

South San Francisco Bay Ferry Service?

Frank Groffie, 2012

http://groffie.com/ferries_on_south_San_Francisco_Bay?ferry_routes.pdf

It's the mid 1990s, and I'm commuting to work from San Jose to downtown San Francisco using either BART or CalTrain. Occasionally I fantasize about hopping aboard a speedboat docked on Guadalupe Creek or Coyote Creek, somewhere near north San Jose, and from there jetting up the bay and docking on the San Francisco waterfront. From there, I'd walk two blocks to work. In the evening, I'd do the reverse.

Fast-forward to 2010. A new boat ramp and dock are opened at Alviso Marina, providing small-boat access between San Jose and San Francisco Bay for the first time since the 1970s. By this time, no longer do I commute to San Francisco. Yet, memories of sailing these waters as a youngster in the late 70s and early 80s linger.

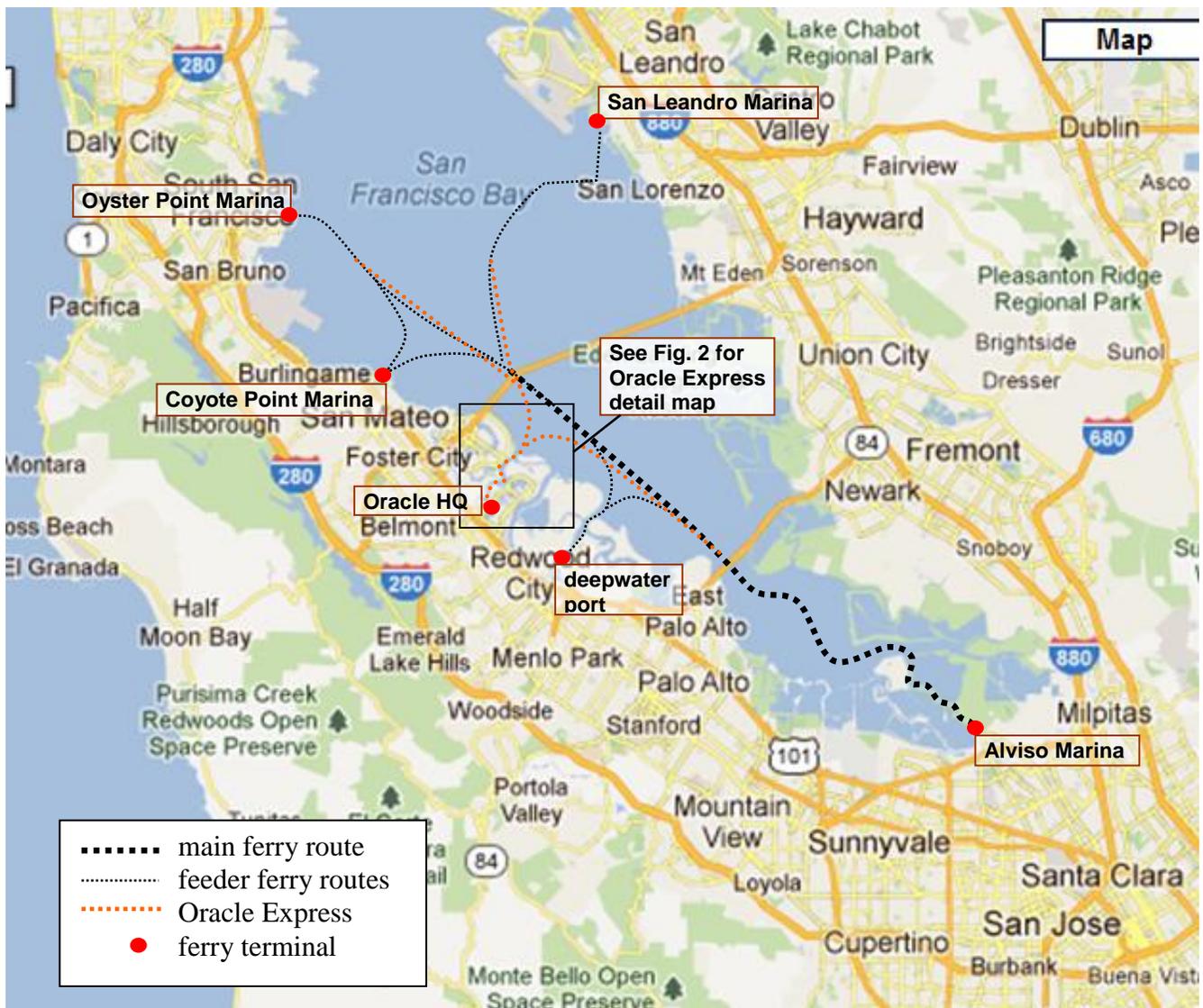


Figure 1. Possible southern San Francisco Bay ferry routes.

CalTrain, running up the Peninsula, and BART, running down the East Bay down to Fremont, are nifty. But they're located far inland. Both are far from Alviso, where numerous big employers are located, and far from San Leandro and Foster City, where workers are located.

Figure 1 summarizes my ideas for potential ferry routes serving the South Bay. Alviso is an obvious southern terminus for commuters arriving from the Peninsula and from the East Bay. Oyster Point Marina, in South San Francisco, seems like a sensible point to take on a few ferry commuters with destinations in Silicon Valley. Coyote Point Marina, in San Mateo, may be an alternate or additional location to take on riders. The same may be said for the port of Redwood City. San Leandro Marina is located on the east shore of San Francisco Bay. San Leandro may be an attractive location to take on riders wishing to avoid the San Mateo bridge. Then there's the Oracle Express.

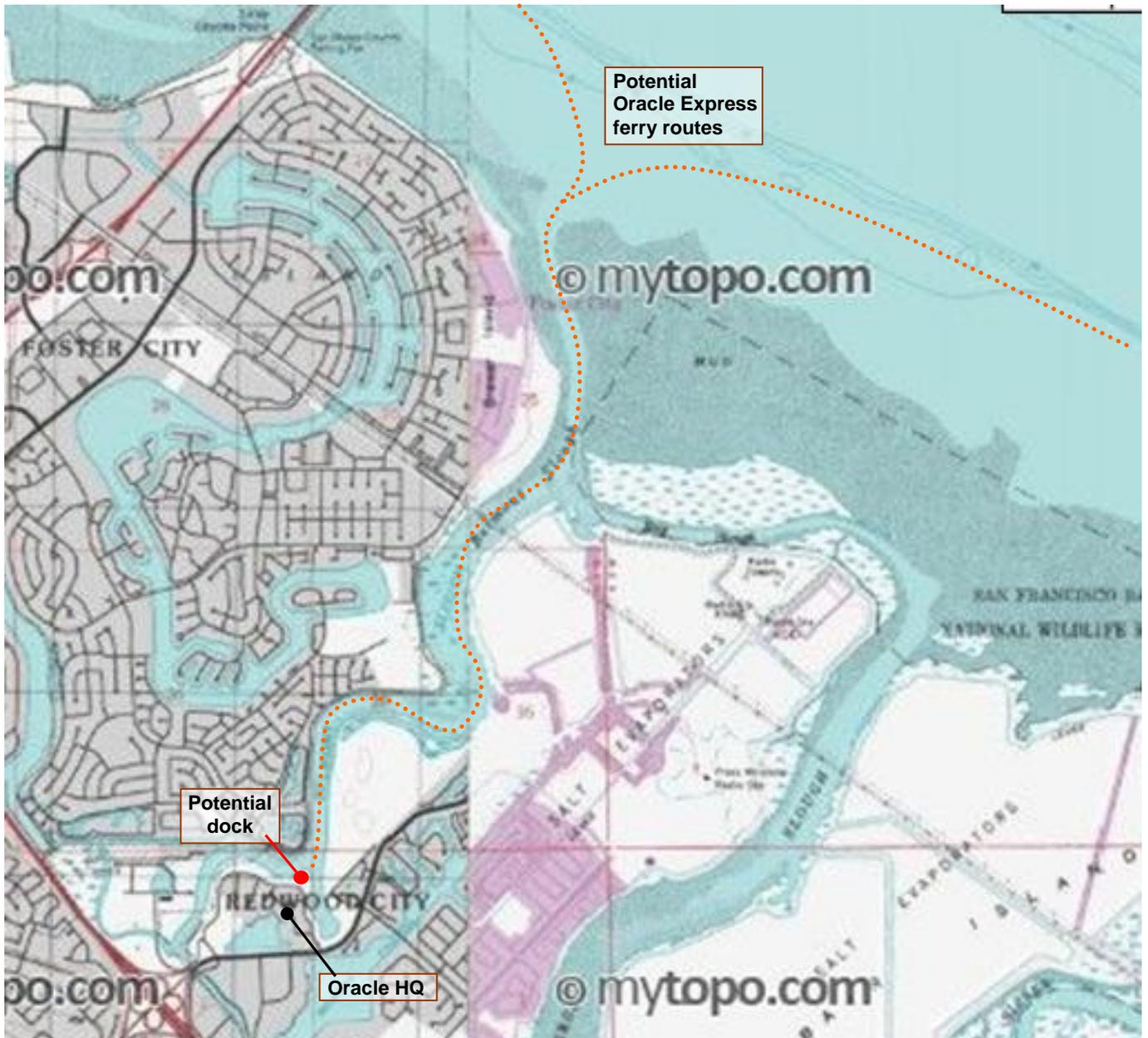


Figure 2. Detail of potential ferry route to Oracle headquarters in Redwood city.

Oracle Express. Oracle's headquarter offices sit next to Belmont Slough. Belmont Slough apparently channels stormwater runoff from streams and a significant drainage basin originating on the eastern slopes of the San Francisco Peninsula. Consequently, a decent natural channel, even at low tide, runs along Belmont Slough and connects to the central channel of San Francisco Bay, as in Figure 2, bypassing mudflats. Perhaps several of Oracle's employees could be enticed to commute by water rather than drive Route 101 or the San Mateo Bridge.

Some of the main issues with an Oracle Express are physical, public-political, and private-political. (1) Physical: can a passenger ferry boat of moderate size reliably navigate Belmont Slough's natural channel? (2) Will BCDC (Bay Conservation and Development Commission) allow a commuter ferry dock to be built a 2-minute walk from Oracle headquarters? (3) Will Oracle itself, including its head Larry Ellison, get behind a commuter ferry service serving its workers coming from the East Bay and South Bay?

San Leandro Marina. San Leandro Marina is a sailboat marina that has been around for decades. Apparently there are buoys marking straight channels for access to the main, deeper waters of the bay.

Oyster Point Marina. Oyster Point Marina, in South San Francisco, is a sailboat marina that has been around for decades. Much about Oyster Point Marina later.

Coyote Point Marina. Coyote Point Marina, in San Mateo, is a sailboat marina that has been present for decades.

Redwood City. The Port of Redwood City is a commercial deepwater port that has been active for many decades. It currently handles some 2 million tons of freight and has been listed as possible future ferry terminal.

Alviso Marina. Alviso Marina was reconstructed as a recreational marina, with much fanfare, in 2010. Alviso has a storied history as an important shipping port dating back to the mid 19th century. Alviso is now near several Silicon Valley headquarter offices, Mission College, and SCVTA light rail (trolley) routes serving downtown San Jose, Mountain View, and other significant commuter destinations.



Figure 3. Possible style and size of boat for initiation of southern San Francisco Bay ferry service.

Ferry boat. I envision something like a 12-passenger ferry boat, as in Figure 3. A boat of this size would allow for a small-scale startup of ferry service. The catamaran style provides for shallow draft in the bay's sloughs at

low tide and gives stability in the bay's waves and swells on windy days. As ferry service becomes established and as demand warrants, operation could be scaled up to include somewhat larger ferry boats.

Ferry boat speeds may be limited to 30 knots in open water and 5 to 10 knots in sloughs and near ferry terminals. Still, given roadway congestion during peak commute periods, ferry transit times would be competitive. Boat fuel efficiency may be limited to 3 to 5 miles per gallon, which converts to about 40 passenger-miles per gallon, similar to a Prius driven solo: nothing dramatic in the way of fuel savings. Still, roadway congestion would be reduced, and disaster/emergency travel options would be available.

New Oyster Point (South San Francisco) ferry service. Around June 4, 2012, I heard radio news reports of initiation of ferry service between Oakland/Alameda and Oyster Point. It appears they use a large boat, much larger than the one in Figure 3. Thus, Oyster Point Marina is now the site of an established ferry terminal. This suggests other similar marinas, including San Leandro, Coyote Point, Redwood City, and even Alviso, could serve as ferry terminals in the future. If potential ferry terminals serving large ferry boats at these marinas are not feasible at present, it may still be possible that existing facilities may be used for ferry service using small boats, as in Figure 3.

Figure 4 shows the website for the Oyster Point marina, including information for the newly inaugurated ferry service. Obviously, this new ferry service gives auto commuters from the East Bay an alternative to the Bay Bridge. It also provides an alternative to BART, which reaches South San Francisco and San Francisco Airport. Genentech, with headquarters near Oyster Point, may be a destination for some of these ferry commuters.



Figure 4. Oyster Point Marina website, accessed early June 2012.

Note that the description of the Oyster Point Marina ferry service mentions the important role of a Water Emergency Transportation Authority (WETA).

Role of WETA in disaster planning. Check out the website for WETA (Figure 5). Evidently, WETA has a mandate to provide transportation in the event of emergencies, if the San Francisco-Oakland Bay bridge, San Mateo bridge, or BART transbay tube were to be damaged by an earthquake. WETA is naturally an agency to work with in developing a south San Francisco Bay ferry network.

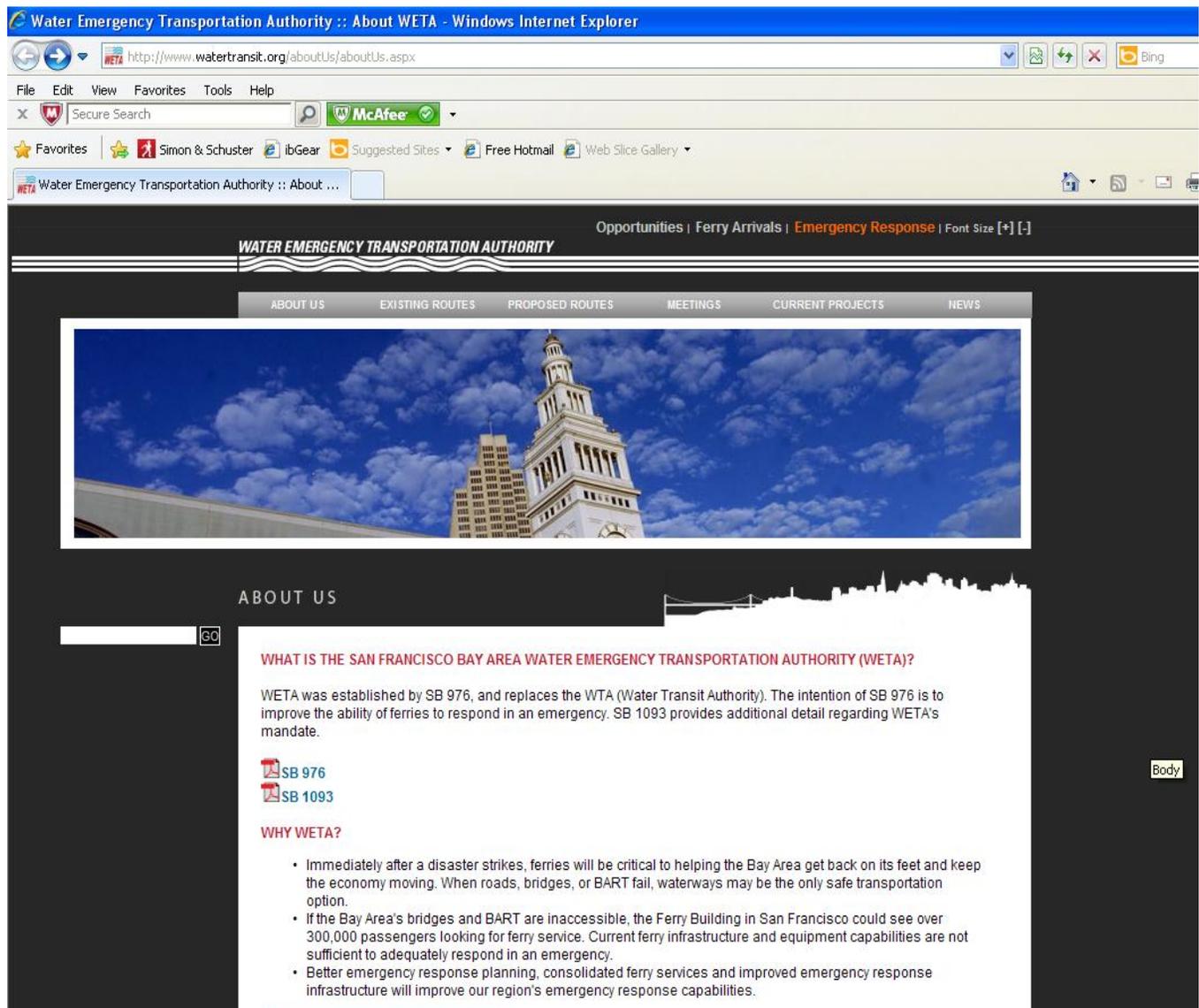


Figure 5. WETA website, accessed in early June 2012.

If you tunnel into the WETA website, you'll see their plans for future potential expanded ferry service routes (Figure 6). Note how they include ferry service to Redwood City. Redwood City has a deepwater port. It's excellent in terms of boat access, but not a natural destination for commuters. There's little nearby, except maybe Oracle, about 5 miles to the north, and Facebook, about 5 miles to the south. However, Redwood City may serve as the site of a potential ferry terminal for cross-bay commuters in general who would like to avoid the San Mateo or Dumbarton bridges or commuters in general who would like to avoid Routes 101 or 880.

If disaster planning is a focus, then planners should include scenarios in which a major earthquake on the San Andreas or Hayward fault causes

- Collapse of any of numerous older roadway crossings over Routes 101, 280, or 880, causing freeway blockages.
- Damage (offset) of at-grade portions of Routes 101 or 880 where they cross liquefiable soils.
- Damage to the San Mateo or Dumbarton bridges, or to their at-grade approaches where they cross liquefiable soils.
- Damage to, or blockage of, BART or CalTrain structures, stations, or at-grade railroad beds.

Such scenarios could nearly freeze automobile commuter travel for weeks, months, or 1 to 2 years throughout the region or on segments of transit corridors while awaiting repairs. A network of ferry routes will likely be more resilient. Such a network would include multiple (redundant) ferry terminals. Routes through local networks of two- and four-lane roads serving the terminals would likely survive or be travelable or quickly repairable following an earthquake disaster.

In the interim, before a disaster, a south San Francisco Bay ferry service will naturally serve to relieve roadway congestion and reduce local air-quality impacts.

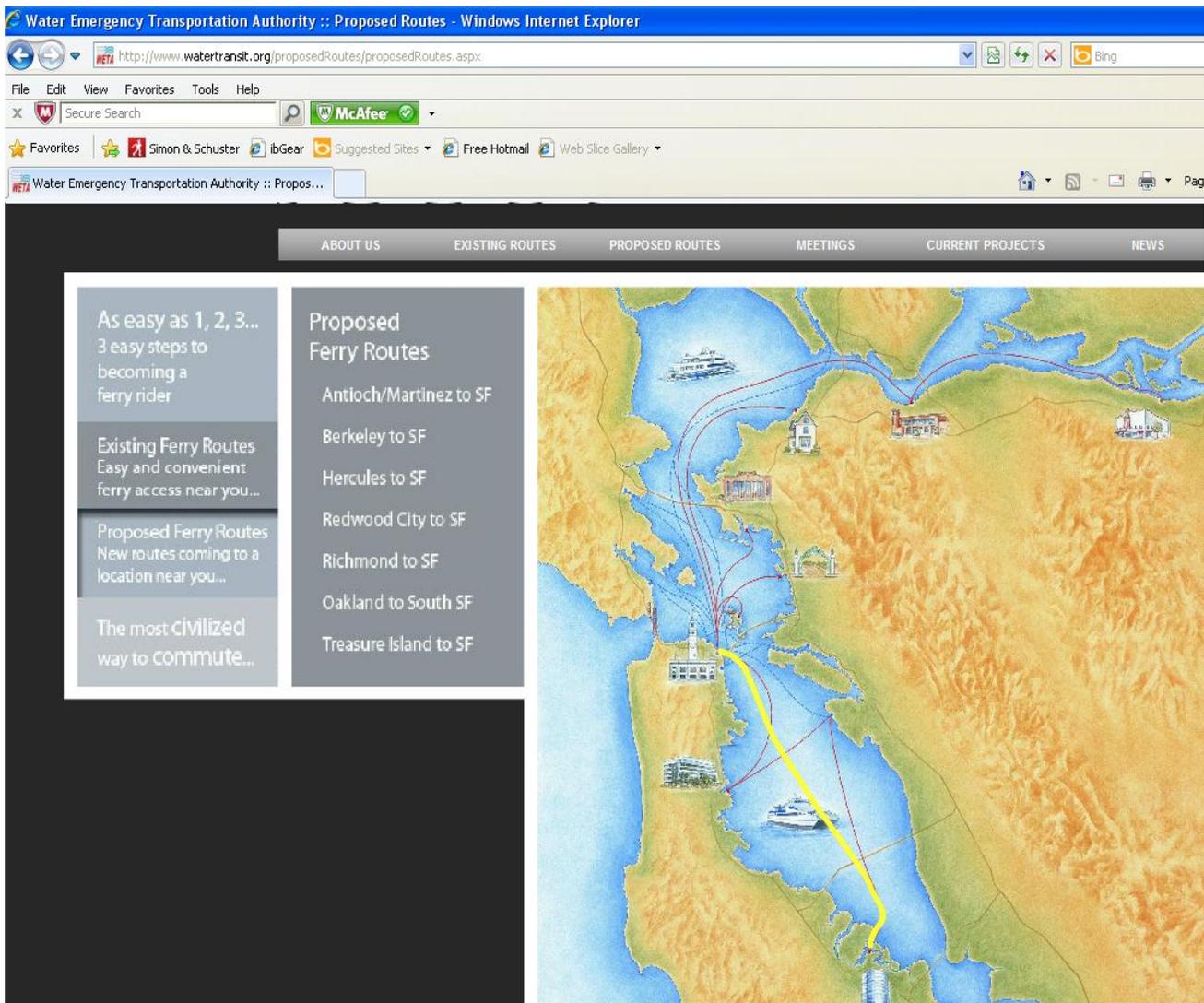


Figure 6. Screen shot from WETA website, accessed in early June 2012.