

Life at the Water's Edge

Urban Riverfront Revival



SOFIA PROKOP | LANDSCAPE ARCHITECTURE | SENIOR PROJECT | 2014



Life at the Water's Edge

Urban Riverfront Revival

Senior Thesis
Sofia Prokop
June 12th, 2014

Presented to the faculty of the Landscape Architecture program at the University of California, Davis, in partial fulfillment of the requirements for the degree of Bachelors of Science in Landscape Architecture.

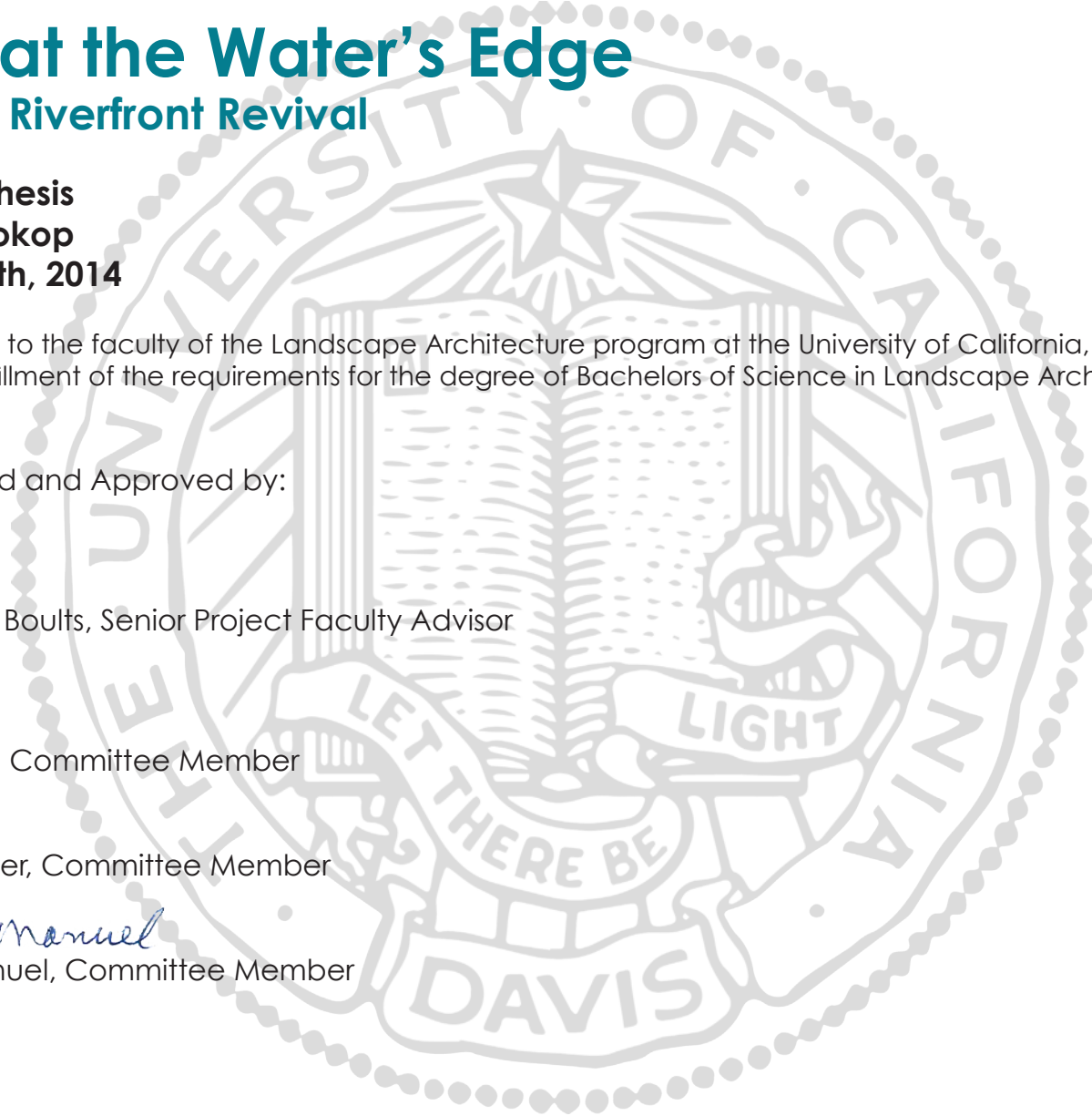
Accepted and Approved by:

Elizabeth Boults, Senior Project Faculty Advisor

Jeff Loux, Committee Member

Rob Thayer, Committee Member

Kent Manuel
Kent Manuel, Committee Member





The author, Sofia Prokop kayaks underneath the Sundial Bridge. She spent numerous days of her life growing up on the Sacramento River, living, kayaking and swimming in Redding.

To mom, my upstream source

Love,
Sofia

Table of Contents

- 1 LIST OF ILLUSTRATIONS
- 3 ACKNOWLEDGEMENTS
- 4 ABSTRACT
- 6 1 TYPES OF WATERFRONTS
- 14 2 ELEMENTS OF A SUCCESSFUL PROJECT
- 18 3 HISTORIC RIVERFRONTS
- 22 4 SUCCESS STORIES
- 30 5 THE DESIGN
- 52 BIBLIOGRAPHY



List of Illustrations

1

TYPES OF WATERFRONTS

- Fig. 1-1 Rivers in Northern California. http://www.lib.utexas.edu/maps/historical/northern_california_detail_1917.jpg
- Fig. 1-2 Port of Pittsburg www.mapsofpa.com
- Fig. 1-3 Pier 39, San Francisco http://upload.wikimedia.org/wikipedia/commons/e/e2/Pier_39,_SF,_CA,_jiron_26.03.2012.jpg
- Fig. 1-4 North American Intermodal Network <http://lwcjustice.com/wp-content/uploads/lwcnaftaintermodal1.png>
- Fig. 1-5 Pittsburg www.mapsofpa.com
- Fig. 1-6 Crescent Park www.hargreaves.com
- Fig. 1-7 Jack London Square www.oaklandmagazine.com
- Fig. 1-8 Property line by river riverptarinc.com
- Fig. 1-9 Example community meeting govinfo.library.unt.gov

2

ELEMENTS OF A SUCCESSFUL PROJECT

- Fig. 2-1 Jack London Square Food options <http://cincinletseat.files.wordpress.com/2012/10/eat-real-fest.jpg>
- Fig. 2-2 Jack London Square plate and beer <http://thirdcultureconciierge.files.wordpress.com/2011/09/p10287.jpg>

3

HISTORIC RIVERFRONTS

- Fig. 3-1 Pont Neuf <http://cultureandstuff.com/wp-content/uploads/2011/06/Paris-in-1981-028.jpg>
- Fig. 3-2 Gondole Moored on Grand Canal <http://blog.imaginevenice.com/wp-content/uploads/2011/02/Venice-Gondole-moored-on-Grand-Canal-black-and-white.jpg>

Fig. 3-3

View of Grand Canal during historic regatta images/P-473-488-90/27/2742/8IRND00Z/posters/view-from-above-of-the-grand-canal-in-venice-during-a-historical-regatta.jpg

Fig. 3-4

Gritti Palace Hotel on Grand Canal http://www.architecturaldigest.com/blogs/daily/2013/04/gritti-palace-hotel-history-venice-italy-blog/_jcr_content/par/cn_contentwell/par-main/cn_blogpost/cn_image.size.gritti-palace-hotel-11-h670-search.jpg

Fig. 3-5

Pont Neuf <http://cultureandstuff.com/wp-content/uploads/PONTNEUF.jpg>

4

SUCCESS STORIES

Fig. 4-1

Reno, Nevada Truckee River boat access <http://gingerleaphotography.files.wordpress.com/2014/05/kfest-wfield-yaks1.jpg>

Fig. 4-2

New Orleans Crescent Park <http://romneypilates.com/wp-content/>

Fig. 4-3

Hargreaves Associates design perspective www.hargreaves.com

Fig. 4-4

Indoor Market Space http://ellispartners.com/project_details.php?c=view&id=&img=2&n=3&p=1

Fig. 4-5

Revelers enjoy dancing along the waterfront at night https://s3.amazonaws.com/localon_user_uploads/upload-4414061176061768722.jpg

Fig. 4-6

Roebing Bridge <http://mysmaleriverfrontpark.org/>

Fig. 4-7

Covered walkway next to river <http://mysmaleriverfrontpark.org/>

List of Illustrations

- Fig. 4-8** American River Parkway bike path http://centralcaliforniacycling.com/images/BikeTrail_Rafts2.jpg
- Fig. 4-9** Truckee River swimmers <http://www.renosriverwalk.com/>
- Fig. 4-10** Competitor in Reno River Festival <http://gingerleaphotography.files.wordpress.com/2014/05/kfest-watchers1.jpg>
- Fig. 4-11** Reno River Festival kayak competitors with onlookers http://thisisreno.com/wp-content/uploads/2013/03/RRF_Whitewater.jpg
- Fig. 4-12** Children kayaking in Truckee River <http://worldkayakblogs.com/sagedonnelly/files/2012/03/Reno-Park-011.jpg>
- 5**
- THE DESIGN**
- Fig. 5-1** World Map <http://www.zonu.com/images/OX0/2009-11-19-11196/World-blank-map.png>
- Fig. 5-2** Map of U.S. rivers <http://bost.ocks.org/mike/us-rivers.png>
- Fig. 5-3** Sacramento River Watershed <http://landingaday.files.wordpress.com/2009/09/250px-pearlms-rivermap.png?w=250&h=250>
- Fig. 5-4** Historic map of Shasta County <http://blogs.redding.com/redding/dsmith/1939.jpg>
- Remaining pages of illustrations and graphics are by the Author, Sofia Prokop.

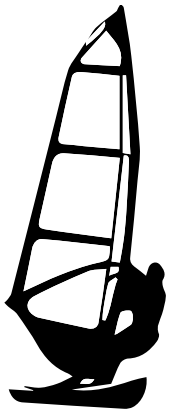


Acknowledgements

Committee members: Thank you for providing much needed advice and information.

Professors: Thank you for educating me in the ways of Landscape Architecture.

Family and friends: Thank you for supporting me through all my endeavors.



Abstract

Riverfronts within city centers become neglected for a variety of reasons: economic, environmental, and social. Today, efforts to reclaim the riverfronts that used to provide conveyance for the economic hub of cities, and/or were solely exploited for their resources, are in the works. Riverfront revivals in urban areas are efforts to restore the environment and increase the social and economic potential of urban rivers.

Park Marina Drive along the Sacramento River in Redding, California is one such area that begs for revitalization efforts. This area offers great potential for economic and social success because of its proximity to the Sacramento River and downtown Redding, office buildings, and nearby neighborhoods. This project researches relevant and successful case studies of urban river revivals to determine what would be appropriate for Park Marina Drive. The project includes a design for a paddle craft park, walking/biking trails, and café's/restaurants that create a waterfront hub for residents and visitors to enjoy the Sacramento River.

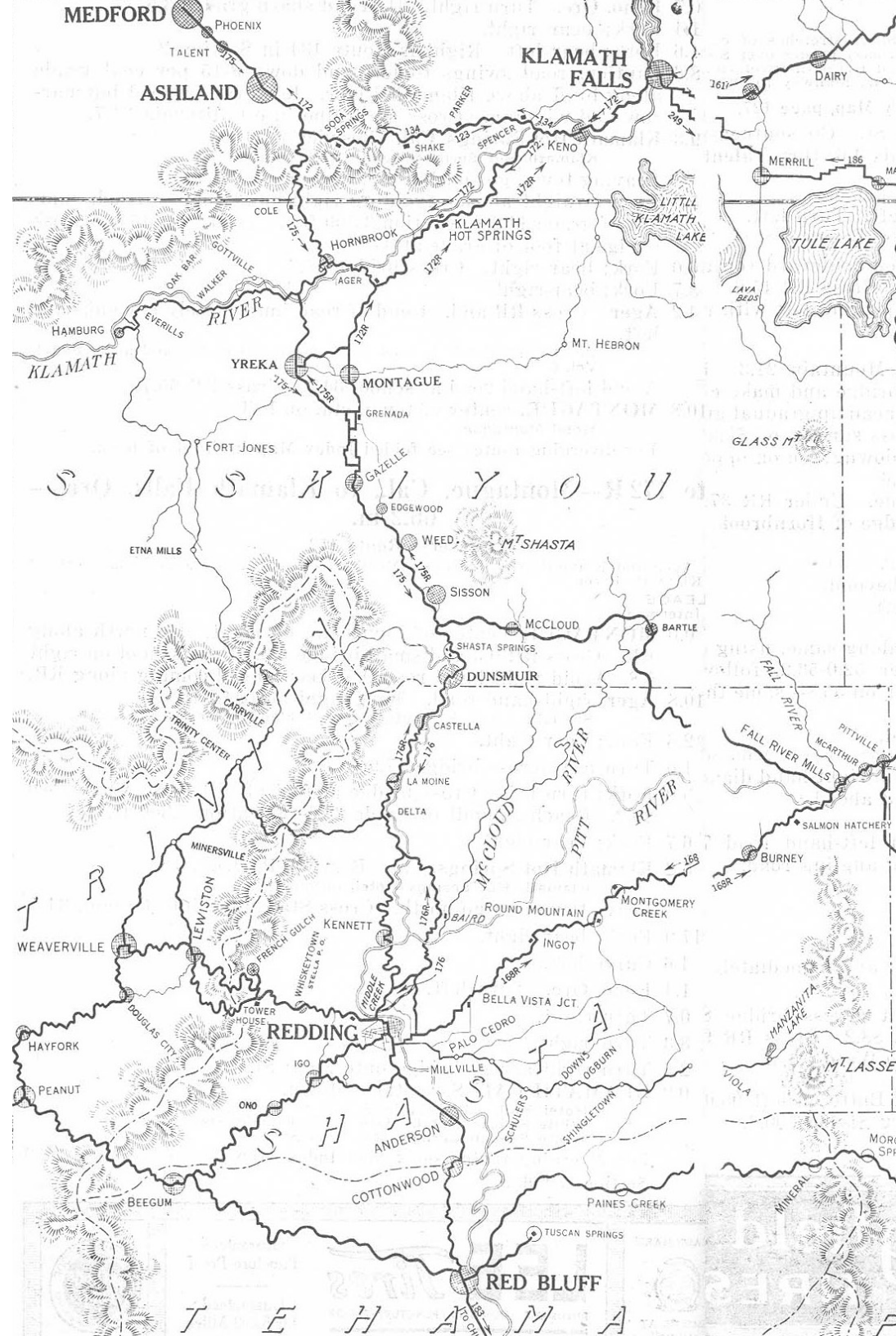


Figure 1-1 Rivers in Northern California

From a report by Fredrick Law Olmsted, prepared in 1910 for the city of Pittsburgh for improvements to its waterfront. Pittsburgh, at the head of the Ohio River, was an early example of a port city that emerged along an inland waterway.

Wherever in the world, as an incident of the highways and wharves along its riverbanks, a city has provided opportunity for the people to walk and sit under pleasant conditions where they can watch the water and the life upon it, where they can enjoy the breadth of outlook and sight of the open sky and the opposite bank and the reflections in the stream, the result has added to the comeliness of the city itself, and the health and happiness of the people and their loyalty and local pride.

Fredrick Law Olmsted

1

Types of Waterfronts

Revitalizations should be tailored to the specific site, based on what type of waterfront it is: seaside, riverside, lakeside, inland, and coastal.

Figure 1-3 Pier 39 in San Francisco offers views of the marina, as well as many tourist attractions



Urban Waterfronts

The establishment and growth of our major cities was based on where economic goods and commerce could reach. This meant that most of the major cities were founded along coastlines or major rivers. The railroad was introduced in the 19th century and this triggered a shift in the way goods and services were transported. The railroad allowed cities to shift their attention from the riverfronts to the railway stations.

Eastern cities in which the rivers were the transportation networks and late 19th century industrial centers found their rivers polluted and lined with abandoned

warehouses at the close of the 20th century. Urban areas along riverfronts declined. Another recent factor that contributes to the decline of riverfronts is the hollowing out of urban centers due to suburban sprawl.

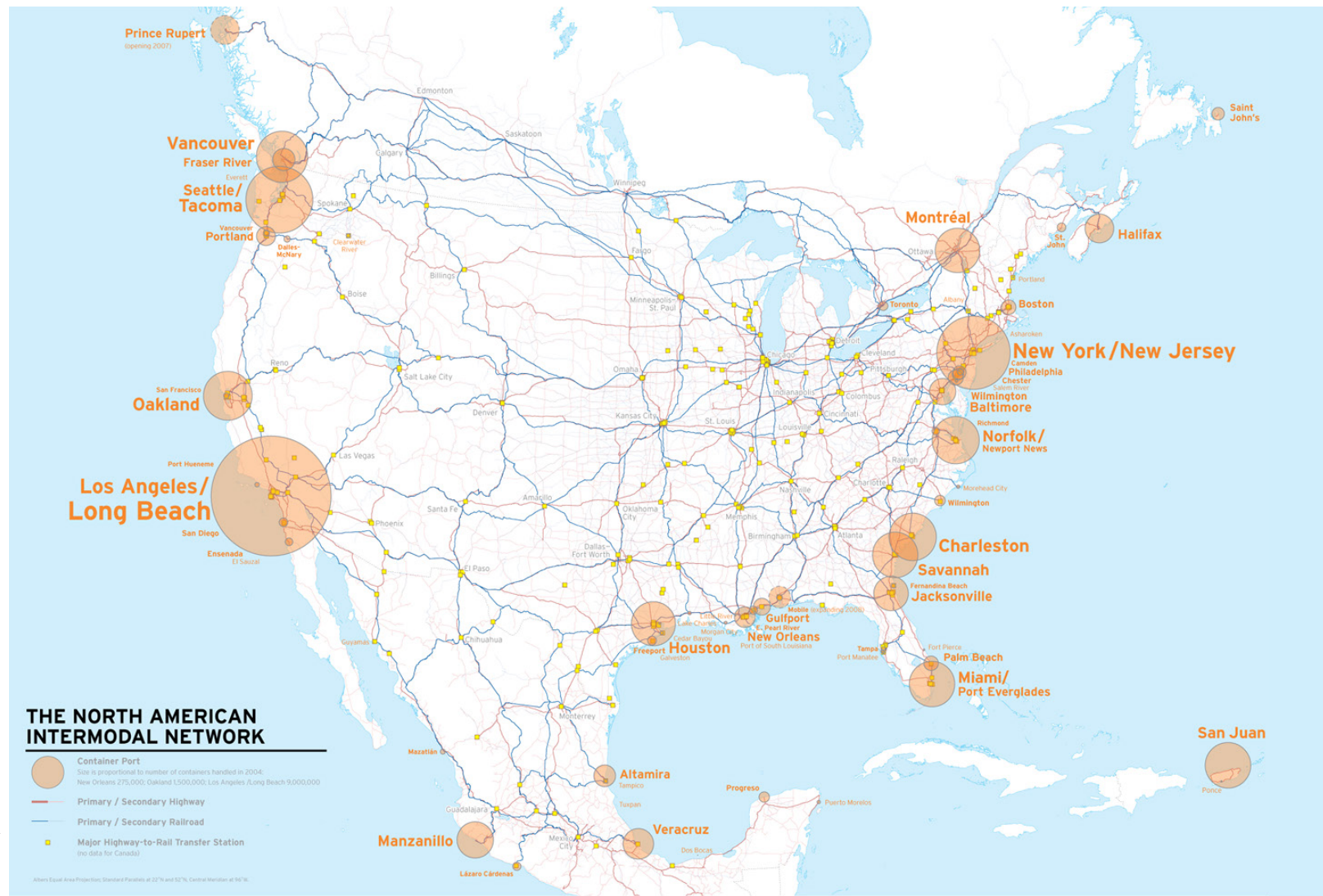


Figure 1-4 North American Intermodal Network

Urban Riverfronts

The next step in the development of cities was to venture further inland from coastal ports, up rivers to establish cities. Before the development of the railroad, inland ports were the basis for all major mid-west American cities. This was perpetuated by the development of the steamboat. Steamboats made the crucial connection for strategic points of transfer from overland routes to the western rivers (1983, ULI).

Pittsburgh (below) was a city that strategically opened up a steam engine shop.

By contrast, western cities have often had an uneasy association with their less benign rivers as they were often un-navigable and sources of unpredictable flooding. As such, the rivers were often seen as problematic and something to be tamed and/or exploited.



Figure 1-5 Pittsburgh at the head of the Ohio River

The American Port City

Initially, port cities in North America developed identically to European ones. They were the central hub for economic and social activities. As commerce increased, the requirements for storage and movement grew, and port cities actually cut off their inhabitants from access to

the water's edge with vast warehouses, rail spurs, wharves, and arterials that provided for the distribution of goods (1989, Torre).

“It is unfortunate that the dream for growth and prosperity caused so many icons of the United States maritime legacy to become lost before American society reached a high level of maturity and sophistication to demand access to their greatest asset, the water’s edge (1989, Torre).”



Figure 1-6 Crescent Park, Hargreaves Associates concept of a continuous pedestrian route along the Mississippi River in New Orleans to reclaim the waterfront from the industrial decay adjacent.

Rediscovering

Riverfronts as prime real estate are recently being re-discovered, and urban renewals focus on riverfronts as a way to positively impact the downtown core. Returning access and life back to a riverfront comes in many forms, and has been growing in popularity and public demand in the United States. These abandoned and under-utilized sites have now found new life as commercial and residential centers of vitality in which the river is the main attraction. Cities that undergo this revitalization experience new economic booms. Riverfronts provide a plethora of opportunities that, once developed, allow for public enjoyment and improve the overall appeal of the city. Redevelopments provide the basis for positive economic impact on the community.

*Figure 1-7 Jack London Square, Oakland, Ca.
July 4th celebration on the waterfront.*



Challenges ← → Consensus

The redevelopment process is not without its challenges and doubters. Fortunately, the public's values have shifted to understanding the importance of waterfront redevelopment and make it a priority. However, riverfront reclamation efforts are not without their challenges. Property owners and political leaders have to be informed and on board throughout the entire project. "If the waterfront has been lucky enough to have avoided the construction of an expressway along its edge, separating it from the rest of the city, then it is probably perceived as the adjacent landowners' personal property for their private use (1989, Torre)." Zoning, safety, and security issues also make waterfront redevelopment difficult.

Consensus is the key to all successful waterfront development projects. Consensus can be reached if all parties are included in all planning stages from broad to detailed.



Figure 1-8 Property line by river



Figure 1-9 Example community meeting

Purpose of riverfront revivals

CONNECT

cities ↔ riverfronts

- Provide connection between citizens/culture and the riverfront
- Increase resident/visitor use/enjoyment of the river
- Create broader uses of urban riverfronts to attract wider variety of visitors

EDUCATE

about riverfronts

- Increase residents' understanding of and knowledge about the river and its significance
- Interpret and highlight river ecology and history for residents and visitors
- Serve as an example for similar urban riverfront revival projects

ACCESS

to riverfronts

- Provide view points for recreaters on bike path and along roadway
- Opportunity for cafe's and restaurants to have river view and riverfront seating
- Allow paddle craft and recreational boat access

ENHANCE

natural features

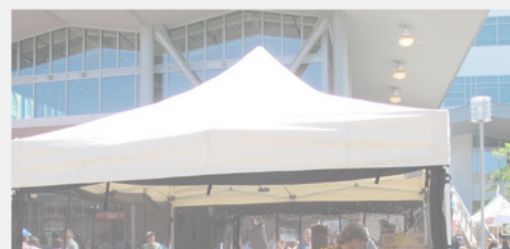
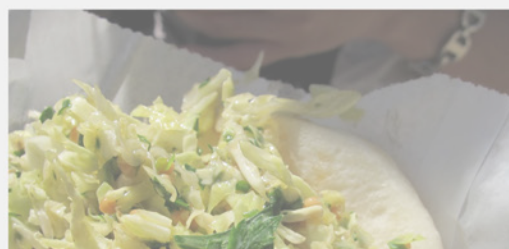
- Clean up polluted or blighted areas of river, improve for human use and flora/fauna
- Improve aesthetics of river's edge
- Improve and increase tourism, commerce, and recreation within the city

2

Elements of a successful project

Elements that hold true across multiple types of riverfront revitalization projects are evaluated.

*Figure 2-1 Jack London Square, Oakland
Plethora of food truck options available at
the square attract large crowd*



Crucial Elements

The waterfront is a melting pot of issues, interests, and players. The most important element of any project is compromise. It is almost guaranteed that each party involved will have a different expectation and idea to contribute. A diverse amount of elements are required in a riverfront revival. However, not all spaces can be festival areas/people places. There has to be a mix of unprogrammed space and programmed space. The diverse elements will ensure that a variety of people will be drawn to the riverfront, therefore ensuring the revival won't die.

Food ends up being one of the most crucial elements. The opportunity to dine along the water's edge creates an exciting backdrop, sure to entice users. The riverfront development theme is also extremely important, whether it be authenticity of a real, working riverfront, or space programmed in accordance with a theme. Grouping amenities together will allow for united waterfront designs.

THEME

Establishing a successful theme is one of the most crucial accomplishments a riverfront development project can make. It controls future design decisions and establishes a unique feel that will draw visitors



Figure 2-2 Jack London Square
Food is the theme

3

Historic Riverfronts

Historic riverfront and waterfront examples can serve as models for current designs.



Venice, Italy

In Venice, Italy, The Grand Canal is the major water-traffic corridor in the city. Most of the palaces along it can only be toured by boat so there is a high demand for gondola service along it. The water is not considered the edge of the city, but rather the main artery.



Figure 2-2 (left) View of gondole moored on Grand Canal

Figure 2-3 (above) View of Grand Canal during historic regatta

Figure 2-4 (below) Gritti Palace Hotel on Grand Canal



Seine, Paris

Seine, Paris is another major navigable waterway. The river is providing service for commerce and industry, as well as recreation and residential uses. In 1975, Christo and Jeanne-

Claude's 'wrapping' of the Pont Neuf drew international fame and therefore international visitors. It created an alternative view of the historic bridge.



Figure 2-5 Pont-Neuf in
Seine, Paris 1975

4

Success Stories

Varying types of success stories that include inland ports, sea-side ports, and western riverfronts.

*Figure 4-1 Reno, Nevada
Truckee River boat access*



New Orleans, Louisiana

The recent Crescent Park redesign focuses on connection of the city and communities to the riverfront. The 6 mile park grants physical and visual access to the river. This creates an environment for the locals to interact with nature and enjoy the river, an extremely crucial part of New Orleans' image.

The design area consists of 6 miles of unused industrial and commercial space along the Mississippi River. It aims to



Figure 4-2 New Orleans Crescent Park

increase tourism, create jobs and revenue for New Orleans, and increase the quality of life in the local communities. Hargreaves Associates was the lead designer of the park, as



Figure 4-3 Hargreaves Associates design perspective

well as other collaborators.

"The long awaited Crescent Park that hugs the waterfront in the Bywater neighborhood is a landscape design masterpiece...The shadows and architectural severity lend the park a certain existential quality. The monumental burned skeleton of an adjacent wharf remains picturesquely in place at the waterline. Some of the running paths enigmatically dead end into the river."

-Doug MacCash

Oakland, California

Jack London Square, named after the author, has undergone recent changes such as more businesses, restaurants, and entertainment. The project, by Ellis Partners,

combines culture, cuisine and commerce along the waterfront. The open spaces were designed by SWA and support a variety of public events such as the farmers markets and organic food fests. Hotels, restaurants and office space share panoramic views of the waterfront. The site also has ample public gathering space, allowing for the largest daily fresh market on the west coast. Oakland celebrates 'First Fridays' along the waterfront with a night market in the summer. Amenities include Oakland crafts, artisan and designers, local produce, shopping bazaar, and quirky performers.



Figure 4-4 (above) Inside market place at Jack London Square
Figure 4-5 (right) Revelers enjoy dancing along the waterfront



Cincinnati, Ohio

The John G. and W. Smale Riverfront Park is a 32-acre park along the banks of the Ohio River in downtown Cincinnati. A trail follows the high banks of the river. The park highlights the city's landmarks, including: the Roebling Bridge, the National Underground Freedom Railroad Center, the Paul Brown Stadium, and the Great American Ballpark. The park links open spaces to the river, and connects a statewide recreation trail and bike systems.



Figure 4-6 (above) Sasaki's design for the park creates an appropriate setting for the Roebling Bridge. Figure 4-7 (left) Covered river walk along the high bank of the river with seating along it offering views of the river and beyond.

American River Parkway

Located in Sacramento, California, the American River Parkway is a success story involving citizen mobilization. Responding to the threat of rapid urbanization in the floodplain, Save the American River Association (SARA) heightened awareness and built support. They raised the public consciousness, raised funds, and gave monetary incentive to public agencies for acquiring land.

The result was a waterfront preservation totaling 23 miles long and 5,200 acres of greenway. It provides access to the

river for boating, fishing, swimming, rafting, tubing on the river; with hiking, camping, cycling, golfing nearby. Unlike most urban waterways, water quality in the American River is good, supporting runs of salmon, steelhead, shad, and striped bass. Consequently, fishing and swimming are excellent. The American River serves as a water supply for Sacramento and the floodway is used for agricultural purposes and as a source of aggregate. Its natural habitat supports wildlife.



Figure 4-8 The bike path offers almost continuous views of the American River

Reno, Nevada

The Truckee River is another example of a western river that had largely been seen as 'wild' and something to be exploited, ignored, or tamed, but now is seen as a tremendous asset. Reno's Riverwalk is located along the Truckee River, with a historic district in the heart of downtown Reno. Reno's Riverwalk hosts many restaurants, bars, lounges, shops, boutiques, galleries, and specialty retailers. Events include: monthly Wine and Beer Walks, live music, and food tasting. Wingfield Park is an island in the Truckee River located in central downtown. This park is host to a multitude of recreational opportunities. Whitewater rafting, kayaking, swimming, and river tubing are among

the highlights. The riverbed is specially engineered for standing waves and other features that draw white water enthusiasts. Wingfield Park is the site of the Reno River Festival, which is



Figure 4-10 Competitor in Reno River Festival



Figure 4-9 Swimmers at Wingfield Park



a kayaking competition that hosts events from freestyle to slalom on its course. The event draws kayakers and onlookers from around the world.

The whitewater park includes 11 drop-pools for kayak play, a kayak racing course, 7,000 tons of smooth flat-top rocks and boulders. Kayakers of all skill levels can find a part of the park that is safe for them. The park is within walking distance from 24-hour hotel/casinos and has easy public and spectator access, surrounding grassy park with amphitheater and facilities for concerts, festivals, picnics, outdoor recreation, etc.

Figure 4-11 (left) Onlookers at Reno River Festival

Figure 4-12 (below) Children kayaking in the Truckee River



5

Design



Figure 5-1 World Map



Figure 5-2 Map of United States Rivers, project site circled

Sacramento River

The Sacramento River is the most significant river in the north west, flowing over 445 miles before reaching the San Francisco Bay. The river historically was home to the densest American Indian population in California, who used the river as a food source (fish) and transportation route. The discovery of gold in the Sierra Nevada's led to an enormous influx of American settlers, which caused booming communities along the Sacramento River.

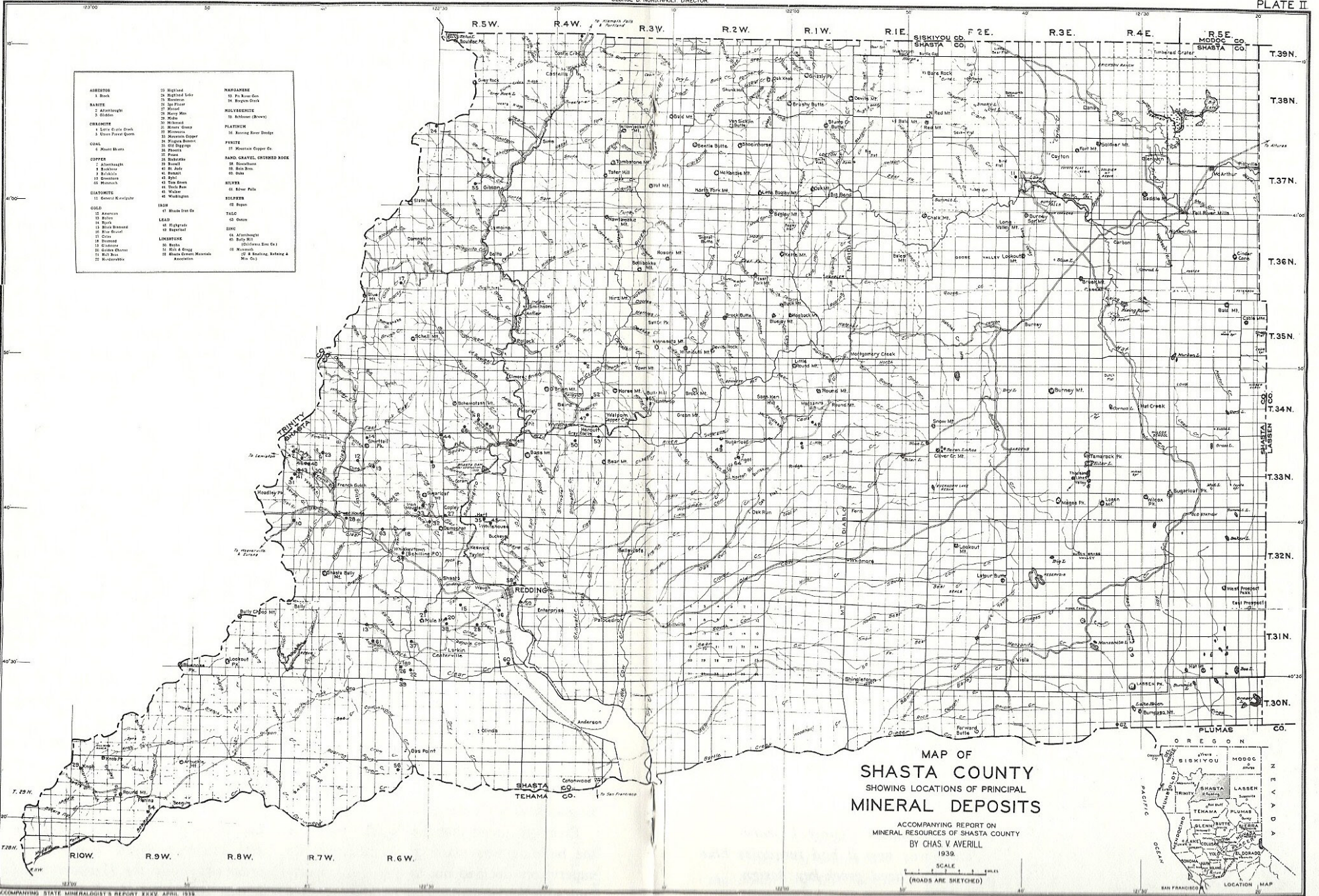
Since the 1950s the watershed has been intensely developed for water supply and hydroelectric power. Today, large dams impound the river and almost all of it's

major tributaries. The dams allow for more designed and built up spaces along the banks of the river because there is less chance of flooding. This has caused significant changes to the river's hydrology and environment.

One section of the Sacramento River that has had significant changes to its hydrology, topography, and environment is in Redding. It is located in Shasta County, along a stretch of the river that contains Shasta Dam and Keswick Dam.



Figure 5-3 Sacramento River Watershed



AMBERGITE 1. Black	22. Sulfur 23. Sulfur Lbr 24. Sulfur 25. Sul. Puff 26. Sul. Puff 27. Sul. Puff 28. Sul. Puff 29. Sul. Puff 30. Sul. Puff	BARITE 1. White 2. Black 3. Green 4. Blue 5. Yellow 6. Red 7. Purple 8. Brown 9. Grey 10. Black 11. White 12. Yellow 13. Red 14. Blue 15. Green 16. Purple 17. Brown 18. Grey 19. Black 20. White 21. Yellow 22. Red 23. Blue 24. Green 25. Purple 26. Brown 27. Grey 28. Black 29. White 30. Yellow 31. Red 32. Blue 33. Green 34. Purple 35. Brown 36. Grey 37. Black 38. White 39. Yellow 40. Red 41. Blue 42. Green 43. Purple 44. Brown 45. Grey 46. Black 47. White 48. Yellow 49. Red 50. Blue 51. Green 52. Purple 53. Brown 54. Grey 55. Black 56. White 57. Yellow 58. Red 59. Blue 60. Green 61. Purple 62. Brown 63. Grey 64. Black 65. White 66. Yellow 67. Red 68. Blue 69. Green 70. Purple 71. Brown 72. Grey 73. Black 74. White 75. Yellow 76. Red 77. Blue 78. Green 79. Purple 80. Brown 81. Grey 82. Black 83. White 84. Yellow 85. Red 86. Blue 87. Green 88. Purple 89. Brown 90. Grey 91. Black 92. White 93. Yellow 94. Red 95. Blue 96. Green 97. Purple 98. Brown 99. Grey 100. Black 101. White 102. Yellow 103. Red 104. Blue 105. Green 106. Purple 107. Brown 108. Grey 109. Black 110. White 111. Yellow 112. Red 113. Blue 114. Green 115. Purple 116. Brown 117. Grey 118. Black 119. White 120. Yellow 121. Red 122. Blue 123. Green 124. Purple 125. Brown 126. Grey 127. Black 128. White 129. Yellow 130. Red 131. Blue 132. Green 133. Purple 134. Brown 135. Grey 136. Black 137. White 138. Yellow 139. Red 140. Blue 141. Green 142. Purple 143. Brown 144. Grey 145. Black 146. White 147. Yellow 148. Red 149. Blue 150. Green 151. Purple 152. Brown 153. Grey 154. Black 155. White 156. Yellow 157. Red 158. Blue 159. Green 160. Purple 161. Brown 162. Grey 163. Black 164. White 165. Yellow 166. Red 167. Blue 168. Green 169. Purple 170. Brown 171. Grey 172. Black 173. White 174. Yellow 175. Red 176. Blue 177. Green 178. Purple 179. Brown 180. Grey 181. Black 182. White 183. Yellow 184. Red 185. Blue 186. Green 187. Purple 188. Brown 189. Grey 190. Black 191. White 192. Yellow 193. Red 194. Blue 195. Green 196. Purple 197. Brown 198. Grey 199. Black 200. White 201. Yellow 202. Red 203. Blue 204. Green 205. Purple 206. Brown 207. Grey 208. Black 209. White 210. Yellow 211. Red 212. Blue 213. Green 214. Purple 215. Brown 216. Grey 217. Black 218. White 219. Yellow 220. Red 221. Blue 222. Green 223. Purple 224. Brown 225. Grey 226. Black 227. White 228. Yellow 229. Red 230. Blue 231. Green 232. Purple 233. Brown 234. Grey 235. Black 236. White 237. Yellow 238. Red 239. Blue 240. Green 241. Purple 242. Brown 243. Grey 244. Black 245. White 246. Yellow 247. Red 248. Blue 249. Green 250. Purple 251. Brown 252. Grey 253. Black 254. White 255. Yellow 256. Red 257. Blue 258. Green 259. Purple 260. Brown 261. Grey 262. Black 263. White 264. Yellow 265. Red 266. Blue 267. Green 268. Purple 269. Brown 270. Grey 271. Black 272. White 273. Yellow 274. Red 275. Blue 276. Green 277. Purple 278. Brown 279. Grey 280. Black 281. White 282. Yellow 283. Red 284. Blue 285. Green 286. Purple 287. Brown 288. Grey 289. Black 290. White 291. Yellow 292. Red 293. Blue 294. Green 295. Purple 296. Brown 297. Grey 298. Black 299. White 300. Yellow 301. Red 302. Blue 303. Green 304. Purple 305. Brown 306. Grey 307. Black 308. White 309. Yellow 310. Red 311. Blue 312. Green 313. Purple 314. Brown 315. Grey 316. Black 317. White 318. Yellow 319. Red 320. Blue 321. Green 322. Purple 323. Brown 324. Grey 325. Black 326. White 327. Yellow 328. Red 329. Blue 330. Green 331. Purple 332. Brown 333. Grey 334. Black 335. White 336. Yellow 337. Red 338. Blue 339. Green 340. Purple 341. Brown 342. Grey 343. Black 344. White 345. Yellow 346. Red 347. Blue 348. Green 349. Purple 350. Brown 351. Grey 352. Black 353. White 354. Yellow 355. Red 356. Blue 357. Green 358. Purple 359. Brown 360. Grey 361. Black 362. White 363. Yellow 364. Red 365. Blue 366. Green 367. Purple 368. Brown 369. Grey 370. Black 371. White 372. Yellow 373. Red 374. Blue 375. Green 376. Purple 377. Brown 378. Grey 379. Black 380. White 381. Yellow 382. Red 383. Blue 384. Green 385. Purple 386. Brown 387. Grey 388. Black 389. White 390. Yellow 391. Red 392. Blue 393. Green 394. Purple 395. Brown 396. Grey 397. Black 398. White 399. Yellow 400. Red 401. Blue 402. Green 403. Purple 404. Brown 405. Grey 406. Black 407. White 408. Yellow 409. Red 410. Blue 411. Green 412. Purple 413. Brown 414. Grey 415. Black 416. White 417. Yellow 418. Red 419. Blue 420. Green 421. Purple 422. Brown 423. Grey 424. Black 425. White 426. Yellow 427. Red 428. Blue 429. Green 430. Purple 431. Brown 432. Grey 433. Black 434. White 435. Yellow 436. Red 437. Blue 438. Green 439. Purple 440. Brown 441. Grey 442. Black 443. White 444. Yellow 445. Red 446. Blue 447. Green 448. Purple 449. Brown 450. Grey 451. Black 452. White 453. Yellow 454. Red 455. Blue 456. Green 457. Purple 458. Brown 459. Grey 460. Black 461. White 462. Yellow 463. Red 464. Blue 465. Green 466. Purple 467. Brown 468. Grey 469. Black 470. White 471. Yellow 472. Red 473. Blue 474. Green 475. Purple 476. Brown 477. Grey 478. Black 479. White 480. Yellow 481. Red 482. Blue 483. Green 484. Purple 485. Brown 486. Grey 487. Black 488. White 489. Yellow 490. Red 491. Blue 492. Green 493. Purple 494. Brown 495. Grey 496. Black 497. White 498. Yellow 499. Red 500. Blue 501. Green 502. Purple 503. Brown 504. Grey 505. Black 506. White 507. Yellow 508. Red 509. Blue 510. Green 511. Purple 512. Brown 513. Grey 514. Black 515. White 516. Yellow 517. Red 518. Blue 519. Green 520. Purple 521. Brown 522. Grey 523. Black 524. White 525. Yellow 526. Red 527. Blue 528. Green 529. Purple 530. Brown 531. Grey 532. Black 533. White 534. Yellow 535. Red 536. Blue 537. Green 538. Purple 539. Brown 540. Grey 541. Black 542. White 543. Yellow 544. Red 545. Blue 546. Green 547. Purple 548. Brown 549. Grey 550. Black 551. White 552. Yellow 553. Red 554. Blue 555. Green 556. Purple 557. Brown 558. Grey 559. Black 560. White 561. Yellow 562. Red 563. Blue 564. Green 565. Purple 566. Brown 567. Grey 568. Black 569. White 570. Yellow 571. Red 572. Blue 573. Green 574. Purple 575. Brown 576. Grey 577. Black 578. White 579. Yellow 580. Red 581. Blue 582. Green 583. Purple 584. Brown 585. Grey 586. Black 587. White 588. Yellow 589. Red 590. Blue 591. Green 592. Purple 593. Brown 594. Grey 595. Black 596. White 597. Yellow 598. Red 599. Blue 600. Green 601. Purple 602. Brown 603. Grey 604. Black 605. White 606. Yellow 607. Red 608. Blue 609. Green 610. Purple 611. Brown 612. Grey 613. Black 614. White 615. Yellow 616. Red 617. Blue 618. Green 619. Purple 620. Brown 621. Grey 622. Black 623. White 624. Yellow 625. Red 626. Blue 627. Green 628. Purple 629. Brown 630. Grey 631. Black 632. White 633. Yellow 634. Red 635. Blue 636. Green 637. Purple 638. Brown 639. Grey 640. Black 641. White 642. Yellow 643. Red 644. Blue 645. Green 646. Purple 647. Brown 648. Grey 649. Black 650. White 651. Yellow 652. Red 653. Blue 654. Green 655. Purple 656. Brown 657. Grey 658. Black 659. White 660. Yellow 661. Red 662. Blue 663. Green 664. Purple 665. Brown 666. Grey 667. Black 668. White 669. Yellow 670. Red 671. Blue 672. Green 673. Purple 674. Brown 675. Grey 676. Black 677. White 678. Yellow 679. Red 680. Blue 681. Green 682. Purple 683. Brown 684. Grey 685. Black 686. White 687. Yellow 688. Red 689. Blue 690. Green 691. Purple 692. Brown 693. Grey 694. Black 695. White 696. Yellow 697. Red 698. Blue 699. Green 700. Purple 701. Brown 702. Grey 703. Black 704. White 705. Yellow 706. Red 707. Blue 708. Green 709. Purple 710. Brown 711. Grey 712. Black 713. White 714. Yellow 715. Red 716. Blue 717. Green 718. Purple 719. Brown 720. Grey 721. Black 722. White 723. Yellow 724. Red 725. Blue 726. Green 727. Purple 728. Brown 729. Grey 730. Black 731. White 732. Yellow 733. Red 734. Blue 735. Green 736. Purple 737. Brown 738. Grey 739. Black 740. White 741. Yellow 742. Red 743. Blue 744. Green 745. Purple 746. Brown 747. Grey 748. Black 749. White 750. Yellow 751. Red 752. Blue 753. Green 754. Purple 755. Brown 756. Grey 757. Black 758. White 759. Yellow 760. Red 761. Blue 762. Green 763. Purple 764. Brown 765. Grey 766. Black 767. White 768. Yellow 769. Red 770. Blue 771. Green 772. Purple 773. Brown 774. Grey 775. Black 776. White 777. Yellow 778. Red 779. Blue 780. Green 781. Purple 782. Brown 783. Grey 784. Black 785. White 786. Yellow 787. Red 788. Blue 789. Green 790. Purple 791. Brown 792. Grey 793. Black 794. White 795. Yellow 796. Red 797. Blue 798. Green 799. Purple 800. Brown 801. Grey 802. Black 803. White 804. Yellow 805. Red 806. Blue 807. Green 808. Purple 809. Brown 810. Grey 811. Black 812. White 813. Yellow 814. Red 815. Blue 816. Green 817. Purple 818. Brown 819. Grey 820. Black 821. White 822. Yellow 823. Red 824. Blue 825. Green 826. Purple 827. Brown 828. Grey 829. Black 830. White 831. Yellow 832. Red 833. Blue 834. Green 835. Purple 836. Brown 837. Grey 838. Black 839. White 840. Yellow 841. Red 842. Blue 843. Green 844. Purple 845. Brown 846. Grey 847. Black 848. White 849. Yellow 850. Red 851. Blue 852. Green 853. Purple 854. Brown 855. Grey 856. Black 857. White 858. Yellow 859. Red 860. Blue 861. Green 862. Purple 863. Brown 864. Grey 865. Black 866. White 867. Yellow 868. Red 869. Blue 870. Green 871. Purple 872. Brown 873. Grey 874. Black 875. White 876. Yellow 877. Red 878. Blue 879. Green 880. Purple 881. Brown 882. Grey 883. Black 884. White 885. Yellow 886. Red 887. Blue 888. Green 889. Purple 890. Brown 891. Grey 892. Black 893. White 894. Yellow 895. Red 896. Blue 897. Green 898. Purple 899. Brown 900. Grey 901. Black 902. White 903. Yellow 904. Red 905. Blue 906. Green 907. Purple 908. Brown 909. Grey 910. Black 911. White 912. Yellow 913. Red 914. Blue 915. Green 916. Purple 917. Brown 918. Grey 919. Black 920. White 921. Yellow 922. Red 923. Blue 924. Green 925. Purple 926. Brown 927. Grey 928. Black 929. White 930. Yellow 931. Red 932. Blue 933. Green 934. Purple 935. Brown 936. Grey 937. Black 938. White 939. Yellow 940. Red 941. Blue 942. Green 943. Purple 944. Brown 945. Grey 946. Black 947. White 948. Yellow 949. Red 950. Blue 951. Green 952. Purple 953. Brown 954. Grey 955. Black 956. White 957. Yellow 958. Red 959. Blue 960. Green 961. Purple 962. Brown 963. Grey 964. Black 965. White 966. Yellow 967. Red 968. Blue 969. Green 970. Purple 971. Brown 972. Grey 973. Black 974. White 975. Yellow 976. Red 977. Blue 978. Green 979. Purple 980. Brown 981. Grey 982. Black 983. White 984. Yellow 985. Red 986. Blue 987. Green 988. Purple 989. Brown 990. Grey 991. Black 992. White 993. Yellow 994. Red 995. Blue 996. Green 997. Purple 998. Brown 999. Grey 1000. Black
------------------------------	--	--

Figure 5-4 Historic map of Shasta County from 1939, showing rivers and mineral deposits

Redding, California

Redding is the fourth largest city in the Sacramento Valley, and is fortunate enough to have the Sacramento River surging directly through its city limits. Redding is a western city that has in the past taken large amounts of resources from the river, but did not view the river for the asset that it was and hence take full advantage of its waterfront. The city promotes the iconic river through advertisements and logos, and yet it has only recently begun to offer improved access points to the river.

Twenty miles of the Sacramento River are within the Redding city limits. The Sacramento River Trail (SRT) spans five of these miles on either bank. This trail is a draw for walkers, joggers, and bikers. Unfortunately, the SRT only offers 2 points of river access for launching watercrafts, allowing for actual interaction with the river. The rest of the river trail is separated from the river by steep banks and overgrown vegetation. While Redding has made great strides in eliminating invasive non-native vegetation such as arundo grasses along its waterways it still has a significant amount of Himalayan blackberry lining its riverbanks.

The remaining miles of the Sacramento River that aren't bordered by the SRT have minimal access as well, due to private ownership or steep cliffs. These stretches of the river benefit only the private landowner, and most are lined with riprap to stabilize the bank so there is no property loss. Neglected public spaces along the river have become home to transient populations. All of these factors combine to make the Sacramento River in Redding an ideal spot for a waterfront redesign.



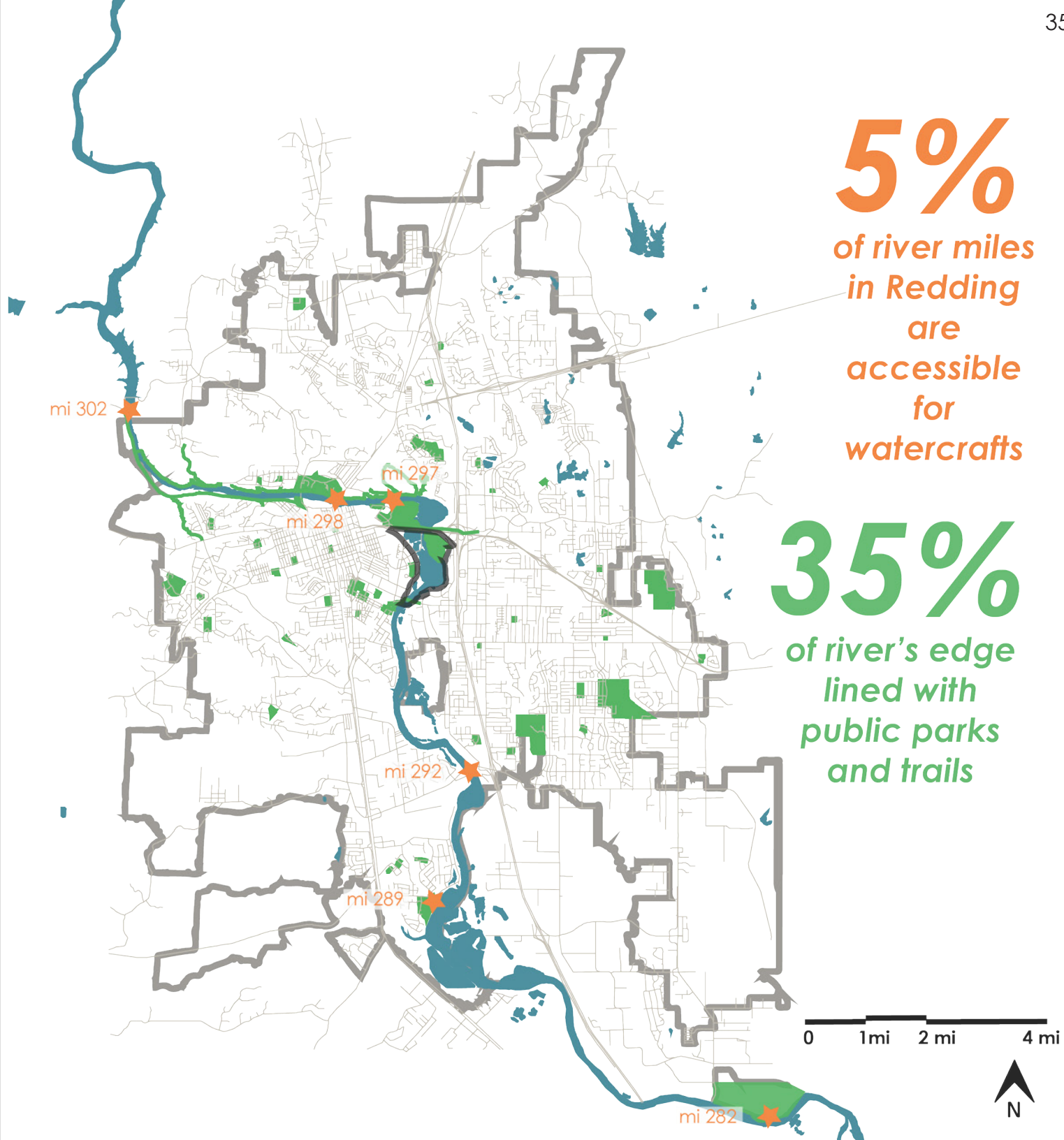
Typical boat ramp access point: concrete ramp with public restroom

 Trails and parks

 Location of public boat ramps and corresponding river mile



Sacramento River Trail: dense brush and steep hillsides prevent access to river



Park Marina

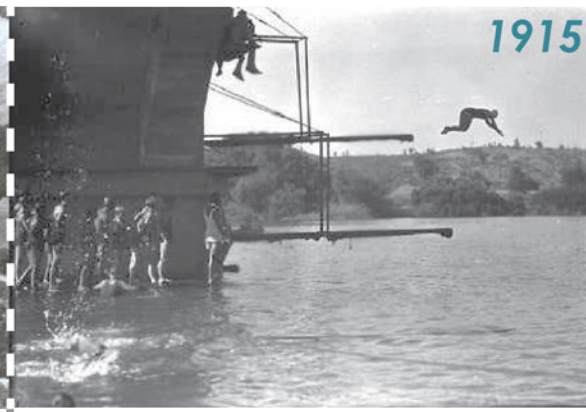
Park Marina Drive offers the best opportunities for a redesign that would result in significant economic, recreational, and scenic improvements. Park Marina Drive is west of and runs parallel to the Sacramento River between the recently rebuilt Highway 44 and Cypress Ave. bridge crossings. The mile long road follows a curve in the river closely, offering many potential access points. Vacant office buildings and surface parking lots obstruct views and access along the river. The site also has uniquely shaped topography that forms lakes along the west side of the river. These ponds are the side effect of the massive excavation project to build Shasta Dam in 1945.

More than 50 years ago the project area was home to several amusement park features including a mini golf course, Ferris wheel, and train ride along the cape created by the largest of the lakes: Kutras Lake. The mile long stretch has been in various states of disrepair for the last 30 years. No new developments have been attempted, and the few new businesses that have opened have found the area not profitable.

Rejuvenating the waterfront along Park Marina Drive will connect east to west and north to south. The project site sits between the Mount Shasta Mall to the East and downtown Redding to the west. North of the site is the Turtle Bay Museum and Exploration Park and the Highway 44 bridge. South of the site is Cypress Bridge, a main corridor from the westside to the eastside of the city. The project site has a planned bike route along the entire stretch of Park Marina. This will provide the necessary link between a gap in the City of Redding Bike Plan: in between the bike lane at Cypress Bridge and the bike lane at Highway 44 Bridge that continues up to Turtle Bay and ultimately to the Sacramento River Trail. This corridor connection will provide safe access and encourage more bikers in the area.



Sawmills operated in the area from 1896-1935. The river was used to float logs down it. The Kutras family owned a sawmill just North of Park Marina until it burned down in 1935.



Lake Redding Swimming Hole, once located less than a mile from Park Marina, was built to maximize profit from the ferry service across the river. All that remains are the concrete steps along the river bank.



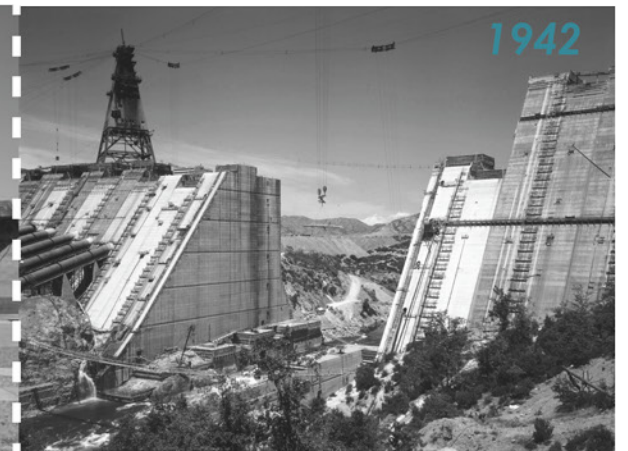
Dredger harvesting the Park Marina area for aggregate, sand, and gravel to make the cement to build Shasta Dam. The curve of the river slows the flow of water, allowing the deposite of rocks.



The longest conveyor belt in the world built for the Shasta Dam project. It spanned over 9 miles and carried 12,200,000 total tons of aggregate.



This structure -The Monolith- was the anchor building for the conveyor belt carrying aggregate from the Park Marina Area to Shasta Dam. The Monolith still stands today, in Turtle Bay Exploration Park.



The construction of Shasta Dam was prompted by the frequent floods and droughts in the Central Valley. At the same time, the railroad that ran along the west side of the river was rerouted.

Existing Conditions



Surface lots cover the area, remnants from when there used to be more stores in the vacant buildings that would require more parking. Now they sit empty and are an eye sore. There is a large round building (3) that sits empty in a central location of the vacant area. This will become the main entrance to the watercraft center. Most of the parking spaces will remain, except for those closest to the river.



5



6



7



8

Dense shrubs and trees block the river from physical access and views of it. The banks are also steep on some stretches (5, 8). There is a large stretch, however, that has a very gradual bank into the water (7). This area will serve as the main swimming and boat launch area.



Aerial of entire site: showing prime location in between downtown Redding and the Mount Shasta Mall. The design is bounded by Cypress Bridge and Highway 44 Bridge. The spiral is highlighting the central activities area of the redesign. From this aerial view the ponds along the side of the main channel are visible.

Design Goals

CONNECT

cities ↔ riverfronts

- Provide connection between citizens/culture to the riverfront
- Increase resident/visitor use/enjoyment of the river
- Create broader uses of urban riverfronts to attract wider variety of visitors to Redding waterfront

EDUCATE

about riverfronts

- Increase residents understanding of and knowledge about river
- Interpret river ecology and history for residents and visitors
- Serve as an example for future similar urban riverfront revival projects

ACCESS

to riverfronts

- Provide view points for recreaters on bike path and along Park Marina
- Opportunity for cafe's and restaurants to have river view and riverfront seating
- Allow paddle craft access with boat ramp, storage facilities, and rental options


ENHANCE

natural features

- Islands created as destination points for paddlers will serve to increase habitat of native plant and animal species
- Increase water flow to ponds to improve water quality and spawning grounds
- Improve tourism, commerce, and recreation within Redding


Natural Resources


Legend

salmon spawning area 

roost or nesting area 

elevations 

bluffs 

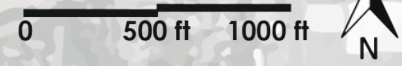
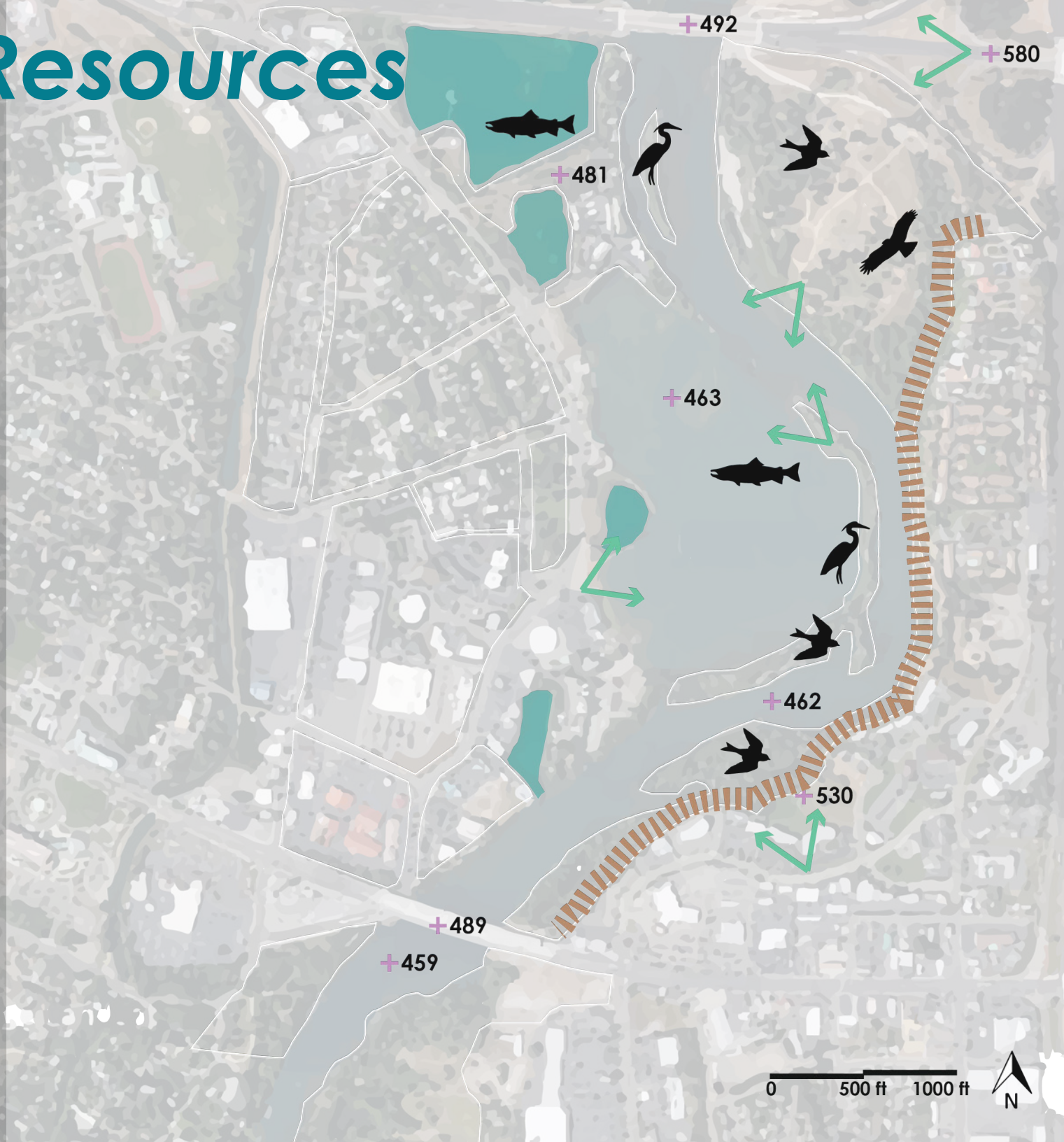
stagnant water 

major views 

Keswick Dam



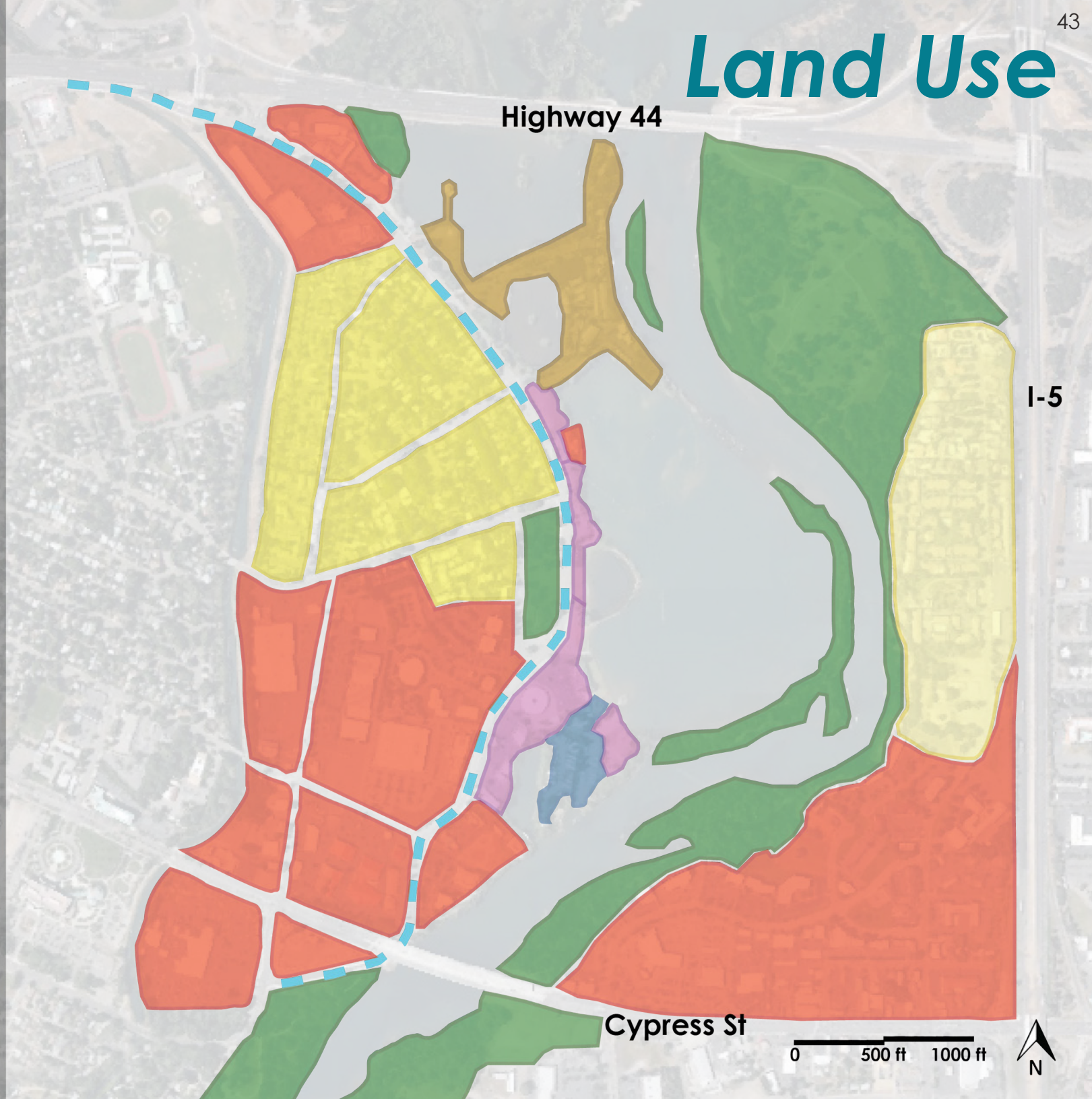
Keswick Dam sits several miles north of Park Marina, marking the end of the free-flowing reach of the Sacramento River. This point is the highest upstream that salmon and steelhead can access to spawn, making the Park Marina river stretch very crucial.



Land Use

Land Use Legend

-  low density residential
-  medium density residential
-  high density residential
-  commercial
-  parks/open space
-  Park Marina Drive
-  vacant buildings/
surface parking lots
-  Marina RV Park



Highway 44

I-5

Cypress St

0 500 ft 1000 ft



Site Plan

Increased river flow to pond to improve water quality

Bike path along entire planning area

Sailboat marina

Habitat islands

Swimming area

Kutras Dog Park

Riverside coffee shops

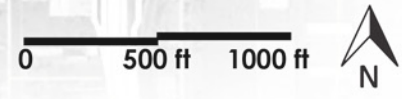
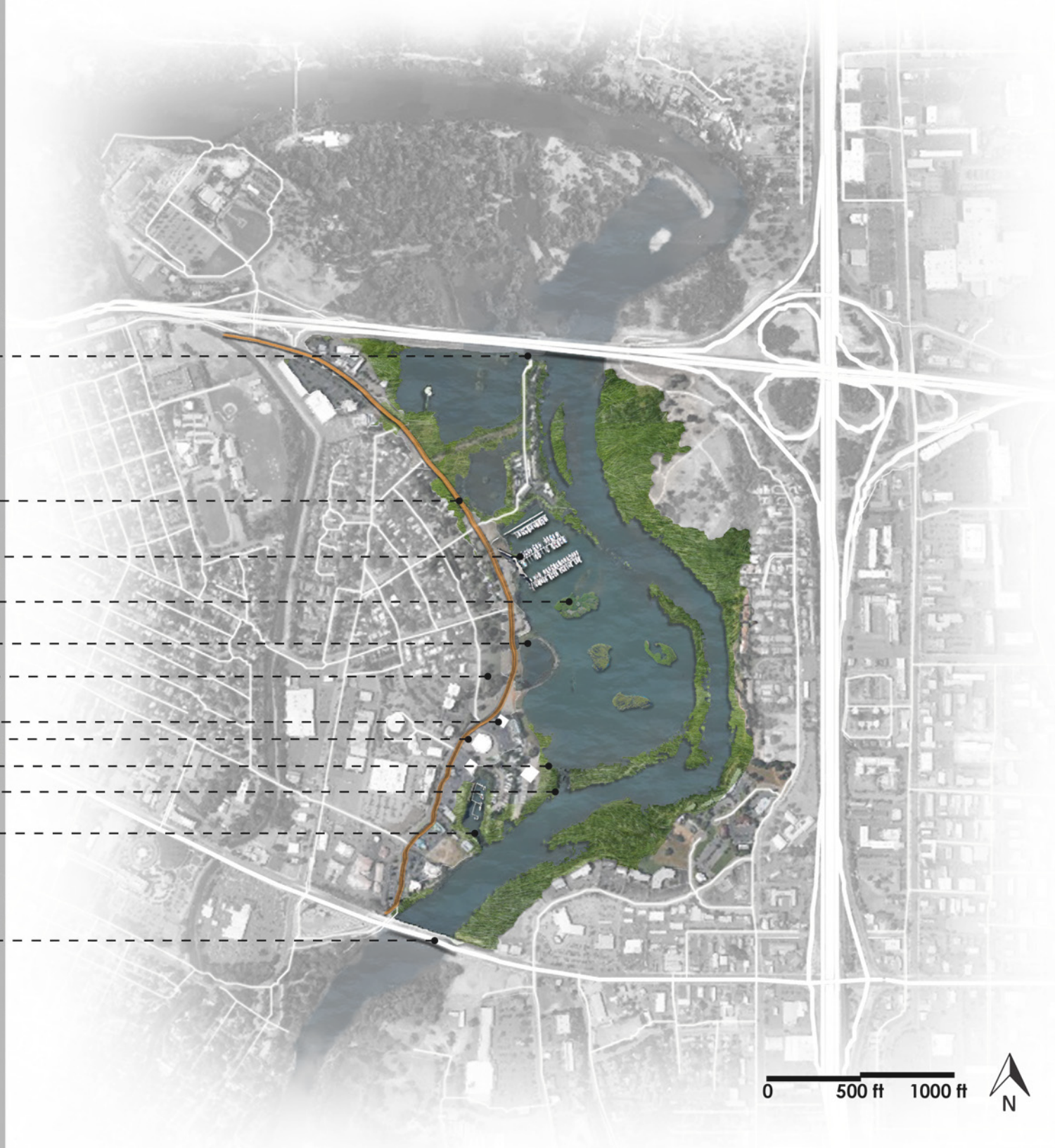
Paddlecraft park entrance

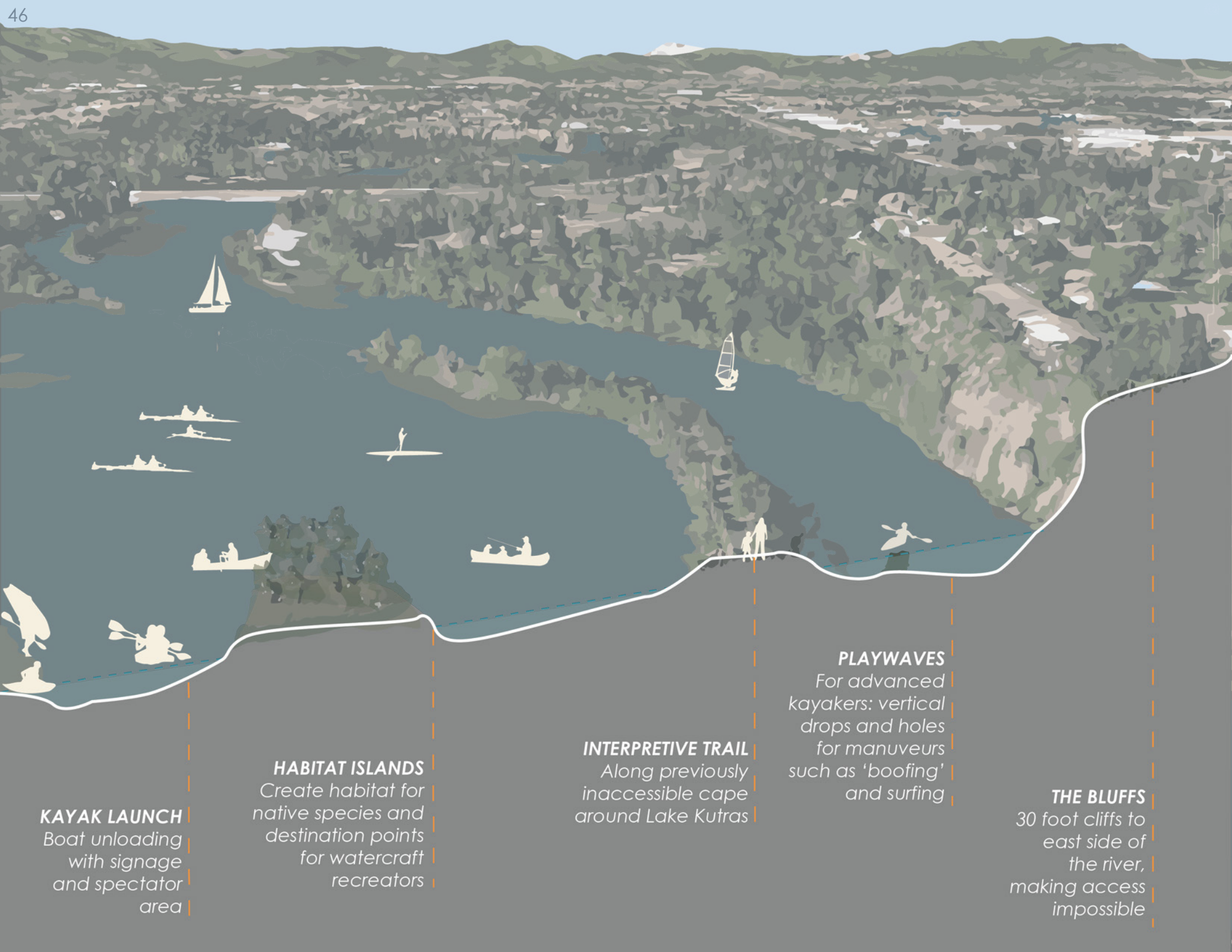
Kayak launch and viewing area

Bridge to cape walking trail

Marina for powerboats

Cypress Bridge bike lane connection





KAYAK LAUNCH
 Boat unloading
 with signage
 and spectator
 area

HABITAT ISLANDS
 Create habitat for
 native species and
 destination points
 for watercraft
 recreators

INTERPRETIVE TRAIL
 Along previously
 inaccessible cape
 around Lake Kutras

PLAYWAVES
 For advanced
 kayakers: vertical
 drops and holes
 for manuevers
 such as 'boofing'
 and surfing

THE BLUFFS
 30 foot cliffs to
 east side of
 the river,
 making access
 impossible

Watercraft Park

Kutras Lake, along Park Marina Drive, is to be the main activities area. The project's focus is on the watercraft park with a planned boat launch along its shore. Planned also is a marina for non-motorized watercraft within Kutras Lake, and a separate marina for power boats further south. Destinations for paddlers will be created in the form of small islands within Kutras Lake. These islands will feature native planting to create habitat for several species in the area, and also serve as lunch spots for paddle craft retreaters. All paddle crafts will be available for rent at this site. For more advanced kayakers, at the south end of Kutras Lake where there is a gap in the cape that forms it's boundary, a play wave (standing wave caused by underground river feature) is planned. This feature, at the right high-water river flows, can allow for endless entertainment and kayak competitions.

The cape of Kutras Lake extends from the main activities area and stretches for $\frac{3}{4}$ of a mile into the river. The project will include a trail with interpretive signs along the way educating people about river dynamics and ecosystems. A bridge over the gap in the cape of Kutras Lake will provide a viewing area to observe the kayakers on the play wave.

Cafés and restaurants will increase the draw of the project site for those who aren't involved in paddle craft sports. Turtle Bay Museum is the only other available option for libations along the river. These cafés would provide people in the neighborhoods nearby a closer option than driving to the mall across Interstate 5.

The Park Marina Riverfront Revival will create access to the river as well as a draw for people to make use of this new access point. The project will educate residents and visitors about the unique history of the site. Park Marina's location within the city of Redding is ideal for this type of riverfront activities center and will improve the river recreation options, as well as the vitality of Redding.





Watercraft Park

Redding has a growing kayaker population, with organizations such as Shasta Paddlers, Penguin Paddlers, etc. Kayak and Stand-up Paddleboard lessons are taught along other stretches of the river. The Paddlecraft Park would provide a central location and mecca for paddlers from the surrounding areas. All types of paddle crafts will be for rent on site. The site will also have kayaking features that will allow for competition to take place, with spectator viewing areas.

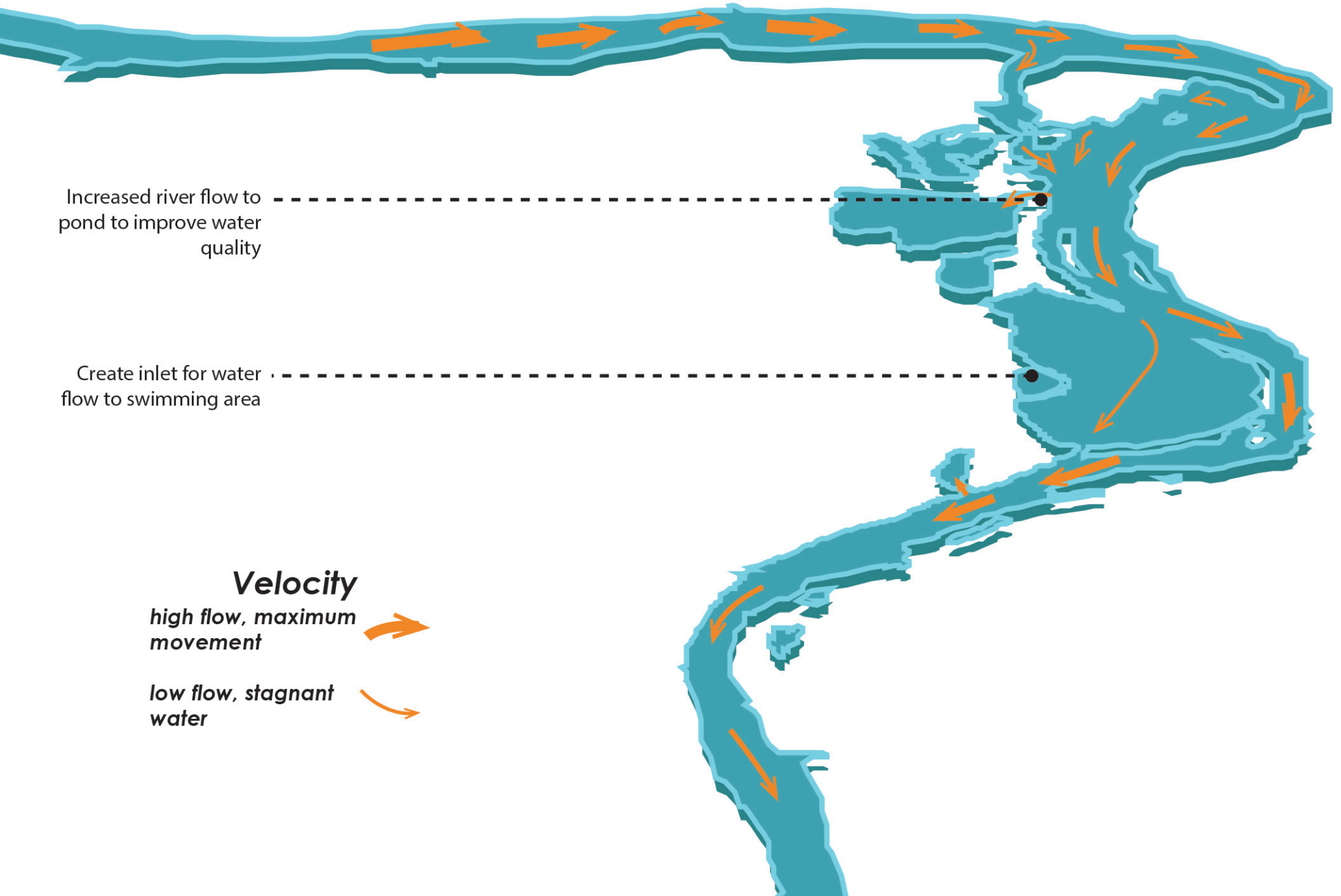


Empty lots adjacent to the river and obstructions that limit access and appeal will be removed.



A precedent study of the American River Lake Natomas: Sacramento State Aquatic Center

Velocity



Bibliography

Urban waterfront revitalization: the role of recreation and heritage.. (1980). Washington, D.C.: Heritage Conservation and Recreation Service, Dept. of the Interior.

Torre, L. A. (1989). Waterfront development. New York: Van Nostrand Reinhold.

Urban waterfront development: selected references. ([Rev. ed.]. (1998). Washington, D.C.: Urban Land Institute.

White, K. N. (1993). Urban waterside regeneration: problems and prospects. New York: E. Horwood.

Roberts, P. W. (2000). Urban regeneration: a handbook. London: SAGE.

Godwin, G. (1981). Urban development and urban renewal. London: The Pitman Press.

Hellmund, P. C., & Smith, D. S. (2006). Designing greenways sustainable landscapes for nature and people. Washington: Island Press.





Life at the Water's Edge
Urban Riverfront Revival

Sofia Prokop
UCD Landscape Architecture 2014