

Cypress

Environmental and Land Use Planning

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Summer Newsletter

July 2014

Wishing you a happy summer and hoping you have an opportunity to relax and enjoy something special in the natural environment during the summer season.

In this edition of the newsletter:

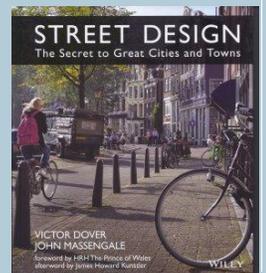
- **[Urban Stream Restoration: Part 2](#)**

We continue the discussion from my spring newsletter on how and why many cities are returning their impacted waterways to more natural watercourses; and finding that doing this creates both economic and social benefits to the urban environment.



- **[Street Design: the Secret to Great Cities and Towns](#)**

This recently published book has been lauded as an insightful discussion on the key to making a successful and viable urban environment. It's a good read for professionals and interested laypersons alike. Victor Dover, a planner, and John Massengale, an urban designer worked for three years on the 400- page book which offers a good argument why good streets make good cities.



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Cypress has been a member of the Santa Cruz Construction Guild since 2010.



Urban Stream Restoration: Part 2 The Return of Waterways as Assets to Cities Across the USA



The Urban Streams Research Center

Why did so many urban streams disappear during the 20th Century and why are many now returning? I discussed the thought provoking answer to this question in my [spring 2014 newsletter](#). Projects in New York's Bronx, Los Angeles, Bend, OR and Santa Cruz, CA were all highlighted as examples where stream restoration has made or can make a

significant improvement to the economy and social vitality of a community.

Urban stream restoration includes a series of actions from redeveloping land uses along stream banks to improving the water quality of the streams. A new research center has been established in the last couple of years to assist urban centers in improving the water quality of their streams. In 2008 the Forest Preserve District in DuPage County, Illinois announced plans to build the Urban Stream Research Center at Blackwell Forest Preserve in Warrenville, IL. Construction of the center, which began in 2010 on the West Branch of the DuPage River, was recently completed. At the Center, ecologists will reintroduce native freshwater mussels and fish species to county streams to augment populations that were once historically abundant in the Des Plaines River watershed as well as create new habitat for these species. Part of habitat creation includes improving water quality. Cleaner water with a restored population of native aquatic species makes any stream more inviting. The Center will partner with conservation groups, universities and other institutions on collaborative and applied research work in these areas.



Not only will the Urban Stream Research Center formulate useful methods for restoring natural ecosystems to stream channels but also provide monitoring of projects to determine the success of stream restoration efforts. Monitoring is crucial to determine if each restoration technique is working as intended so corrections can be made before identified problems overwhelm restoration activities leading to project failure. Sometimes monitoring the effectiveness of mitigation measures is overlooked in various types of land use planning projects resulting in objectives not being fulfilled as anticipated.

Restoration of Trout Creek in Downtown Truckee

In California, the State Dept. of Water Resources has a Stream Restoration Program that provides competitive grants for urban and rural stream restoration. The Town of Truckee (located north of Lake Tahoe) received a \$300,000 grant to initiate implementation for the Town's [Trout Creek Restoration Plan](#). The creek is a tributary of the Truckee River, the sole outlet for Lake Tahoe. The Plan was approved in 2008 and implementation began in 2011.



Restoration of Reach 3 of Trout Creek in the
Town of Truckee, CA
(Compare this with the image below.)

The Problem

Over the past 150 years Trout Creek was re-routed for the commercial and residential development of downtown Truckee and to power a lumber mill in a flume. The creek was also channelized and used to feed ponds for ice harvesting and logging. More channelization occurred to "get it out of the way" to construct city streets and the railroad. None of the lower portion of the creek follows its original channel and a large segment has been channelized within a concrete flume.

As Truckee grew, more impacts occurred resulting in an upset of the natural physical and biological processes of the aquatic ecosystem, such as reducing sediment transport, floodplain function and riparian habitat connectivity. By 2000 the waterway barely resembled the once vital stream it was over 150 years ago.

The Solution

The Trout Creek Restoration Project ultimately envisions restoration and enhancement of over 1 mile of Trout Creek that flows through the Town of Truckee from the Interstate Highway 80 overpass to the Truckee River. Although a preliminary restoration design was prepared for the entire project area in 2008, the city determined it would be necessary to implement the proposed project in phases, tackling one reach (segment) of the creek at a time. This revised approach to implementation recognizes funding constraints, landowner access issues and weather which limits the “water work window” primarily to the summer months.

Construction of Reach 3 occurred over two seasons beginning in 2011. There are 6 reaches in the total restoration project.

The following work was completed on Reach 3:

- Grading to widen and deepen the stream channel;
- Grading of the stream bank to reduce over-steepened slopes and to provide other modifications that expand (and better contain) the size of the floodplain;
- Partial removal of a concrete levee along one stream bank;
- Revegetation of graded stream banks to improve habitat and reduce erosion.

This work is similar to activities in other urban stream restoration projects.

As with other urban stream restoration projects, Truckee's Trout Creek plan has the following benefits:

- Improve safety from flooding;
- Improve downtown aesthetics;
- Stimulate economic growth in the downtown area, especially with visitor-serving business;
- Create more civic pride in the town; and
- Create a riparian habitat that can support fish and aquatic wildlife and plant species.

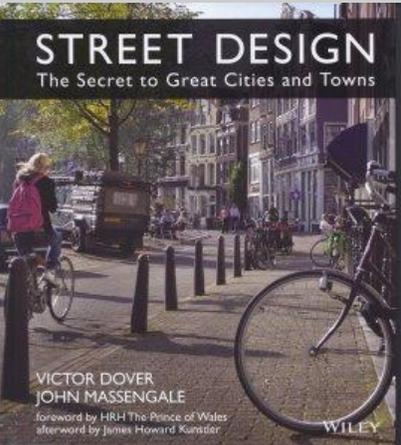
Businesses in other cities where urban stream restoration has occurred have expanded to orient windows, plazas and patios to take advantage of the improved stream viewshed. Some of these other experiences are discussed in my [spring newsletter](#).



Trout Creek in Truckee before implementation of the town's Trout Creek Restoration Plan (Compare with the image above.)

-- Newsletter continues below --

Street Design: The Secret to Great Cities and Towns



My [past newsletters](#) have discussed the concepts of "Complete Streets" and "Traffic Rounders" and how they help revitalize cities in more ways than improving traffic flow. The two authors of the new Street Design book discuss these concepts and other related practices that focus on street design and use. Based on their research, they conclude the design and use of public streets, sidewalks, plazas and promenades are the leading aspect that make great cities--both in terms of enhanced livability and economic vitality.

For example, streets designed at a human-scale, rather than only accommodating vehicle traffic, have been shown to have a positive impact on bringing more people into commercial areas and having them purposely stay there longer for enjoyment. The authors provide an adequate array of ideas to choose from so that readers can decide which may be feasible for their town or city. I hope you will find [the review](#) the Dover & Massingale book interesting.

Please visit [my website](#) to better understand our various land use planning and environmental planning services that can help you and your project.

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