream as well as onto the street. San Luis Obispo has also changed the type of businesses it attracts to the restored area—encouraging mixed-use businesses such as offices and restaurants with decks overlooking the stream, and boutique shops that open onto the stream walk area and meld easily with the surrounding restaurants, art galleries and gift shops. The downtown area is now designed to encourage and attract pedestrian traffic.

Most of these cities also established some form of advisory committee—i.e., a standing committee that represented various interests in the community—to shepherd the project from the early development phases through the construction and completion phases. These committees were charged with meeting on a regular basis, keeping in touch with their respective constituencies, and helping the planning, technical, and other city staff or consultants in the design and promotion of the project.

A Note about Sources for This Report

Two of the projects profiled in this report were originally profiled in Richard Pinkham's report, "Daylighting: New Life for Buried Stream," published by the Rocky Mountain Institute in 2000. The author wishes to thank Mr. Pinkham for his help with contacts and information. The author also wishes to thank the Rocky Mountain Institute for permission to reprint information that made this report possible. While some of the basic information about the daylighting projects was obtained from Pinkham's report, this report adds to Pinkham's work by providing information and status updates obtained during phone and email interviews with the principals involved in those projects. This report also describes the public involvement processes that project managers used to generate community support for each project, and provides information regarding the current status, costs, and benefits of the project. The Pinkham report did not focus on these facets of the daylighting projects. This report also notes any future plans project managers have developed as a result of completing the initial phases of their respective projects.

The author has also contacted members of the private sector in some of the communities profiled, in order to include their views on the efficacy of these projects. However, should readers want more thorough analyses of any one of the individual projects, additional information from the private sector in the respective communities could prove invaluable.

Case Studies



Fig. 1. The “Festival Site,” a key component of the completed daylighting project for Arcadia Creek in Kalamazoo, MI. (Kalamazoo Planning Department. Reprinted with permission.)

Arcadia Creek, Kalamazoo, Michigan

For more than a century, Arcadia Creek was buried under the streets of Kalamazoo, Michigan. Arcadia Creek is not in the core of the central city, but is in a north-central business district. This area experienced economic decline, deteriorating buildings and infrastructure, crime, and other problems associated with declining urban areas. The city had two major objectives as planners and staff looked for ways to revitalize the downtown area: 1) attract new business to the area and thereby revitalize it economically and socially; and 2) address the area’s increasing flooding problems resulting from an increase in impervious surface areas in the surrounding community. In 1986 the city began planning for a major redevelopment project in the area, and the option of daylighting Arcadia Creek grew out of the initial planning process as a way to help meet both of the objectives noted above.

The city formed the Downtown Development Association (DDA) to coordinate the project and act as the funding agent. The DDA purchased seven blocks along the original creek corridor. The DDA still owns this property. According to Ken Nacci, Director of the DDA, the city chose this approach in order to generate greater public and commercial support for the project. The city, through the DDA, decided to take title of the properties because of environmental contamination to the land as a result of previous commercial uses. Under this arrangement, the private developers own the buildings, but they lease the property underneath the buildings from the DDA, thereby avoiding liability associated with any toxic contamination.

The Arcadia Creek project is approximately three-quarters of a mile long. Daylighting of Arcadia Creek occurred along five blocks of the downtown area. For three of the five blocks, the daylighted creek runs through an open, 20-foot-wide and 12-foot-deep concrete channel. A stream walkway parallels the daylighted stretch and links this pedestrian path with walking paths that are part of a larger pedestrian/bicycle path system in the region.

To address the flooding problem, the DDA created an open stormwater pond that was also designed as an amphitheater to provide cultural activities for city residents and summertime tourists. The festival site/stormwater pond was part of the original daylighting project design and provides a very successful recreational and social amenity to the city, according to Nacci. Grassy slopes characterize this area, creating a park-like setting that is an open-air, unfenced oasis in the urban core. The area is now called the “Festival Site” (Figure 1) and hosts five annual festivals during the summer: the Blues Fest, Rib Fest, Taste of Kalamazoo, Island Fest, and Greek Fest.

Nacci noted that this component of the daylighting/revitalization project has been extremely successful for the city. According to Nacci, the DDA documents about \$12 million annually in income as a result of the Festival Site. This figure includes local employment from the festival directly, gate receipts, hotel stays, restaurants, etc. This site was formerly a parking lot. Part of it still is a parking lot during the week and a site for festival events on weekends and during the summer. However, the project has been so successful that the DDA is now planning to remove the remaining parking lot in the near future and turn the entire area into a park and festival commons area.

To entice the local business community to support the daylighting/revitalization project, the DDA offered 30-year leases at 9% interest to the developers. The DDA has taken that income source and leveraged it to fund other developments. After the initial 30-year leases are up, the businesses can renew their leases on very friendly terms (\$1.00/yr). Two hundred million dollars in private development has been leveraged from a total public investment of \$18 million. Nacci noted that the \$200 million includes revenues both for renovating existing buildings and construction of new buildings, plus leveraging the income by the DDA.

Nacci cautioned not to begin a daylighting project on a “build it and they will come” basis. “Although anything is better looking than boarded up windows and run-down buildings,”

Nacci continued, “if you’re looking for a return on your investment that is tangible, then getting commitments from local businesses and institutions early is critical.”

Kalamazoo wanted to fix the flooding problem created by development in the surrounding area, which had increased the impervious surface area and led to increased stormwater runoff flowing into the culverts buried under the city’s streets. The city had to address the flooding problem either by fixing, enlarging, and re-burying the existing culvert, or by daylighting the stream and increasing its capacity. To achieve their goal, the design called for laying back the streambanks and creating a stormwater pond. However, before they pursued this approach, the city and the DDA wanted to anchor the project by obtaining commitments from local developers.

Five local businesses—a bank, two hospitals, the community college, and a museum—committed to making an investment in the downtown area. The bank had wanted to build a new headquarters for their business, so the downtown redevelopment effort provided them with a good reason to proceed with construction.

A two-block area still has not been redeveloped in the daylighted area. Nacci said that occupancy rates and community use of the area has changed, but that it has not resulted in rapid development of restaurants and boutiques, mostly because the area was historically a commercial and industrial area. However, in the past two years, some of these industrial warehouses have been renovated into upscale office space for lawyers and other white-collar professionals. Nacci said that the DDA hopes to have restaurants and boutique shops move into this area as more professional office space is created. Nacci was confident that this transition to office space and other mixed-use business development is a direct result of the daylighting project’s influence.

Nacci thinks the general public recognizes the changes and sees how the project has resulted in removing prostitution and drug use from the area. Now, the daylighted section is a pleasant site for cultural and recreational uses. In addition to the festivals already mentioned, private development is occurring near the Festival Site.

There have been some setbacks along the way. For instance, a larger bank, First of America Bank, purchased the locally-headquartered bank that had been one of the early institutional supporters of the revitalized area. After the merger, First of America moved the bank headquarters to Ohio, leaving a vacant building that the city has yet to fill.

Public Outreach

Kalamazoo pursued some innovative public outreach strategies to generate initial interest and support for the daylighting project. One of the first things the city did was to create and produce a children’s book that focused on the Arcadia Creek project. Copies of the book were handed out to schoolchildren to generate support and help educate the community about the daylighting project. The city also orchestrated a public relations campaign, with public meetings and workshops to inform the residents and get them involved in generating ideas about design. The city made a concerted effort to reach out to the corporate and business community. This was a very successful campaign, according to Nacci. As a result

of this effort, the business community responded with \$4.5 million of private funds to purchase land around the creek area.

Nacci noted that there were detractors who criticized the city’s idea. The city and the DDA heard complaints from some residents at public meetings and in the local press. These citizens wanted to know why the city wasn’t fixing streets and roads instead of making such a huge investment in the creek. By and large, however, as people understood the seriousness of the flooding problems, and how addressing them could leverage a revitalization effort in the downtown area, public support became very strong.

“One of our biggest mistakes,” Nacci concluded, “is that it was so difficult to get the daylighting and revitalization project accomplished that once it was completed—and it took over ten years—no marketing was done. We never put even one brochure together to use as a marketing tool to businesses and companies around the region and country. So, we don’t have any ‘before’ and ‘after’ pictures to share. Let the residents in Idaho know that *that* was a big mistake on our part. Maybe they can learn from our mistake and do a better job of documenting the project.”

Watershed Size³	Flow Rates	Length Daylighted	Primary Objectives	Project Costs
7.5 sq. miles	< 5 cfs to 1,015 cfs 100-year peak flow	1,550 feet (5 city blocks)	Flood relief, create downtown amenity	\$18 million



Fig. 2. The Festival Site also acts as a flood-control reservoir during winter high flows. (Kalamazoo Planning Department. Reprinted with permission.)

³ Source: “Daylighting: New Life for Buried Streams,” Richard Pinkham, Rocky Mountain Institute, 2000.

Cow Creek, Hutchinson, Kansas

Hutchinson is a city of approximately 40,000 residents in rural Kansas. The impetus for making changes to the downtown area and Cow Creek included a deteriorating bridge, deteriorating underground pipes that encased Cow Creek through part of the downtown area, and a declining downtown core. According to Hal Munger, an engineer with the city of Hutchinson, the city had originally looked at daylighting Cow Creek over 20 years ago. But now the combination of the deteriorating infrastructure and the decline of downtown, along with flooding concerns, gave new life to the idea.

Heavy truck traffic had contributed to the decline of the bridge, and the public works department worried about the integrity of the bridge and the associated liability. Unacceptably high building costs and the long construction time associated with building a new bridge led the city to look at alternatives within the downtown area. The city also knew that the underground pipes that encased Cow Creek in the downtown area were deteriorating and needed to be replaced and upgraded.

The engineering department had two ideas for how to address the problems associated with the deteriorating underground pipes: 1) excavate the old pipes and encase the creek permanently in new pipes, keeping it underground; or 2) daylight the creek and turn it into a park area. With the additional infrastructure needs of the deteriorating bridge, the city was forced to make infrastructure investment improvements (including addressing the deteriorating underground pipes) in the late 1990s.

The city's engineers completed a feasibility study in the mid-1990s and began holding public meetings to help educate the residents about the choices the community faced. The feasibility study looked at the costs of replacing the pipes and keeping the stream underground, as well as the costs and design of daylighting the stream and creating a greenway and park area in the middle of downtown. The study showed that it would be more cost-effective to daylight the stream and restore the area than excavating, replacing, and then re-burying the pipes. This approach would also avoid replacing the bridge entirely by purchasing a number of properties in the area, daylighting the creek, and filling in the area where the old bridge was located.

Munger noted that the daylighting and park development costs made the project attractive even before the city knew that outside funding sources for such projects existed, such as federal Intermodal Surface Transportation Efficiency Act (ISTEA) funds. Of the total \$4 million cost for the entire project, the city received an 80% cost-share grant from the "Bridge Replacement and Transportation Enhancements Program" of ISTEA, which paid for most of the costs of the project, including the park development and daylighting costs.

A landscape architect/planner on the city's staff created the public involvement process for the project. He anchored this process around a series of public meetings, after the engineering department's feasibility study was completed. Notices were sent to the downtown businesses in the area, to service organizations (e.g., Boy Scouts, Rotary, Elks) and to interested citizens. The initial meeting "got quite a turn-out," according to Munger.

The landscape architect suggested making the project more comprehensive than the originally proposed park and greenway plan—by adding a water play area, a merry-go-round, a bandstand stage area, and public restrooms. The planner noted that the downtown businesses already had a “Hutch Fest” every summer that blocked off the streets in the middle of the downtown. He reasoned that creating a stage for bands would also make sense to the community. The department also planned a visitor’s center in the area to provide information to visiting tourists about events scheduled in and around the area.

The daylighting and greenway project involved numerous infrastructure improvements. For instance, the city acquired and demolished a number of properties near the proposed stream (see Figure 3). The city also wanted a walkway along the daylighted area, and they needed to elevate the downtown’s main street to gain the necessary clearance for the river walkway and to increase the lighting for the walkway and the street.

To daylight the creek, the city had to run the creekbed through a number of existing buildings. Before the project began, four commercial buildings had to be relocated to provide the needed space for the greenway and re-engineered floodplain. Munger said that support for the downtown redesign and infrastructure wasn’t difficult to obtain by that point because the city had already received broad public support before proposing moving or demolishing any buildings. He indicated that because the city had shared the relative costs of daylighting Cow Creek and compared them to the costs of unearthing, replacing and reburying the pipes that encased the creek, support for the infrastructure changes they proposed was easier to maintain. Munger noted that some “cave people” (as he called them) in the community were opposed to the project, but that the vast majority of the city’s residents were supportive of the daylighting and revitalization project.

The downtown area had a number of vacant and deteriorating buildings when the engineers first proposed the daylighting project. One building owner offered to tear down his building in order to make a parking lot because it was so severely deteriorated. Because the daylighting project has been so successful, Munger said, the building owner is now renovating the building and bringing it up to current municipal code.

The project took on a life of its own beyond what the engineering department had first envisioned. Munger said the engineers supported the project gaining its own momentum because the larger community “coming on board with it” ensured that it would have broad and continued support.

Some of the ideas the landscape architect proposed didn’t receive initial funding, such as the merry-go-round. They did build the bandstand and included a large electrical outlet; Munger explained that the bands “need a huge power source for all their equipment, so we made sure enough power was available at the stage area.” Funds from the Kansas Department of Transportation were available for the bridge replacement and street enhancement. But the transportation funds wouldn’t cover the costs of the water play area or the stage. KDOT did fund the visitor’s center and the restrooms. And the City Council

provided the funds for the merry-go-round. The play area remains part of the master plan, even though at this point Munger admitted that a funding source for it is still unknown.



Fig. 3. Cow Creek (Avenue A) before the daylighting project began. (Hutchinson Public Works Dept. Reprinted with permission.)

Munger noted that the project has had tangible economic benefits for the city. For instance, a neighborhood on Main Street near the restoration project has increased in property values by 10%, based on subsequent sales, since completion of the project in 1997. Munger emphasized that this area had been subject to declining property values and diminishing tax receipts before the project began. Munger also said that the area is experiencing significant remodeling and upgrading of structures. Regarding public use of the area, a marked increase in business activity has occurred. “There’s no question that the daylighting and park area have provided a significant boost to the community,” he said.

An email from Jim Seitnater, with the City of Hutchinson’s Downtown Development Agency, corroborated Munger’s characterization of the daylighting project as an economic benefit to the city. Seitnater noted that “the Avenue A Park project definitely acted as a catalyst that spurred the growth of a very active Antique District with great synergy amongst neighbors which include our largest destination restaurant, small shops and

services, a fresh produce market, feed & seed store, chain hardware store and popular dance studio.” Seitnater noted that he had “no real hard sales numbers to share,” however.

Public Involvement

Munger cautioned that “you have to do your homework” before the first public meetings are held. He noted that the city staff developed good presentation materials for the first meeting so the attendees understood the overall issues. Staff also provided a clear vision of the proposed alternatives and developed clear explanations, with supporting materials, of the costs associated with each of the proposed alternatives.

The staff organized the first meeting in small groups, to maximize discussion. “We set up a room full of tables in a big meeting room,” Munger said, “and had six to eight people sitting at each table.”

At that initial meeting, Munger made a presentation that provided an overview of the creek and bridge situation. He described the infrastructure and flooding problems and explained the alternatives that the engineering department had developed. Waterflows in Cow Creek had increased as a result of the increased impervious surfaces in the surrounding area. One of problems the engineer had noted with the “fix the pipes and rebury them” option was that the city had yet to find a supplier who could provide pipes with the capacity to handle the creek’s additional stream flows. Munger also talked about repairing the bridges and streets, and the costs associated with those repairs.

Munger then explained a totally different vision for the area, laying out the concept of daylighting the creek and creating a park/greenway area. The engineering department’s feasibility study showed how it would cost less to open up the stream, create a park that could also act as a flood-control area during winter high water, and avoid the costs of replacing or repairing the existing infrastructure. The park was designed so it would be submerged part of the time during the winter, with native riparian vegetation that could tolerate seasonal submersions.

According to Munger, the attendees responded enthusiastically to the daylighting/park idea. The organizers led the group through a brainstorming exercise on what a park in the downtown area might include.

Although all the meetings were open to the public (Munger noted that the public meetings were well attended), the city also wanted to create an advisory committee to help guide the project’s development and ensure broad and continued public involvement. This advisory committee was designed to oversee the project and act as the liaison to various constituencies in the community. The city and planners wanted to include a broad representation of the community’s interests as the project moved forward, so each table at the first public meeting also elected a representative to the advisory committee.

Munger also mentioned that the engineers and planners had to make some adjustments to the park design after the first flood season because the original design didn’t work as well as expected. He said it was helpful to have the advisory committee understand that this was

an “adaptive process” that would probably need some modifications as they learned what worked and didn’t work over time.

Future Plans

The city is now working on a downtown beautification project as a second phase of the revitalization plan. The daylighted stream area acts as an anchor to the revitalization project. One of the local banks now sponsors a “brown bag in the park” lunch program during the summer, bringing in musical groups to perform at noon. The previously mentioned large, grassy slope across from the bandstand serves as an amphitheater (and doubles in the wintertime as a flood-control area, holding high water so that the stream doesn’t overflow its banks). The project is on-line at www.hutchgov.com.

Watershed Size⁴	Flow Rates	Length Restored	Primary Objectives	Project Costs
1.5 square miles	<30 cfs to >700 cfs in peak flows	800 feet approx. 3 city blocks	Create park, culvert replacement, flood control	\$1.25 million for daylight and park project



Fig. 4. Cow Creek after completion of the daylighting project. (Hutchinson Public Works Department. Reprinted with permission.)

⁴ Source: “Daylighting: New Life for Buried Streams, Richard Pinkham, Rocky Mountain Institute, 2000.



Fig. 5. Fox River/St. Charles riverfront before restoration began. (Hitchcock Design Group. Reprinted with permission.)

Fox River Restoration Project St. Charles, Illinois

Although not a daylighting project, the city of St. Charles, Illinois (pop. 26,000), linked its downtown revitalization project to restoration of the Fox River where it runs through the heart of town. This project is an example of a community focused primarily on revitalizing a declining downtown area, and seeing an opportunity to restore the stream and streamside walkways as a component of achieving that goal. Unlike other communities profiled here, however, St. Charles focused initially on revitalizing its downtown area. It anchored that effort with the replacement of a major bridge across the Fox River and simultaneously restored the downtown commercial area. A subsequent phase of the overall revitalization effort is focusing on restoring the riverfront area through downtown.

The continual decline of the downtown core area gave impetus for both the revitalization project and the stream restoration project. In 1992, a group of local citizens and business

leaders started the “Friends of St. Charles” group as a support base because so many storefronts were empty and the city was witnessing a decline of the downtown area. According to Neal Smith, Director of the St. Charles Downtown Association, the downtown core area “was going in the wrong direction—buildings were crumbling and crime was increasing. We had a lot of the problems communities experience in this kind of situation.”

Commenting on the phenomenon that St. Charles and other communities have experienced, Smith noted, “It seems that downtown areas need to get really bad before anything is done about them.”

However, once the residents of St. Charles began focusing on the problem, they found other sources of support and expertise to help them turn the core area and riverfront around in relatively short fashion. For instance, in 1994 the city partnered with the Illinois Main Street Program, which gave them the organizational support needed to help the “Friends” group and city staff achieve their revitalization goals.

The revitalization and restoration project included replacing a large bridge and restoring a local park that sits along the river. The city also decided that restoring a historic hotel would be a cornerstone to the area’s revitalization project. The city wanted the hotel to act as an economic and institutional anchor for the restoration project in the river area.

The bridge restoration project began in 1997. The bridge needed to be completely removed and replaced because of hazards to its structural integrity. Once the project began, the city of St. Charles lobbied the Illinois Department of Transportation to widen the bridge and put in pedestrian walkways and benches.

When the bridge replacement project started in earnest, the business community’s interest in revitalizing the downtown core area also increased. The city eventually received support from the state transportation department for widening and upgrading the bridge to make it friendlier to pedestrian traffic. The new bridge design provided an aesthetic addition to the downtown area, and it encouraged more traffic and pedestrian use of downtown.

In 1997, according to Smith, business owners began restoring the previously-mentioned historic hotel, built in 1928. When the hotel had originally opened, it included a diversion dam upstream designed to generate electricity for the hotel. The city dammed the diversion canal in 1997, to prevent diverting water out of the stream and to maintain instream flows. The city is currently reviewing whether to take out the diversion dam completely to enhance fish passage, as part of the restoration project. However, Smith underscored that ultimately such a decision would be made with input from the public and technical experts.

The restored hotel itself, however, did not become the flagship for the downtown revitalization effort that the community had originally hoped. Although the hotel has been restored, it has been closed since January, 2002, and is now for sale. Craig Frank, co-owner of Hotel Baker, had bought the hotel six years ago with the goal of returning it to its original luxury hotel status. The owners invested \$9 million into the hotel’s renovations,

Frank said, and achieved their goal of recreating a luxurious hotel. However, the hotel had a number of challenges to face in order for it to realize a profit. One issue, according to Frank, was the timing of the Main Street Bridge restoration project. Frank said, “A number of businesses struggled with what we call ‘the re-building year’ in 1997.”

The hotel owners had originally scheduled a grand opening of the restored hotel in the spring of 1997, but given the timing of the bridge construction, the hotel didn’t re-open until the fall of 1997. Frank said that the delay resulted in a significant setback to the hotel’s economic plan and debt management. Frank also said that many other businesses decided to wait until after the bridge reconstruction was completed before re-locating to the downtown area in late 1997 and early 1998. Consequently, according to Frank, the downtown’s economic revitalization didn’t really “take off” until after the bridge was completed in late 1997.

Frank said that the community still sees the hotel as a major economic and cultural asset to the downtown. However, the downtown revitalization project has been so successful, according to Frank, that the commercial storefronts and downtown area are now “all full,” and the hotel is not considered a necessary component to the continued success of the revitalization effort.

Another part of the downtown revitalization project, completed in the mid-1990s, is the “Freedom Trail”: a bike/pedestrian path that runs from the municipal center to a converted railroad trestle a third of a mile away. The railroad trestle is now a bike/pedestrian bridge that allows for non-motorized traffic to cross the river and avoid the interstate vehicular bridge entirely.

Public Outreach

Smith encouraged any group leading a downtown revitalization/stream restoration project to “reach out to as many community organizations as possible early to generate knowledge and interest in the project.” St. Charles wanted to get as many stakeholder groups as possible involved in all aspects of the project. “In fact,” Smith noted, “the by-laws of the Downtown Association dictate that local service groups and city government officials will be on the group’s board as a way to ensure broad community support.”

St. Charles needed a broad consensus from the public to move forward with the project, and the project organizers used focus groups with bicycle clubs, hikers, the business community, and others to share basic ideas about the revitalization/restoration effort and generate ideas for ways to improve upon it. The St. Charles Planning Commission, Downtown St. Charles Partnership, and Park District created a partnership within the St. Charles Planning Commission specifically focused on helping to sponsor the project and engage the public’s involvement.

Smith said that getting the public involved was fairly easy to accomplish in St. Charles, since the community’s residents have always had a strong desire to work together on community issues, and the city schedules regular public meetings for that purpose. The project organizers also wrote a mission statement for the partnership and solicited various

stakeholder groups (bicyclists, natural area preservation advocates, the Chamber of Commerce, etc.) for their feedback.

Between 15 and 20 citizens attended each of the focus group sessions that were designed as part of the public involvement process. The project organizers also conducted six facilitated public meetings explaining the revitalization/stream restoration concept and asking for input and support. They continually asked the public for ideas on how to improve upon the concept and increase support for the project with the broader public.

Today, Smith said, “storefronts are full” and the downtown has an attractive, inviting atmosphere. The city regularly holds festivals and events in the downtown and river area. Businesses are moving into the area, and the city, through the Downtown Association, is starting a marketing campaign for the core area to solicit business and community interests from around the state and region.

The downtown revitalization and stream restoration project further enhanced its strategic objectives by bringing together different bicycle groups and the county commissioners in 2001. Their objective was to map all the existing bike and pedestrian trails in the area. They also mapped all planned trails and created a map that showed where trails could be developed that link the city center with schools, the river area, and other community nodes.

This map has been adopted into the city’s master plan as an alternative transportation plan, so when opportunities for land acquisition appear on the market, they can purchase these lands—assuming funds are available and the acquisition still makes strategic sense to the partners.

Future Plans

In 2002, St. Charles began the subsequent riverfront restoration phase of its revitalization effort. The planning commission, the parks district and the downtown association have donated an additional \$45,000 to design a path that will run for two miles on each side of the river as a river walk. Another component of this phase will be to restore a section of the streambank where people currently launch boats from a nearby island. Smith said that the area along the island needs to be better managed, with improved riparian vegetation and more access for river-based recreation. Plans also include moving a parking lot that’s adjacent to the river farther back from the streambank.

The partnership is also planning a public outreach process to solicit continued ideas about the river walk area. Half of this project will be a bank restoration effort, replanting with native vegetation. The objective is to protect the water quality and improve native fisheries in the stream. Smith noted that “fish are edible today and 15 years ago they weren’t.”

Watershed Size⁵	Flow Rates	Length Restored	Primary Objectives	Project Costs
N/A	N/A	1750 feet (6 city blocks)	Bridge replacement, create downtown amenity	N/A



Fig. 6. Artist's rendering of the completed Fox River/St. Charles riverfront restoration project. (Hitchcock Design Group. Reprinted with permission.)

⁵ Source: Personal communication, St. Charles development staff.

Little River Walk Restoration Project Hopkinsville, Kentucky

The town of Hopkinsville, Kentucky (pop. 33,000), experienced problems with its downtown core area similar to those faced by the other cities profiled in this report. According to Steve Bourne, a 20-year planner in the city's planning department, the river running through downtown was "almost an eyesore" and had been neglected for many years by the community.

The city's planning department designed and developed the Little River Walk Project in the mid-1990s as a revitalization project, according to Bourne, in order to both "embellish" the river and make it an asset in the downtown area, as well as link the river restoration project to a core downtown revitalization effort. The Little River streambed and banks have not been enhanced, Bourne noted.

Before the project began, Hopkinsville's downtown suffered deteriorating buildings, low occupancies, and diminished economic activity. The city designed the Little River Walk (a project partly inspired by the San Antonio River Walk) as a strategy to address these problems. The planning department anchored the revitalization project to a new municipal center which included the existing public library, a new plaza area, a new justice department complex, and low-cost housing.

One of the main objectives of the river walk was to create what Bourne called "connectivity" between the new municipal center and the rest of the downtown area by providing a walkway that encouraged pedestrian use of the core area. This design provided an incentive for the county to make considerable investments in the area, by creating connectivity between the then-proposed new county facilities and the city's facilities and business centers in the downtown area. The walkway runs approximately 1.5 miles along the river, which is approximately 20-30 feet wide through the downtown area. The walkway terminates at an abandoned rail yard that the city has reclaimed as a greenspace area. The river was also subject to flooding, and the restored walkway is periodically submerged. Flood control was not one of the objectives of the project, however.

The project has been extremely positive for the community, according to Steve Bourne and other observers. Benefits include an increase in user visits to and public activity in the downtown area. For instance, visits to the public library have increased by approximately 400% according to Ann Riley.⁶ There has also been an increase in public events downtown. Bourne noted that new activities have occurred in the walkway area since the river walk project was completed. "The Little River Days, which is a festival that occurs annually in May, and The Jazz and Blues festival, which also began after the river walk project was completed (in 1996), is now an annual event in June and also draws a large following," Bourne said.

⁶ *Restoring Streams in Cities*, Ann L. Riley, Island Press, Washington D.C., 1998

As with the Kalamazoo, Michigan, revitalization effort cited above, having the jail and court facilities as institutional anchors in the revitalized core area has provided an incentive for increased public usage and additional business development in the area. “Having an \$18 million justice complex in the area,” Bourne said, “draws the public to the area all by itself.”

“We wanted to create connectivity for pedestrian and non-motorized traffic,” Bourne explained. “The county put in the new justice center and jail complex along the river. The jail was built in mid-90s and the courthouse is being built now.”

The walkway is set back about 30 feet from the river channel and runs through downtown and the municipal complex (police station, fire station, city hall). The city built the public library in the 1960s. The other public institutions now create a complex of services that anchors the walkway on one end, and a greenspace created out of an abandoned rail yard acts as an anchor at the other end. The city is now working to enhance the greenspace by developing passive recreation structures. This area is approximately three acres in size. Bourne said that the city now wants to acquire additional property near the greenspace and make a park out of the greenspace with benches, play structures, etc. However, this will occur in a subsequent phase of the revitalization effort.

The city is now putting in a town square near the river by upgrading an old park. The design includes a splash fountain, which Bourne said will act as the town centerpiece and increase the aesthetic appeal of the area.

Bourne noted that the walkway existed before the revitalization project began. The city designed the revitalization project around the existing walkway as a vehicle to show the county and city that putting the facilities in the downtown area would be a good strategic move. Bourne said that the planning department and a larger group of downtown revitalization supporters “fought hard to get the jail and justice complex located in the downtown area.” He indicated that some of the community’s residents were reluctant to have the jail and courthouse placed in the downtown area along the river.

“That’s paid off ten-fold because the justice complex then came in after the jail was built,” Bourne said. “The walkway was the anchor that tied the complex together.” Residents and visitors see the walkway as an asset that provides an open-air, greenspace opportunity that the community wouldn’t have otherwise. Businesses are making new investments in the downtown area because of the public and governmental developments.

“This community is very agrarian in nature and not close to any large urban areas,” Bourne continued. “So the city wanted to provide more greenspace and open spaces, like the pedestrian walkway for the area’s residents.”

Bourne characterized Hopkinsville as a “conservative” community. “If you don’t try and enhance and revitalize your existing, natural features, what’re your options?” Bourne asked rhetorically. “At some point in time folks always come back to revitalizing their

community. If you don't, you'll have those low occupancy rates to deal with. There's too much investment in downtown to ignore it. The economy there is too important."

Some citizens were opposed to the project, asking the city staff, "How much are you going to spend on that river path?" Bourne commented that "the thing you have to remember is that this is where people grew up, and letting it go downhill isn't acceptable."

The project was funded through state "T-21 funds." These funds were created by the then-recently-elected Governor when he first came into office as a program for urban and community revitalization projects in the state. The program includes a strong incentive for local communities to apply for the funds through an 80/20 grant process. Hopkinsville has been able to use the county court facility as part of the required 20% match. To date \$800,000 has been spent on the restoration and revitalization project, plus \$400,000 for riverwalk development. These funds are in addition to the funds spent on building the new justice department complex.

Watershed Size⁷	Flow Rates	Length Restored	Primary Objectives	Project Costs
N/A	N/A	7,900 feet (26 blocks)	Create downtown amenity	\$1.3 million

⁷ Source: personal communication, Steve Bourne



Fig. 7. San Luis Obispo's Creek before the restoration project began. (City of San Luis Obispo. Reprinted with permission.)

San Luis Obispo Creek, San Luis Obispo, California

Instead of being a case study of a stream daylighting project, according to Neal Havlik, the Natural Resources Manager for the city of San Luis Obispo, this is a story about how a community avoided completely burying a stream under parking lots and downtown buildings and streets.

A two-block area of San Luis Obispo Creek was permanently covered over for a parking lot in the early 1960s. After that section of the stream was buried, a feasibility study completed in 1963 showcased the potential economic and social value the creek held for San Luis Obispo. The study also assessed the feasibility of creating a creekside plaza in the downtown area. Viewing the stream as a community asset gained some public support after the study was published. At the time, however, the creek wasn't widely perceived as a

community asset. Buildings were built with storefronts facing onto the streets, and the stream and riparian area was neglected and avoided.

While public interest in the creek increased during this time, the business community wanted to create an additional parking lot in the downtown area by covering over another half-block of the stream. In 1972, business owners placed a measure on the local ballot to develop a parking lot and pave over the stream completely. The feasibility study and the business community's development plans generated intense controversy in the community. A number of citizens mounted a counter-offensive to the parking lot ballot measure, which resulted in its defeat and eventually led to a change in leadership on the city council. According to Havlik, what emerged from the study and community-wide debate was a growing appreciation for the creek as a key thread in the City's growing urban environment.

Concern over flood control also generated support for a restored creek area. In 1969 and 1973, San Luis Obispo experienced serious flooding along three major downtown streets. Due to the size and shape of an old underground culvert, and increased development in the city, flows exceeded the capacity of the culvert to carry floodwater. Years of dumping, sedimentation, and neglect had also created "bottlenecks" along the major creeks and their tributaries, reducing flow capacity.

Initially, most downtown merchants didn't support the stream restoration proposal. They were worried about the possible loss of access and parking. Concerns were also raised about downtown traffic, flood hazards, security, and safety. A citizen's committee was formed, consisting of downtown merchants, planning board members, City advisory commission members, concerned citizens, and City staff. The committee was charged with studying the project proposal and working with the community to find solutions to these issues.

The community eventually gained consensus on a design for the creek's restoration. The agreed-upon design called for widening the creek's floodplain and re-contouring the streambanks. The design also incorporated building terraced stone walls to prevent bank scouring during high winter flows. The City Council adopted the restoration design, as well as a flood management policy that was atypical for cities at that time. The city policy avoided creating the usual concrete-lined, trapezoidal channels that many communities were adopting for flood control. According to Havlik, the City began developing a program designed to protect the creek while reducing the risk of flooding.

Merchant access and parking were maintained, and businesses were encouraged to open a second "storefront" onto the creek walkway, with opportunities for strolling and outdoor dining. Decorative lighting and walkway railings were included to address safety concerns, and a new "mission-style" sidewalk paving was developed to unify the plaza's design. Art galleries, restaurants, and other businesses that encouraged strolling and using the creek's pedestrian walkway were targeted. Over time the type of businesses located in the area changed from those oriented toward street parking to businesses that encouraged pedestrian

traffic and took full advantage of the plaza behind the stores, such as restaurants with outdoor seating and boutique shops.



Fig. 8. San Luis Obispo's Creek after the restoration project was completed. (City of San Luis Obispo. Reprinted with permission.)

Changing the city's attitude about the creek as an amenity didn't take long once the community decided it had value for the downtown area. Next to the stream an old Spanish mission, built in 1772, became a focal point for the restoration effort. The city closed Monterey Street in front of the mission, put in a pedestrian parkway, and called the renovated area "Mission Plaza." Cultural events such as music festivals are regularly

scheduled during the spring and summer months in the plaza area. According to Neal Havlik, San Luis Obispo Creek is now considered the heart of the downtown.

Landscaping of the creek and pedestrian walkway is designed to shade and cool the creek, and to provide food, forage, and nesting habitat for wildlife. Steelhead trout are regularly seen in the creek in the downtown area, Havlik noted.

In a statement of how much the business community eventually embraced the project, the downtown merchants' association funded and sponsored the restoration project with the goal of improving business. Costs were kept down by having local graduate students at California Polytechnic State University create the master plan for the project. Local businesses also made contributions by donating construction materials, equipment, operators, and money. Donated labor also leveraged city funding. And the biggest savings came from avoiding land purchases for the project. The city had owned much of the land before the project began, and no businesses had to be relocated as a result of the project.

Watershed Size⁸	Flow Rates	Length Restored	Primary Objectives	Project Costs
84 square miles	N/A	600 feet (2 city blocks)	Flood relief, create downtown amenity	\$100,000

⁸ Source: <http://www.ci.san-luis-obispo.ca.us>

Conclusion

Daylighting projects, as this case study shows, can provide local communities with social, economic, and even environmental assets in previously deteriorating downtown areas. The communities profiled here all experienced benefits and positive outcomes from restoring streams in their downtown areas.

However, pursuing daylighting and stream restoration projects as part of a downtown revitalization strategy can be a difficult decision for many communities. This approach needs to be assessed in the community's broader environmental and economic climate before the excavators begin digging. In some circumstances, a community's downtown revitalization efforts may not benefit from stream daylighting or restoration.

For instance, the communities featured in this report were not constrained by meeting federally-mandated Endangered Species Act habitat criteria, or Clean Water Act mandates under the 303(b) provision of that act. If a community has species listed under the ESA (particularly water-borne species), it must clear the additional threshold of ensuring that a daylighting project provides the necessary habitat needs for those protected species and does not result in a "take" as defined in the ESA.

The City of Eugene, Oregon, is an example of a city grappling with such issues. Eugene is considering daylighting a section of a buried millrace that runs through its downtown. Spring Chinook salmon are protected under the ESA in the Willamette River, which runs past the city and the millrace. According to Neil Bjorklund, Senior Planner for Natural Resources for the city, concerns have been raised about whether the daylighted channel might result in a "take" for migrating juvenile salmon. "If we daylight the millrace in a way that juvenile salmon can enter it, is that a good thing?" Bjorklund asks. According to Bjorklund, the city needs to investigate a number of issues, including the question of whether the daylighted millrace would harm ESA-listed salmon. Soil contamination from previous land uses in the area is also a concern and may have implications for the health of listed salmon.

Another issue is how the area adjacent to the daylighted stream will be maintained. Most of the communities profiled in this report hardscaped much of the daylighted or restored streams in their urban core area. Such an approach may not be advisable where ESA-listed species are present. The costs of daylighting projects in such instances can rapidly increase as a result of the need to create habitat setbacks in the urban area. Such setback requirements can result in having to purchase even more of the downtown's expensive commercial real estate. Such purchases may have implications for public support of the project. Business and development interests, for instance, or local governments, may not support projects that remove too much urban real estate from commercial uses (and result in a loss of property taxes from those uses).

Likewise, if a stream has been listed on the Clean Water Act's 303(d) list, initial project scoping must assess how the daylighting project will facilitate meeting CWA parameters for water quality. For instance, if the daylighted stream is designed as a slow, shallow

meander that increases stream temperatures, and the stream is already listed for exceeding stream temperature parameters under the CWA, then daylighting may not be the optimal approach. In such instances, analysis should also be conducted on how the daylighting project may result in increases to non-point source pollution from streets and local industry.

The City of Eugene, according to Bjorklund, is also assessing the water-quality impacts of daylighting the millrace in the downtown core. Given the amount of impervious surfaces in the downtown area adjacent to the proposed daylighted millrace, non-point sources of water pollution are a concern. Eugene wants to avoid contributing to water-quality contamination in the Willamette River system. The river is already listed under the Clean Water Act's 303(d) list as "water quality limited" for temperature exceedance. Eugene is involved in a public discussion about daylighting the millrace, and these issues will receive significant scrutiny as it continues its assessment of the proposed project.

For cities such as Eugene, water quality and habitat assessments need to be conducted as part of the initial scoping process. It is necessary to identify the full suite of issues early in the process in order to avoid "blind-siding" the community and the project supporters with difficult regulatory and environmental issues partway through the project's development.

However, in communities where such federally-mandated constraints are not a factor, or where such issues can be addressed within the initial project planning, daylighting holds the promise for urban renewal that can link the built environment of the city with the natural environment of a stream. In these instances, as this report documents, the benefits to the local community can be substantial. The cities profiled here all regard the now daylighted or restored streams that run through their respective communities as assets around which future economic development and social cohesiveness are based. Having a place that appeals to residents and visitors creates a natural magnet for increasing the community's use of and regard for these core areas. Additionally, many cities are finding surprising environmental benefits to restoring or daylighting streams, including flood control and fish and wildlife habitat enhancement.

Daylighting or restoring streams in our urban areas not only provides immediate benefits to the community, its residents, and visitors; such projects also lay the foundation for future urban development and economic strategies that can reap benefits for the community. As San Luis Obispo discovered, once the stream was identified as an asset, the downtown commercial district changed its focus to support businesses that could leverage the stream and pedestrian walkways to economic and social advantage. While these projects entail some financial and political risk to local communities, the rewards for taking such risks can be significant and result in returns that translate over future decades.

Appendix

Key Recommendations

Key recommendations for communities assessing or planning daylighting projects include:

- Secure business and institutional support for the daylighting/restoration project, and secure early commitments to anchor businesses and institutions near the restored stream area.
- Develop partnerships with other natural constituencies (fishing groups, river recreation/boating groups, chambers of commerce) who will support the project.
- Create an “advisory committee” composed of a broad representation of constituencies. The committee should convene to share interests, develop strategies for broader support, brainstorm ways to improve the project, and act as a forum where potential barriers can be raised readily.
- Assess whether the daylighting project can be part of a more comprehensive revitalization plan that includes parks, greenways, connecting trails, or other features.
- Develop a comprehensive public education and involvement strategy early in the process. Use it to solicit support and ideas for improvements to the project.
- Research technical and policy-related issues, including federal Clean Water Act, Endangered Species Act, and state statutes that may affect the project.
- Research funding from federal and state sources with low matching-grant obligations.
- Create funding strategies that appeal to private sources and business interests.

Contacts for Daylighting / Restoration Projects Profiled in Report

Arcadia Creek project, Kalamazoo, Michigan. Ken Nacci, Director, Downtown Development Association: (616) 344-0795, kenn@dki.org.

Cow Creek project, Hutchinson, Kansas. Hal Munger, City Engineer: (620) 694-2644. For information see www.hutchgov.com.

Fox River project, St. Charles, Illinois. Neal Smith: (630) 513-5386, neal@dtown.org.

Little River project, Hopkinsville, Kentucky. Steve Bourne, Director, City Planning Department: (270) 887-4285.

San Luis Obispo Creek project, San Luis Obispo, California. Neal Havlik, Natural Resources Manager: (805) 781-7211.

Contacts for Other Communities Working on Stream Restoration and/or Downtown Revitalization Projects

The following projects and contacts were researched during development of this report, but were not profiled because they did not fit the criteria for Caldwell, Idaho (e.g., small city, urban area, etc.). The project names, contacts, and a short description are provided below in the hopes that this information may be helpful to others looking for information on restoration and downtown revitalization projects that have different criteria to meet.

Berkeley, CA. Urban Creeks Council: (510) 540-6669. Berkeley has daylighted a number of creeks in the urban core.

Bonaparte, IA (pop. 500). Constant Meek, Director of Main Street Program: (319) 592-3400. Stream restoration project. Flooding of downtown was a problem.

Brookings, OR. City Mg. Leroy Blodgett: (541) 469-3650. Downtown project linked trails to the ocean.

Burlington, VT (pop. 39,000). Ron Redmond: (802) 863-1648. Lake Champlain: completed a downtown revitalization in the industrial area and turned it into a river /walk.

Elcader, IA (pop. 1500). Cindy Cook: (319) 245-2770. They developed a river walk along the Turkey River.

LaCrosse, WI (pop. 51,000). Larry Kirch, City of Lacrosse: (608) 789-7512. Revitalization project linked to the Mississippi River waterfront.

Lafayette, IN (pop. 46,000). Susan Gearhart: (765) 742-2313. They completed a downtown mainstreet revitalization associated with a body of water. Purdue University located there.

Napa, CA. City of Napa Planning Dept: (707) 257-9530. Public Works Dept: (707) 257-9540. One of the earlier stream restoration projects developed in the 1970s.

Oakland, CA. Robin Freeman, Merrit College: (510) 655-3637. Merrit College has a program involved in a number of stream restoration projects, mostly in the San Francisco Bay Area.

Portland, OR (pop. 512,000). Bureau of Environmental Services: (503) 823-7740. Portland is involved in multiple daylighting projects within the city's core area.

Seattle, WA (pop. 563,000). Numerous restoration projects are occurring in the Seattle metro area, including daylighting of Ravenna Creek. Ravenna Creek Alliance: ravennacreek@earthlink.net, <http://home.earthlink.net/~ravennacreek>. Restoration of the

Duwamish River is also occurring. Tom Dean, Restoration Project Mgr., People for Puget Sound: (206) 382-7007.

Sheboygan Falls, WI (pop. 5,800). Nancy Versterate, Main Street Assoc.: (920) 467-6206. They replaced deteriorating warehouses and turned them into mixed-use complex with restaurants and boutiques along a riverfront.

Texas A & M, Recreation and Tourism Dept. Dr. Carson Watt: (979) 845-5419, cwatt@rpts.tamu.edu. Dr. Watt worked on the San Antonio River Walk project. Knowledgeable about other projects.

Texas Historical Commission. Janie Headrick: (512) 463-5754, <http://www.thc.state.tx.us/>. Has information about numerous stream restoration and daylighting projects in the area.

The National Main Street Center of the National Trust for Historic Preservation. 1785 Massachusetts Avenue, N.W., Washington, DC 20036. Phone: (202) 588-6219. Fax: 202.588.6050. Email: mainst@nthp.org. The Main Street Center supports communities working on downtown revitalization efforts. Bill McCloud is the Network Exchange Coordinator. They have a large database of downtown revitalization projects around the country, including projects linked to stream or lake restoration.

State and Federal Funds Used by Case Study Communities

“Bridge Replacement and Transportation Enhancements Program,” part of the federal Intermodal Surface Transportation Efficiency Act (ISTEA) funding.

Kansas State Department of Transportation Funding for specific components of the downtown revitalization: the visitor’s center and public restrooms in the project area.

Kentucky State “T-21” funds for community revitalization efforts.

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San Luis Obispo, California website: <http://www.ci.san-luis-obispo.ca.us>