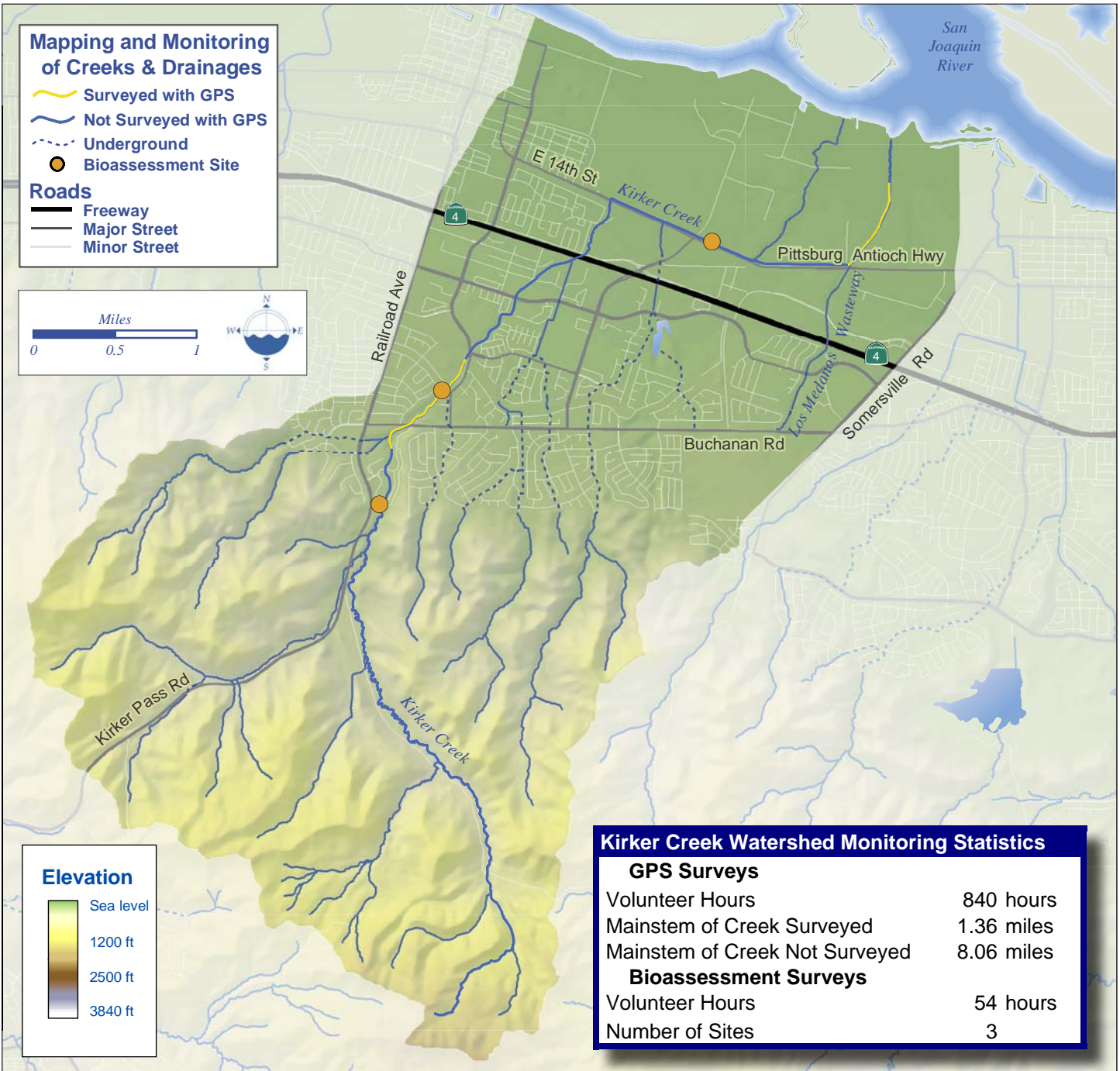




Chapter 3 Kirker Creek Watershed



Kirker Creek Watershed - Survey Sites (Note: Kirker Creek flows north)

Kirker Creek Watershed has a number of active stewardship organizations. The Contra Costa Resource Conservation District is a leader in this watershed, facilitating community involvement through the Kirker Creek Watershed Advisory Group (that advises on implementation of the Kirker Creek Watershed Management Plan) and Partners for the Watershed (an organization that focuses on environmental education and encouraging local stewardship). Students from Los Medanos Community College are also very involved in the watershed having contributed most of the 800 hours of volunteer monitoring for Kirker Creek.



Los Medanos students and Professor Mitch Schweickert



Bank Composition (Note: Kirker Creek flows north)

GPS surveys performed in the Buchanan Park area indicate a long stretch of natural channel condition. The design of Buchanan Park incorporates Kirker Creek as a feature, providing a visual amenity for the park and protecting a portion of the creek in a natural condition.

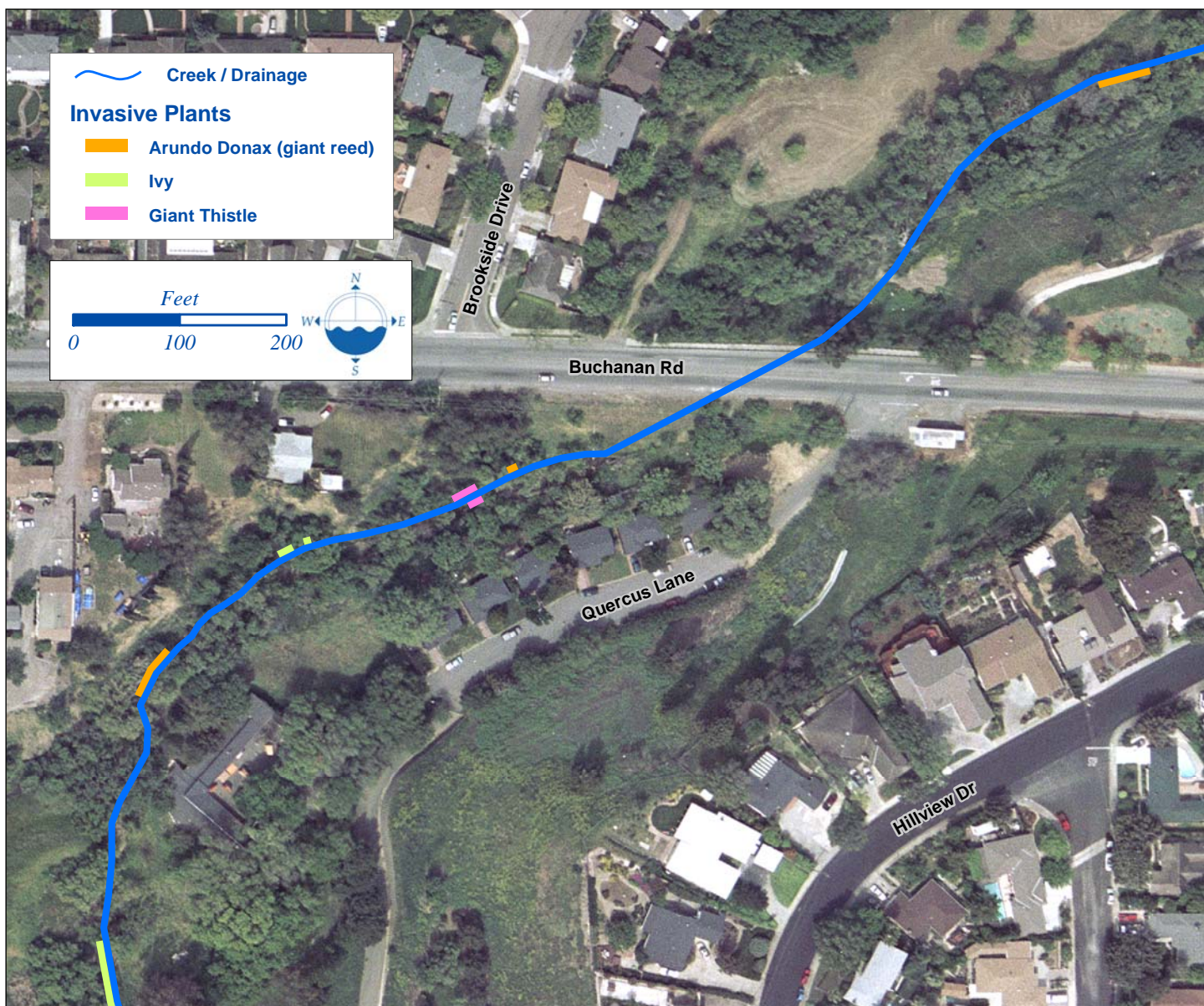
Throughout this book, bank composition is classified either as “constructed” or “natural” for display purposes. The raw data contains substantially more information than what is displayed. In addition to information on the type of constructed reinforcement, the data also provides detail on the location of the constructed feature on the bank (lower, middle, upper).

| Kirker Creek Bank Composition | |
|--|------------|
| Total Creek Length Surveyed | 1.36 miles |
| Constructed banks (concrete-lined, rip-rap, etc.) | 0.5 miles |
| Natural banks (no obvious reinforcements) | 0.86 miles |

Note: Table refers to surveys throughout the watershed, not just the section displayed



Invasive Plants



Invasive plants along Kirker Creek (Note: Kirker Creek flows north)

The GPS Creek Survey tracks ten invasive plants. Non-native invasive plants can disrupt the natural creek ecosystem when they crowd out native riparian vegetation, generally by out-competing them for sunlight, water and nutrients from the soil. Compared to native riparian vegetation, non-natives often provide less bank stability and less creekside habitat for local animals, and disrupt natural nutrient cycles. *Arundo donax*, commonly known as giant reed, spreads rapidly down creek channels. *Arundo* is well adapted to the frequent hydrologic disturbances in creek systems. Flood events break off pieces of the plant and transport them downstream where they can take root.



Arundo donax, commonly known as giant reed

Friends of 5 Creeks

In-stream Vegetation and Debris Jam



Note: Kirker Creek flows north

In the 1940s Kirker Creek was re-routed around the U.S Steel property (now USS – POSCO). Kirker Creek now flows into the Los Medanos Wasteway which carries it to the Sacramento-San Joaquin Delta.

Here, the creek runs along the Delta Diablo Sanitation's wastewater treatment plant and through the Dow wetlands, an area restored by Dow Chemical and volunteers. This section of creek was surveyed by students from Los Medanos Community College in 2004.

Interesting features noted here include debris jams made up of mostly natural materials and patches of thick in-stream emergent vegetation (emergent vegetation has roots in the creek bed and foliage above the water line).



Volunteer holding an antenna for a GPS unit