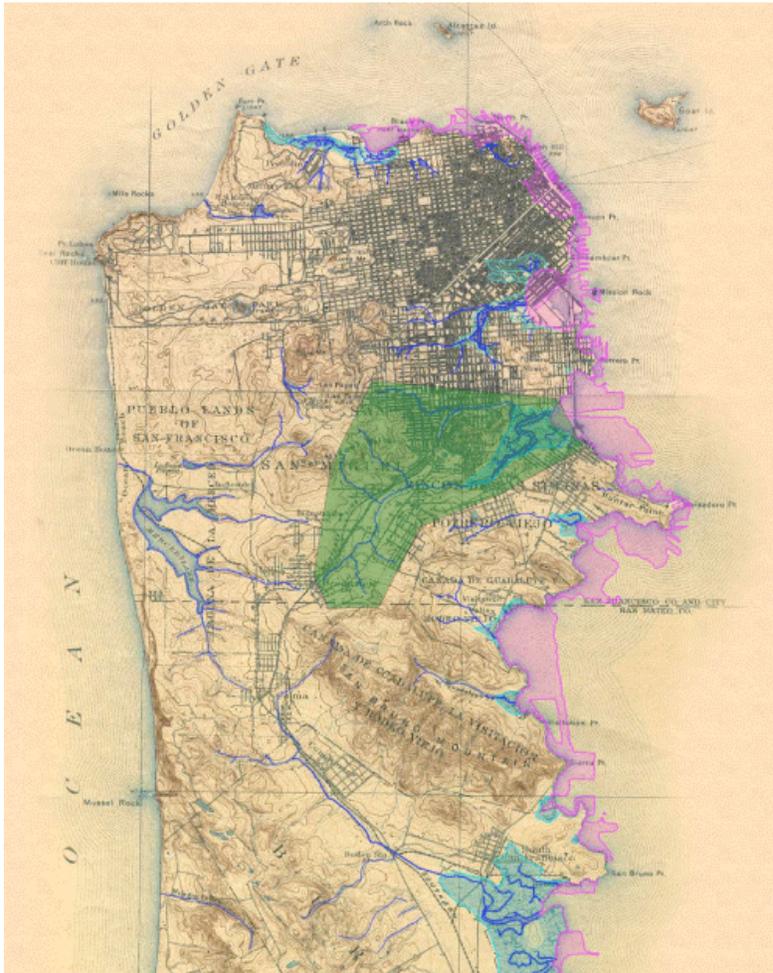


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Research Paper: Daylight for Islais Creek  
Geography 647: Water Resources in California

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San Francisco Creeks & Watersheds, 1890

<http://www.museumca.org/creeks/SFTopoCreeks.html>

### Overview

Islais Creek formerly drained most of the southern sector of San Francisco, running through Glen Park, the Outer Mission and Bayview Hunters Point to San Francisco Bay. During the late 19<sup>th</sup> Century, as San Francisco was developed Islais Creek was seen as more valuable as a sewer than a fresh water source and its channel was buried and paved over. This paper explores the effects of those decisions and prospects for daylighting<sup>1</sup> Islais Creek to restore the watershed to health in the context of greater equity for its inhabitants.



The **Islais Valley** extends from the northern slopes of Mt San Bruno, the eastern slopes of Twin Peaks and the southeastern quadrant of Bernal Hill. The freshwater creek that drains the valley, now mostly underground, was named Islay-is<sup>2</sup> for the California wild cherry tree (Islay, *Prunus ilicifolia*) that proliferated along its banks.

The San Francisco peninsula has supported human life for at least 6,000 years. For 5,850 of those years, despite a relative regional aridity, there was sufficient water for wildlife, plants and humans to co-habit and thrive here. The Mediterranean climate produced a Redwood and Oak woodlands mosaic with seasonally abundant edible and medicinal plant species and game including salmon, shellfish, shrimp, birds, deer and other mammals. When Spaniards colonized the area in 1776 they brought European social constructs, illness, livestock and crops to fort and mission. Resultant violence and contact with pathogens reduced the indigenous population from an estimated 20,000 Costanoan-Ohlone people in 1700 to 3,000 individuals by 1800.<sup>3</sup> By 1848 when gold was discovered in the Sierra foothills, the San Francisco peninsula had been further depopulated to 2200 souls, Indians & Europeans combined. Demand for fresh water resources was lower then than at any time since.

The ensuing Gold Rush brought immigrants to San Francisco at the rate of 1000 per week by sea alone.<sup>4</sup> By 1849 the human population had swollen to 25,000, and continued rapid expansion through the turn of the century. During this period Islais Creek supplied 85% of the city's drinking water.<sup>5</sup>

More of a river than a creek, until near the end of the 19<sup>th</sup> Century Islais Creek extended approximately 3.5 miles into the heart of the San Francisco Peninsula. Shallow draft barges replaced Ohlone canoes made of rushes and navigated Islais Creek into the *ejido* or community pasturage on Potrero Hill to transport hay during the winter and spring.<sup>6</sup> On either side of the navigable channel the largest salt marshes in the County provided significant habitat for migrant birds on the Pacific Flyway.

As the human population continued to burgeon in San Francisco the needs for fresh water outstripped local supply requiring development of external sources. As water prospecting schemes began to succeed surface water in the City was rendered less precious. On the San Francisco peninsula as in most places the wealthier populations preferred coastal high ground with first access to prevailing winds. Smelly, messy industries like feedlots, slaughterhouses and

tanneries needed to be close to markets and shipping lanes but far from well-to-do noses. But people who worked in these industries lived near them. Wealth influenced land use then to lay down the demographic lines in the city that are still in effect today. "Butchertown" was seen as less valuable than Pacific Heights.

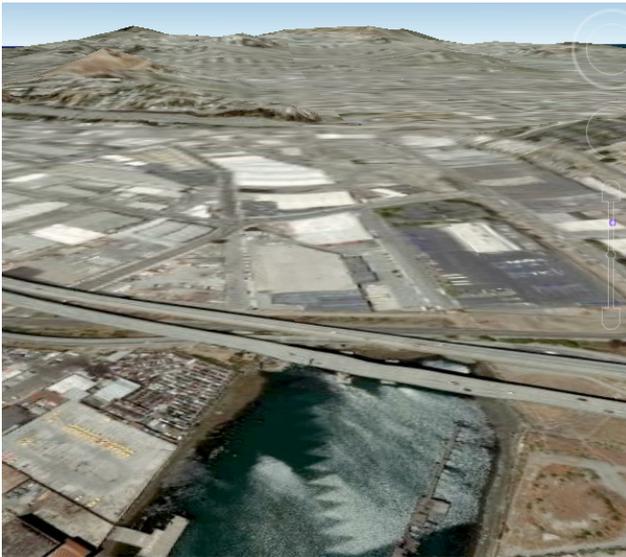
Islais Creek was the swampy low ground that ran through this southeastern industrial zone. Long before Sunset Scavenger trucks would make their rounds to collect waste much of it was disposed of in the creek which was clogged with slaughterhouse pollutants so foully that it was nicknamed "S#\*t Creek".<sup>7</sup> The creek also connected Glen Park, Bernal Heights and the Outer Mission to the district. So as those workers who could moved into the newly forming upwind neighborhoods they saw no benefit from being connected to a devalued waterway that was treated like an open sewer and industrial dump.

Culverting began in 1878 when the City Board of Supervisors obtained the right from the California Legislature to route a sewer line through the stream channel.<sup>8</sup> Land values and population pressure contributed to the climate that promoted covering all of the former southern stream by 1932 when Geneva Lake at Geneva and Niagara intersection was drained. The physical division of the southeast district from the rest of the city was further reinforced by construction of the elevated I-280 highway which also runs over the former creek bed. The largest sewerage treatment and release facilities for the city are located in or near what remains of the Islais Creek mouth in San Francisco Bay.





Available from: [http://www.sfsewers.org/combined\\_sewers.asp](http://www.sfsewers.org/combined_sewers.asp)



Asberry, GoogleEarth, 2008

By the 1970's the City's population stabilized at about 700,000 people.<sup>9</sup> As new generations took up residence in neighborhoods formerly watered by Islais Creek they joined indigenous Ohlone residents in imagining a restored Islais Valley watershed.<sup>10</sup> Neighborhood environmental activists lobbied SF Park & Recreation for support for and invested sweat equity in conservation areas. Today at each of the three sources of the creek there are parks; Precita Park, Glen Park and Cayuga Park. At the mouth of the Creek several small parks were built; among them the Ohlone-Muwekma Pocket Park and the Heron's Head

Park.



Available from: Muwekma Ohlone Pocket Park  
<http://www.muwekma.org/news/park.html>

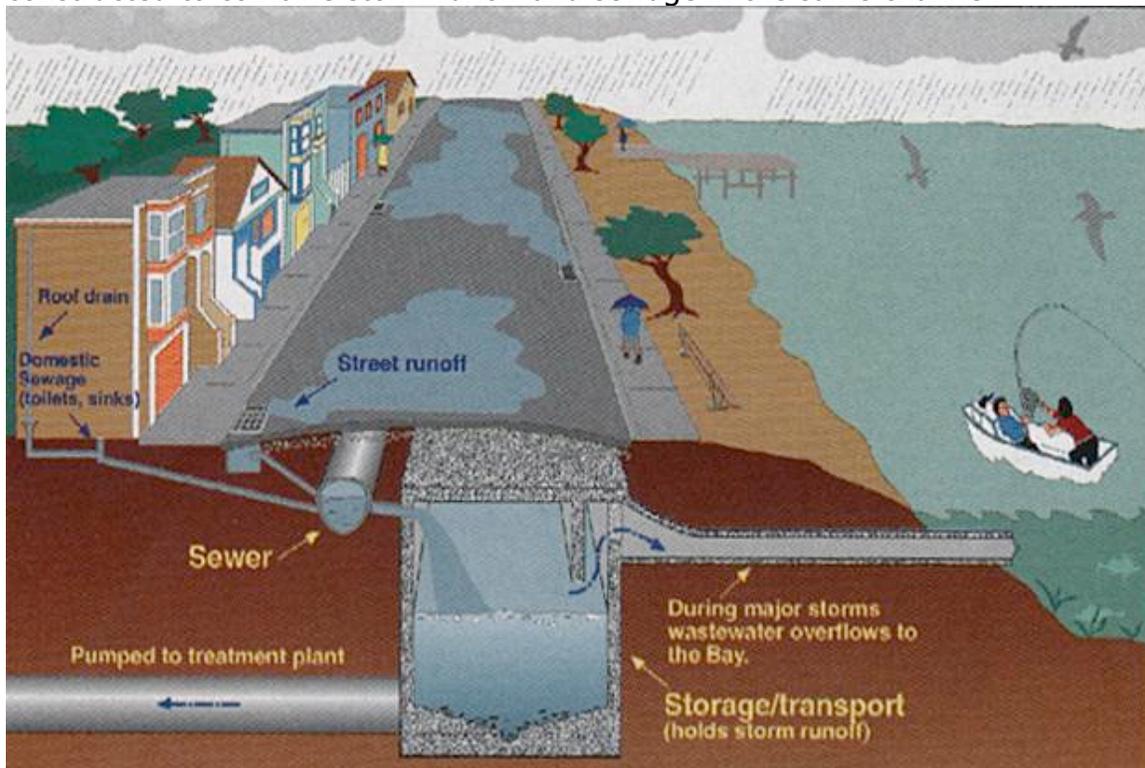
However positive the overall movement to restore waterways in San Francisco has been, within it the original disparities between upwind and downwind neighborhoods have often been maintained. In 2002 Friends of Glen Canyon obtained a 3-year grant for \$500,000 from city coffers for administration of volunteer restoration and maintenance of the upper reaches of the never-covered Glen Canyon tributary.<sup>11</sup> In 2004, a MUNI construction accident effectively destroyed the Muwekma-Ohlone Pocket Park in a public works project gone awry, as yet unmitigated.<sup>12</sup> City grants for developing that park never exceeded \$10,000. Several factors could contribute to this discrepancy in investment, including relative strength in organizing and size of areas however there would appear to be a lack of political will on the part of the City of San Francisco for redressing past inequity.

Recent awakening of enthusiasm for restoration of the watershed, the need to rebuild San Francisco's aging wastewater infrastructure and the approach of effects from global warming in terms of higher frequency of extreme storms, less

precipitation as snow & more as rain and near-term sea level rise are all contributing to an atmosphere that advantages another look at Islais Creek as an open watercourse.

In their 2004 feasibility study, Jencks & Leonardson wrote that daylighting Islais Creek would help insulate San Francisco from extreme effects of global warming<sup>13</sup> but that it would be expensive both due to the need to relocate homes and businesses off of the stream course and because the sewerage management system would have to be redesigned and rebuilt.<sup>14</sup>

Unusually for a western city, the San Francisco sewerage system is constructed to combine storm runoff and sewage in the same channel.<sup>15</sup>



SF PUC, 2007, Available from: [http://www.sfsewers.org/combined\\_sewers.asp](http://www.sfsewers.org/combined_sewers.asp)

During torrential rain raw sewage currently overflows into City streets causing extreme health and sanitation problems.[SF Sewer Plan, 2008] For the neighborhoods affected, again its no accident that they are in the Bayview district, this is a crisis that has to be addressed whatever else is done with Islais Creek. Since sewer system renovation is in active process and the city is adding treatment capacity city-wide, separation of the two systems is less a question than those opened up by advocating that people give up their homes and businesses to uncover a stream that's run underground for over a hundred years in some areas.

On the other hand, for land that is likely to flood under predicted extreme storms and sea level rise, proactive relocation might be the best course of action.



Global Warming Sea Level Rise in SF, changes in light blue.  
 Available from: <http://geology.com/sea-level-rise/san-francisco.shtml>

Restoration of wetlands, removal of pavement over recharge zones and reforming land for gentler runoff are all practices recognized to aid flood control and fresh water regeneration.<sup>16</sup> Along with better understanding of environmental function and dynamic equilibrium has come a sense that the giant public works project is not the answer to everything. Decoupling problems to solve them and study the effects of solutions seems less of a blunt instrument for dealing with the complexities of urban resource management than massive projects of the past. That is not to say nothing should be done while continuing to study the situation, on the contrary, because these matters are urgent planners need to use what is known, learn by doing and be ready to respond to created circumstances. Perhaps a first, not altogether symbolic step would be to employ an historic resources preservation mitigation technique and replant the former riparian corridor with native cherry trees. This would trace the route of the underground waterway and help create awareness of it as a spiritual presence. It would also connect all the smaller, seemingly disconnected restoration projects and clearly demonstrate how the presence of water formed the city in the past and how it affects us today.



Wild California Cherry, *Prunus ilicifolia*, Wikipedia

## Epilogue: Green City Schizophrenia

On a late night walk near Cayuga Park moonlight is reflected off wet pavement while water rushes underfoot. San Francisco is on the eve of another early summer election, where controversial initiatives have the best chance of flying under the radar to victory with smallest voter turnouts. At this crossroads the course of development in Bayview/Hunter's Point district stands to be decided. San Francisco prides itself as a Green City but is schizophrenic about which kind of green is meant.

On the one hand we have a deep, old commitment to public transit yet just at the moment when ridership on light rail, bus and BART have all increased beyond any earlier levels (from 3 – 10% since this quarter 2007) substantial cuts in service to Ocean View and West of Twin Peaks neighborhoods are planned. Zoning limits that in the past have balanced density with sky access in downtown neighborhoods are evidently relaxed. Seven new, very tall buildings have been approved to go up near Rincon Center and south along the waterfront, near the mouth of Islais Creek. These areas are subject to high liquefaction during earthquakes since they're built on landfill. Will all this development be solar powered? How many toilets in each of them will be hooked up to the existent sewer system? With business suffering couldn't high vacancies further stress the local commercial real estate market? Will local owners be able to afford these new buildings? Who will pay for the increased load on City infrastructure?

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<sup>1</sup> To daylight a buried, or culverted, stream means to redirect it to run aboveground.

<sup>2</sup> Hispanicized Salinan word [Sharpsteen, 1941]

<sup>3</sup> Ohlone People [Wikipedia, 'Ohlone']

<sup>4</sup> San Francisco NewsLetter Sept 1925

<sup>5</sup> Erickson, "Conversation about Destroyed Muwekillema Park" 2007

<sup>6</sup> Sharpsteen, 1941, Vanished Waters

<sup>7</sup> Neighborhood Parks Council: Islais Creek History, 2004

<sup>8</sup> Sharpsteen, 1941

<sup>9</sup> <http://www.sfmuseum.com/hist1/early.html>

<sup>10</sup> Environmental protection laws enacted during the 1970's helped make this possible.

<sup>11</sup> Glen Canyon Park Improvement Plan, 2002

<sup>12</sup> Erickson, 2007

<sup>13</sup> Jencks, R & Leonardson, R. UC Berkeley, 2004

<sup>14</sup> Rosey Jencks now works for the SF PUC and is chief public contact for sewer system renovation questions.

<sup>15</sup> San Francisco City & County Sewage Master Plan, 2008

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<sup>16</sup> Ibid

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