



Lower Cordova Creek Planning Project

Stakeholder Design Formulation Workshop

Thursday March 25, 2021 12:00-2:00 PM

Zoom recording: https://youtu.be/qBU_LdgHiqI

Meeting materials: <https://www.waterforum.org/cordova-creek/>

Meeting Summary

Lower Cordova Creek Planning Project Scope, Schedule, and Stakeholder Outreach

Kat Perkins, Water Forum, gave a [presentation \(slides 3 -21\)](#) orienting the group to Cordova Creek, giving background on past naturalization, and reviewing the scope and schedule of the Lower Cordova Creek Planning Project, as well as stakeholder outreach completed to date. The presentation concluded with an overview of takeaways from stakeholder interviews conducted prior to the meeting which informed the concept design alternatives presented.

Interview Themes (1/2)

- Flows are important and uncertain – but coordination with Aerojet is hopeful
- Beaver dams are a benefit to salmon especially for rearing and primary production (and other native species including Western Pond Turtle)
- A vegetation survey is needed to inform channel alignment and mitigation
- Anecdotal evidence of rich ecosystem – birds, deer, frogs, snakes...

Interview Themes (2/2)

- Neighbors are important stakeholders; Rancho Cordova is our outreach partner
- Need to balance access improvements with protecting habitat; Target educational access East of the creek rather than general public
- Understanding stewardship responsibility is an important part of the planning process

Discussion:

- Barb Byrne, NMFS, asked about the relationship between flows in the creek and pumping from Aerojet's groundwater remediation plant. Kat Perkins, Water Forum, explained that flows from Aerojet groundwater pumping are almost constant, except during planned and emergency shutoffs. Dalia Fadl, City of Rancho Cordova, added that in addition to flows from Aerojet pumping, Clifton Drain/ Cordova Creek drains approximately 1300 acres, making suburban runoff a major source of water.
- KC Sorgen, SAFCA, asked about an anticipated end date for Aerojet groundwater remediation at this site. Kat answered that in a conversation with an Aerojet staff member they reported that contaminants at this site were not decreasing but they felt less sure that the same level of pumping would continue 20+ years in the future.



Baseline Aquatic Study Update

Kirsten Sellheim, Cramer Fish Sciences, gave a [presentation \(slides 22-36\)](#) to update the group on the purpose and findings to date of baseline aquatic study of Cordova Creek. Likely due to dry conditions and low flows in the American River creating a disconnect between the creek and main channel, salmonids have not been observed in the creek during snorkel surveys.

Discussion:

- A NMFS scientist asked about temperature dynamics within the creek and whether additional loggers might provide useful data. Sellheim reviewed the temperature graph, noting that loggers throughout the creek showed relatively uniform temperatures. Logger data shows that during the rainy season, water cools as it moved downstream through the naturalized creek.
- The group discussed the “flashy” nature of the creek due to runoff: the creek can go from 6 cfs to overflowing its banks after a major storm event.
- Michelle Stevens commented that the Western Pond Turtle is being outcompeted in the American River and encouraged the group to consider building basking areas and think more about the complex interactions between salmon, beavers and turtles in the creek. Sellheim added that crews have been looking for Western Pond Turtles during surveys.

Action Items:

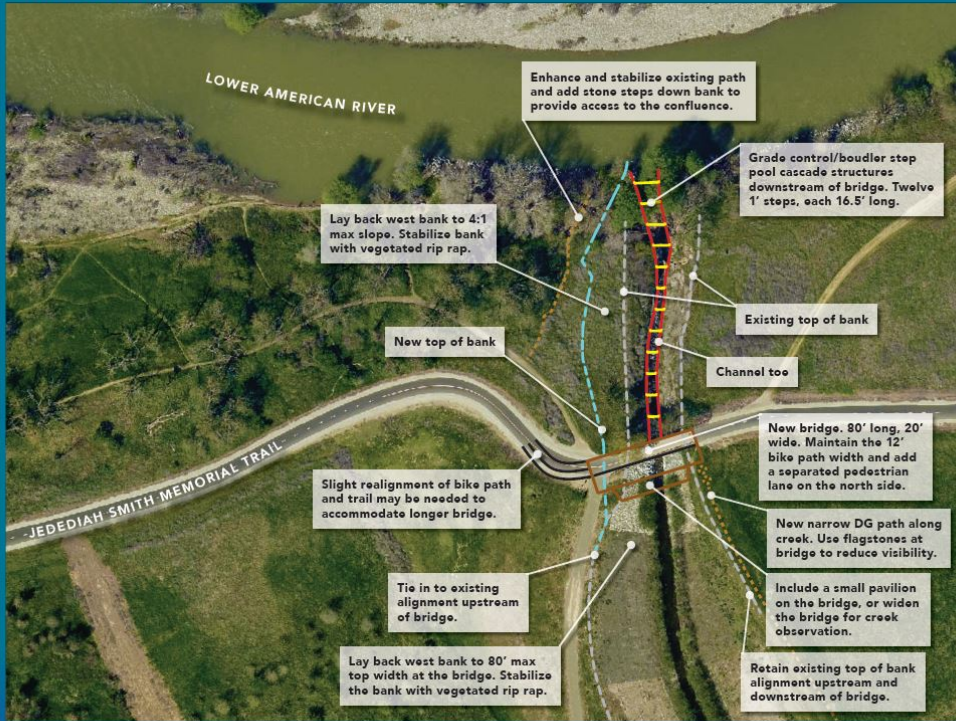
- Dalia Fadl will share with cbec a model of the Cordova Creek watershed which includes volume for 100-year and 10-year flood flows and water surface elevation.

Preliminary Design Concepts Discussion

Sam Diaz, cbec, presented two conceptual design alternatives ([handout](#)) to the group and led a discussion focused on consideration of the alternatives. Cbec revised concepts considerably after the pre-design meeting based on stakeholder input and preliminary modeling of the bridge; the new concepts have a shorter bridge with less realignment of the bike trail and less overlap of previously naturalized ground.

Alternative 1 uses the existing alignment and East bank, whereas Alternative 2 realigns the channel by swinging it to the West and exiting in an existing downstream pool. Alternative 1 would create twelve 1-foot steps, whereas Alternative 2 would create twenty-four 6-inch steps. The bridge design for both alternatives includes a separate pedestrian crossing and both designs shows a path on the East side connecting Soil Born.

Cordova Creek Phase 2 - Alternative 1



Cordova Creek Phase 2 - Alternative 2





Discussion:

- The group discussed the location of the exits of the two alternatives into the main channel. Alternative 2 exits downstream of an existing bank revetment. Alternative 1 would likely include the addition of some fill at the downstream end of the channel to prevent recirculation that would scour rock.
- Multiple stakeholders expressed a preference for Alternative 1 due to the lower level of disruption which would likely create less destruction of existing vegetation and impacts to nearby sensitive cultural resources.
- Dalia Fadl, City of Rancho Cordova, expressed a preference for maintenance access on both sides of the channel and noted that 15' maintenance roads are standard, but often are narrower and unpaved in the Parkway.
- Mary Maret, Regional Parks, expressed satisfaction with both alternatives and the lower level of disruption to previously restored areas. Maret noted that Alternative 2 will impact the existing equestrian trail. Maret also reminded the group to keep in mind the resiliency of trails built near the river.
- Lacey Carlson, Soil Born Farms, explained Soil Born Farm's desire to target interpretive use by groups affiliated with the American River Ranch on the planned East side trail and to keep the path leading to their farm narrower than the trail built on the West side of Cordova Creek. Liz Bellas and Mary Maret, Regional Parks, reminded the group that trails should be accessible to all.
- Carlson also expressed a desire for the trail to run alongside upstream portions of the creek including the Wisdom Oak, and to have an upstream crossing to enable grazing.
- Ruth Goodfield, NMFS, commented that Alternative 2 is more conducive to fish passage, but Goodfield also noted that she felt the most valuable aspect of the project is interpretation and creating better opportunities for kids to learn about restoration.
- Kirsten Sellheim, Cramer Fish Sciences, encouraged the group to not to think about fish use of the creek being all bad or all good, but rather likely beneficial in some years and not others.
- Mike Meschi, Sacramento County, asked about the turnaround radius and use by emergency vehicles. Diaz explained that the design maintains the width of the bridge crossing for vehicles while adding width for a pedestrian crossing. Meschi commented that the design should consider eliminating bridge skew.
- David Bolen, Sacramento County, commented that it may be beneficial to keep the bridge in service during construction and locate the new bridge upstream or downstream. Diaz added that upstream relocation would likely be necessary to avoid sensitive cultural areas.



- Fisheries scientists present at the meeting, including CDFW and NMFS scientists, expressed hesitancy to make a decision regarding the suitability of habitat for salmonids with only one year of data.
- Chris McKibbin, CDFW, reviewed feedback from his colleagues, highlighting that CDFW is the agency which would be asked with maintaining the fishery and responding to public concern. Tracey Grimes, CDFW, provided a caveat that the alternatives previously provided were different, creating some confusion. Grimes explained that her main concern is that Aerojet could shut off flows within the creek, stranding fish.
- McKibbin asked about a fish barrier at the upstream end of the creek. Sam Diaz answered that there is a hydraulic jump which was evaluated previously and was impassable by fish.
- The group used a [mural](#) board to brainstorm pros and cons of the project (included at the end of this summary).

Next steps:

- Dalia Fadl, City of Rancho Cordova and Mary Maret, Regional Parks, will discuss maintenance, and work to determine what areas are the responsibility of Rancho Cordova versus Sacramento County.
- Kat Perkins, Water Forum, will pursue further discussion with stakeholders regarding ADA accessibility of trails.
- Kat Perkins, Water Forum, will continue to update and solicit input from tribal representatives on design concepts.
- Lacey Carlson, Soil Born Farms, and others will continue to discuss the trail route.
- Mike Meschi, Sacramento County, will provide review of the bridge design.
- Kirsten Sellheim, Cramer Fish Sciences, will follow up with more information on the upstream barrier to fish passage.

The next stakeholder workshop for the Lower Cordova Creek Planning Project is to be scheduled for June 2021.

Pros and Cons

PROS - Alt. 1	CONS - Alt. 1
<p>PROS - Alt. 1</p> <ul style="list-style-type: none"> Allows for fish passage Provides access along Ph1 channel Less disruption to environment Minimal grading - shares existing channel alignment Provides access to confluence with LAR Less expensive? Reduced user conflict on bridge Provides safe view area of Ph1 channel 	<p>CONS - Alt. 1</p> <ul style="list-style-type: none"> Steeper slope - steps are 1 ft tall Outlets on the outside of a bend - swifter water and more difficult access for juveniles Access to confluence - limited landing space Retains the concrete right bank Outlet is exposed to swifter river flows Might it result in stranded redds/ juveniles? Requires some fill at the downstream end Requires a bike path encroachment onto Phase 1 restoration Less trash capture function at high flow events?
PROS - Alt. 2	CONS - Alt. 2
<p>PROS - Alt. 2</p> <ul style="list-style-type: none"> Allows for fish passage with short 6" steps Provides access along Ph1 channel Outlets in an existing eddy - easier access for juveniles Reduced user conflict on bridge Provides access to confluence with LAR Outlet is tucked behind existing bank protection Better visibility into the channel Provides safe view area of Ph1 channel More surface area for trash capture Channel confluence is in an existing pool Greater potential to tie into other restoration project Easier access for monitoring (less steep) 	<p>CONS - Alt. 2</p> <ul style="list-style-type: none"> Larger grading footprint and more vegetation impacts Access to confluence - limited landing space More expensive? Creates a large slope near a bend in the bike trail Might it result in stranded redds/ juveniles? Shallower pools could heat up more - require more shade to cool? Requires a bike path encroachment onto Phase 1 restoration