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Climate Action Planning and Urban Greenways: Weaving Together Sustainability, Health and Resilience

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Introduction

Envisioning and planning citywide greenways and supporting urban greening (green infrastructure) linked to climate action planning are surprisingly not well integrated in sustainable planning initiatives and in fact represent two separate landscape action approaches and two different scales and disciplines of focus. By not being strategically integrated, cities are missing out on many significant environmental and social co-benefits that are especially needed at this time. Consider, the planning focus for greenways (especially in the US context) over the last forty-years has generally emerged from a landscape design and park planning tradition and thus we see various inter-city/regional or suburban “pleasure way” or neo-“garden city” features typically centered on landscaped Class I bicycle and walking pathway as part of reclaiming or reinvesting in post-industrial urban spaces along waterways and railroad tracks.¹ Meanwhile, on a very independent trajectory over the last two decades, green infrastructure planning – usually conceived as place-specific features to recapture storm-water or provide needed vegetative greening or other energy savings has been getting increasing attention as a retrofit method for improving urban ecological health (Beatley, 2014).

Greenways are more than just one conceptual thing such as a linear parks but a connecting fabric or more appropriately the urban green infrastructure that can and should be woven in to retrofit the city and provide support where it is most needed and make the city more livable by introducing bands and groves of tree canopy, fresh air, access to nature, connection to unique ecological features, open-up view corridors, provide places for outdoor exercise; support local urban agriculture, offer flood protection; provide pedestrian-scale networks for socializing and non-motorized cross-city access; and, least appreciated of all, become places of cultural expression.

¹ Some medium to large cities in US taking deliberate steps towards implementing and envisioning postindustrial urban greenway planning projects include: Minneapolis, MN., Portland, OR., Birmingham, AL., Madison, WI, Milwaukee, WI., Baltimore, MD., Denver, CO., San Jose, CA., Austin (Barton Creek), TX, Los Angeles(LA River) , NY (Bronx Greenway), Chicago (South River Parkway) among many others.

Background

For the last decade, starting with the mayoral administration of Jerry Brown, the City of Oakland has been recognized as a national leader in promoting green civic policies and its efforts to become a sustainable city through an integrated planning approach (e.g. the initiation of a citywide climate action plan). In parallel, there has also been a push from non-governmental organizations with support from philanthropic foundations to have the city engage in comprehensive community health initiatives and resiliency planning. While successful in their own rights, these efforts did not find much direct overlap nor were they actively brought together within the formal planning realm instead residing under the purview of differing agencies. Much of the sustainability work focused on energy efficiencies with facilities and “smart” transportation grids; the health work focused on de-centralizing service providers; and the resiliency work on assessing and preparing responses for disaster vulnerabilities. Surprisingly, none of these coalesced around land-use oriented approaches or the significance of urban nature and not too surprisingly, only offered token gestures towards addressing equity and community engagement. This disconnection became a huge area of concern and a place for intervention for the faculty and students from the Oakland-based Merritt (Community) College associated with the Institute for Sustainable Policy Studies and with the possibilities of environmental planning for shaping the urban landscape.

The pilot project work being done at the community college was already showing how watershed-based green infrastructure and neighborhood greening design/build projects in East Oakland could be a deeply impactful focus for addressing local quality of life concerns around community environmental health while also providing critical mitigation and adaptation responses called for by sustainability and resiliency advocates in addition to, as a key bonus, providing needed local job skill development.²

Most significantly, this effort highlighted that a perennial creek that went through East Oakland and the neighboring city of San Leandro - from very wealthy to very poor areas, through residential, commercial and industrial areas - not only was a neglected natural and cultural resource but could provide for a needed green corridor connection linking neighborhoods, schools and parks and transit centers from the hills to the bay against an otherwise disconnected concrete urban-scape. Although the City of Oakland resisted initial attempts to conceive of the San Leandro Creek as a defining greenway

² Green Works Development Program 2010-2012 funded from the City of Oakland under Mayor (former US congressman) Ron Dellums.

or making investments (competing as it was against other development and transportation planning priorities), our community college classes with key support from Director Doug Siden of the East Bay Regional Park District managed to cobble together an active alliance of stakeholders from both Oakland and the neighboring City of San Leandro and other agencies to help galvanize community visioning input to attract state funding and attention around the possibility of a greenway.³

In 2014, this project and its success got the attention of the San Francisco Bay Area regional planning entity (ABAG) charged with developing a mandated sustainable communities plan (per State law under California's landmark climate legislative acts: AB32 and SB375). Dubbed the "One Bay Area" Plan, the planning premise called for localities to designate areas for focused dense development and for other areas for focused conservation of natural lands and places for urban greening that together would have measurable climate impacts and other important co-benefits such as health. The call for urban greening designations was a new and somewhat controversial attempt to encourage not only larger greening belts outside of urbanized cores but to also weave green spaces into highly urbanized cities. The San Leandro Creek Project was brought forth as an example to the Board of Directors (and some skeptical public constituents) of how urban greening could be successfully conceived as watershed-oriented greenways helping to both mitigate and adapt to climate change while creating significant health co-benefits. Most importantly, this planning call – tied as it was to major statewide infrastructure funding streams – could not be ignored by the City and opened up a process whereby the City of Oakland would with trepidation embark on an ambitious nine-month citywide urban greening planning effort. Merritt College quickly joined forces with the 21-group strong Oakland Climate Action Coalition and others to become the de facto conveners of community stakeholders into this intensive planning process.

Over this time, the coalition worked (at most times) collaboratively with the city's planning department, resiliency office and sustainability office to develop a comprehensive urban greening plan built around wide swaths of green infrastructure equity target zones (covering most of the disadvantaged "flatland" neighborhoods) and a network of eight watershed-based greenways linked to headwater natural areas, regional cross-city trails and parks and planned industrial/freeway buffer areas. It was a remarkable, unprecedented and hard fought effort to finally get this plan adopted by the City Council and

³ The San Leandro Creek Alliance group successfully garnered support from the National Park Service, Rails to Trails and with the City of Oakland and San Leandro committing matching funds, secured a \$250,000 sustainable communities planning grant from the California Department of Transportation.

the greenways proved the most contentious item, requiring careful negotiations, framing and environmental champions on the City Council to step up and support such visioning.⁴ From a land-use planning perspective the greenways as a clear citywide network are not yet fully articulated (and requires further definition) but their proto-structure tied to specific watersheds is clearly established. The adoption of defined urban greenways along the two largest creeks, Sausal and San Leandro, is nothing less than a tremendous success building from the work started years earlier.

Going forward, the goals of this Oakland urban greening mapping with both its equity-based neighborhood green-planning over-lay and its greenway structures is that this planning will set the land-use stage and vision for concerted multi-scale green infrastructure “retrofit” investments and be deliberately connect together on-going sustainability, health and resiliency planning efforts. Achieving this goal will take the continued engagement of local community stakeholders and the support of environmental planners and landscape architects in other cities as well. There has been a lot of collected insights and lessons from this applied effort that we have combined with research from examples of greenway planning elsewhere. The methods and results of this Oakland greenway mapping and research are discussed next.

Methods

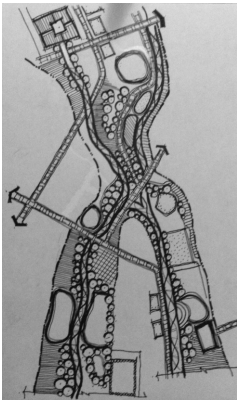
Initialize and incubate collaborative visioning via quasi-public/community-oriented entities - Cities are typically top-down and driven by economic imperatives, public safety and bureaucratic efficiency and thus engagement-intensive bottom-up initiatives that do not directly reflect these values are hard to gain footing. Engaging extra-city public-serving entities such as local colleges and health agencies that explicitly seek civic partnerships around environmental and community health can often be a very fruitful avenue for initializing and developing initial urban greening concepts.

Connect neighborhood interests/assets to citywide place-based assets - For greenway planning, especially involving neighborhood residents and representative organizations of disinvested areas, highlighting how local natural assets can connect to neighborhood interests (and vice versa) and convening community visioning that express local experiences and voices is a prudent way to build momentum and the basis of a “grassroots” plan.

⁴ We would like to especially acknowledge the leadership and support of City Planning Commissioner Jahmese Myres and City Councilmembers Kalb and Campbell-Washington.

Conceive of citywide greenway planning in terms of an urban greening retrofit design – We do not have the luxury of creating our new sustainable cities from a blank slate and superficial changes may not be enough to address fundamental imbalances. Greenways (e.g. along watersheds/flood plains, abandoned rail lines as the most available “marginalized” urban land) represent landscape structures that can be woven into the existing urban fabric to not only help define key ecological features and link/connect existing open spaces but also start creating an alternative organizational pattern that supports a biophillic network of nature within the existing modern city rendered unsustainable and vulnerable by layers of concrete grey-infrastructure and mass-scale grading.

Provide everyone access to greenways – All neighborhoods should be connected into a citywide comprehensive greenway network that provides such open space corridors as a reserve from automobiles for comfortable hiking, walking and biking. For example, based on the pattern exhibited by Minneapolis, MN (generally regarded as one of the top US city for greenways), every resident should be within ½ mile of a greenway or similar green infrastructure spur connector such as landscaped parkways or streetscapes with separated pedestrian/bike.



Insert greenway plan visions into strategic long-range land-use documents tied to municipal general plans – With current city planning increasingly focused on climate change and resiliency often with regional and state funding contingent on having such plans in place (see California’s sustainable community plan mandate of SB 375), the intention and pattern of proposed greenways should be clearly articulated as a collective vision which can then be further developed and implemented in a phased-approach based on opportunities, public will and funding.

A significant challenge in strategic land-use planning in the US is how to depict proposed greenways as a development-limiting land-use in such a manner that does not infringe on property rights or otherwise require exorbitant land acquisition costs. In our work we developed the idea of mapping with “green incentive overlays” that do not disturb existing zoning or land-use parameters and instead incentivize green augmentations to existing development patterns or encourage compatible green land-uses that can still

derive economic value.⁵

Define a range of inter-connected greenway experiences that reflects urban transects - Greenways are certainly not successful as a “one size fits all” standardized approach. To borrow the “transect” idea used in the trending “form-based zoning codes” which in turn was borrowed from early 20th c. watershed ecology studies, greenways should be designed to offer different typologies of experience from inner urban core areas to outer neighborhood districts.

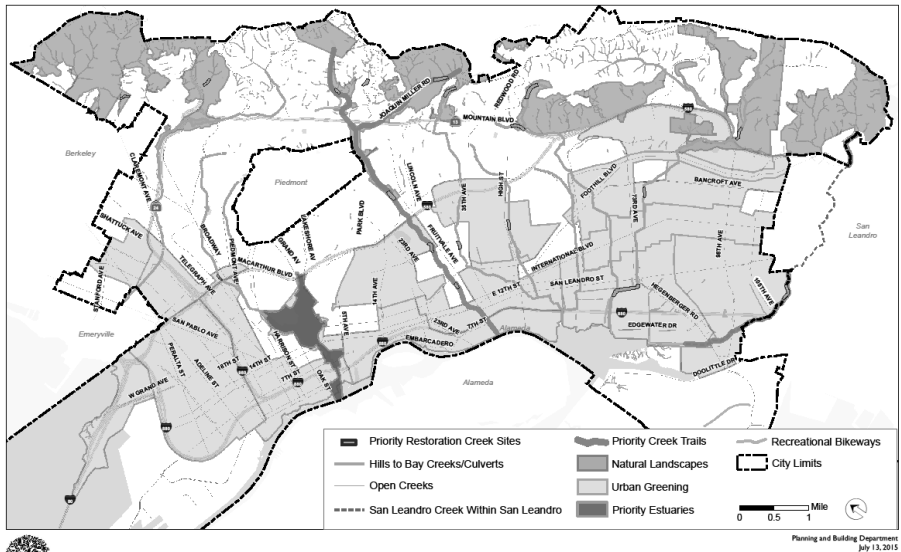
If most medium to large cities today are between 5-10 miles radius in their municipal domain from city-center, typical greenways are seen between 1 mile and 7.5 miles. These greenways typologies are often characterized as linear parks winding through residential areas with bands of tree canopy, paths, touching on some nature-access (e.g. site water) and interpretive areas. These can be augmented and grown as places for urban gardens, gathering, community businesses, artwork, and areas of repose from urban cacophony. Inside the one-mile center city, these greenways can segue and merge into pedestrian street plaza parks, promenades, green commons, botanical gardens framing key public spaces and facilities. On the outer edges of the city growth boundary, these greenways merge with wider bands of “country fingers” complete with forested arboretums, urban farms and providing direct access to regional parks/trails and large rural greenbelts.

Start building out greenways from small from locally-derived projects and utilizing local resident energy and creativity – From an equity perspective, it is important to begin efforts with the more marginalized and underrepresented groups and spaces not only because they represent the greatest need but also can have the most impact on restructuring the city and setting the stage for an organic place-based growth. It is essential that these projects cultivate local involvement and build “stewardship” along with economic and educational opportunities for building and designing as well as on-going operations and function.⁶ Without such care, greenway investment can simply become a driver for “gentrification” and cultural displacement. Starting with “community-building” projects, implementation in phases builds momentum,

⁵ For example, such an overlay can target funds to support low-impact landscaping, trees/vegetation, fences, support publically accessible open spaces and easements as a trade-off for density or other development bonuses as well as allow viable green uses such as urban agriculture, recreational, education retreat centers, equestrian facilities, libraries, cafes, golf, camp-grounds, nurseries and so forth.

⁶ In our work in Oakland we connected greenway planning to opportunities for paid design-build construction - modeled like a green WPA program – and opportunities for ranger/naturalist career education training programs and jobs.

positive publicity and more meaningful involvement than simply waiting for master plans to manifest.



All PCA Designations - Recommendation by ABAG

Figure 1. Map of the adopted City Urban Greening Plan designating two “Priority Creek Trail Greenways” and highlighting other proposed greenways as “Hill to Bay Creek” connectors

Results and Conclusion

Through the incubation of the community college and with the support of community health organizations, per the methods outlined above, we were able to start developing and implementing a larger citywide greenway vision stemming from our engagement work along one key watershed as a pilot project. The on-going success of the greenway planning work along the San Leandro Creek has built up participation and momentum by involving more and more stakeholders in the visioning and definition process. Eight other significant watersheds across the city start to resonate with adjacent stakeholders with similar possibilities. Many independent groups and actions, toiling away in a rather marginalized space, are able to coalesce around an inter-connected plan vision and a collective strategic urban greening land-use reason. In September of 2015, the Oakland urban greening plan and map was adopted as part of the Bay Area regional sustainability plan. While the overall greenway structure is still not fully formulated as a land-use designation by the planning department, two greenways are designated and the framework for others to emerge has been established. The voices and visions of our

collaborative of stakeholders were recognized by the planning commission and council despite the initial reluctance of those charged with maintain the city's land-use plans.

In this case, with the development of the San Leandro Creek Greenway, with the buy-in of its neighbors, and with the significance for climate mitigation and adaptation (empirically showing co-benefit between health, sustainability and resiliency), the next step will be linking this urban greening plan into the city's soon to be updated climate action plan and the new resiliency plans. We believe the growth of an integrated greenway network in Oakland, as with other cities across the world, will be soon forthcoming as a sensible postindustrial planning protocol and firmly stand as an eminently worthwhile and critical city investment into its own socio-cultural landscape, the people, and lived natural landscapes, the place.

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