



L O W E R P U T A H C R E E K C O O R D I N A T I N G C O M M I T T E E

TO: Interested Persons

FROM: Max Stevenson, Streamkeeper

DATE: February 10, 2022 3:30-5:00 PM

SUBJECT: Agenda for February 10, 2022 Decision Meeting of the Lower Putah Creek Coordinating Committee via Zoom from 3:30 to 5:00 PM

#	min	Item	
1	3:30	Remote Meeting Action Item: In Compliance with Government Code Section 54953(e) added by Assembly Bill 361, board to reconsider the circumstances of the state of emergency and determine that: (i) the state of emergency continues to directly impact the ability of the members to meet safely in person; and/or (ii) State or local officials continue to impose or recommend measures to promote social distancing.	
2	3:35	Public Comment: The public may comment on matters pertaining to Putah Creek.	
3	3:45	Approval of Minutes: Minutes of the January meeting will be reviewed.	LPCCC Admin
4	3:50	South Fork Wetlands: Andrew Fulks will present on a proposed restoration and public access project on Putah Creek near Old Davis Road.	
5	4:15	Streamkeeper Report: SK will report on current activities.	
8	4:40	The LPCCC will receive updates from the Planning Subcommittee:	Patterned Calendar
		A. Riparian Diversions B. Interagency Communications C. Fish Monitoring D. Annual Workplan	
10	4:50	Member Reports: LPCCC members will have an opportunity to report.	
11	4:55	Next Meeting: March 10, 2022 3:30-5:00 PM	

Join Zoom Meeting <https://zoom.us/j/92144805586?pwd=UFI1NXFUMDFoZlBSSXZRamc1eVBoZz09>

One tap mobile +16699009128,,92144805586#,,,,*224174# US (San Jose)

Dial by your location

+1 669 900 9128 US (San Jose)

Meeting ID: 921 4480 5586

Passcode: 224174

810 Vaca Valley Parkway, Suite 203, Vacaville, California 95688 ♦ Phone: (707)451-6090 ♦ Fax: (707) 451-6099
<https://www.scwa2.com/lower-putah-creek-coordinating-committee/>

*The Lower Putah Creek Coordinating Committee consists of:
 Cities of Davis, Fairfield, Suisun City, Vacaville, Vallejo and Winters; Counties of Solano and Yolo;
 Solano and Yolo Riparian Landowners; Maine Prairie Water District; Solano County Water Agency;
 Solano Irrigation District; Putah Creek Council and University of California, Davis*

January 13, 2022 LPCCC Meeting Minutes. Meeting by Zoom.

Attendees:

Harold Anderson, Andrew Fulks, Patrick Huber, Roland Sanford, Herb Wimmer, Turid Reid, Elizabeth Reay, Michael Hether, Thomas Pate, JP Marie, Tara Thronson, Justin Cole

Staff: Rich Marovich, Chris Lee, Max Stevenson, Gavin Poore

Public: Jeff Tenpas, Melanie Truan

Convened at: 3:30 PM

Quorum: Yes

1. Remote Meeting Action Item: Government Code Section 54953(e) added by Assembly Bill 361 requires that teleconferencing be approved by governing boards each month. Motion: Roll call vote on whether to continue teleconferencing.

Motion to continue Zoom Meetings: JD Kluge Second: Roland Roll Call Vote:

Ayes: Hether, Wimmer, Kluge, Sanford, Anderson, Reid, Reay, Fulks, Thronson, Huber, Cole

Nayes: none. Motion passes unanimously.

2. Public Comment: Jeff TenPas stated he will submit a letter commenting on the Nishikawa project (Comments attached to these minutes).

3. New Members: No new members.

4. Election of Officers:

Election of Chair (nomination from Yolo)

Andrew Nominates Patrick Huber for Chair, Tara second. No other nominations. Roll Call Vote:

Ayes: Hether, Wimmer, Kluge, Sanford, Anderson, Reid, Reay, Fulks, Thronson, Huber, Cole

Naye: none

Election of Vice Chair (nomination from Solano)

Roland nomination of Michael Hether, Patrick second. No other nominations. Roll Call Vote:

Ayes: Hether, Wimmer, Kluge, Sanford, Anderson, Reid, Reay, Fulks, Thronson, Huber, Cole

Nayes: none

5. Approval of Minutes of Dec 9, 2021 Meeting:

Revisions: None.

Motion to approve: Herb

Second: Andrew

Ayes: Unanimous

Discussion on the need to abstain if a member was not present during the meeting. JD reports that a member can approve the minutes if they have read the minutes, even if they did not attend. Rich agreed that was his understanding.

6. Stebbins Cold Canyon Trail Work Report on Completion:

Gavin Poore (SCWA) presented on completion of the Stebbins Cold Canyon Trail Project. The Cold Canyon trail was impacted by the Wragg Fire. Erosion from the trail was a hotspot for erosion, potentially contributing sediment into the inter-dam reach of Putah Creek. Approximately 1 mile of trail was reworked, with new stairs, switchbacks, water bars, rolling dips, and outsloping to reduce erosion. A video and before and after photos were shown. Fifteen to twenty trail workers spent a few months on the project during the summer of 2021 (June to August). Minor sections were rerouted. American Conservation Experience (Phoenix AZ) was the contractor. FEMA Hazard Mitigation funds (5091-PJ0001) were used (~\$441,000) with SCWA and volunteers contributing in-kind labor.

7. Patterned Calendar Review:

The patterned calendar was presented and reviewed. Topics for January include the review of budget, grant application process, and equipment inventory. The 'Nursery Operations' item was removed from the calendar (as Putah creek Council has taken over nursery operations). The planning subcommittee steps were reviewed. Wimmer gave a history of development of the calendar.

Herb motion to adopt, Roland second. Adopted unanimously.

8. Streamkeeper report:

Max Stevenson is the new Streamkeeper and has worked 4 days so far. Max is working on logistics, file organization, and introducing himself to stakeholders.

An update on the low dissolved oxygen in the Toe Drain was presented by Max with a review of the Lisbon Wier dissolved oxygen (DO) sensor data. USGS data was also discussed showing that the low DO extended for about 25 miles to the Delta. The need for a plan to respond to future low DO events was discussed.

Marovich reported some small erosion repairs on Dry Creek.

9A. Review of Grant Budgets

The draft grant agreement for Prop 68 funds for the Nishisikawa has been received from the Ca Resource Agency. A table was also presented showing the history of grants received by the LPCCC. Twenty-six grants for over \$14 million have been received by the LPCCC since 2000.

9B. Review of Equipment Inventory

The LPCCC equipment list was reviewed. No changes have been made to the list recently.

9C. Review of potential new Grant Applications

Rich Marovich commented on next grants opportunities focusing on FEMA hazard mitigation funds for more erosion control on inter-dam reach tributaries. CDFW Drought Emergency funds may be available for the Los Rios Check Dam Bypass project. Huber asked about Federal Infrastructure Funds. Sanford stated that there is discussion on federal funds with the Bureau for Solano Project activities, but not for work directly on Putah Creek.

10. Planning Subcommittee

The planning sub-committee reviews potential future projects and helps guide activities of the LPCCC. A new planning subcommittee is usually chosen each January.

Nominations; Wimmer, Sanford, Fulks, Ried, Hether

Passed Unanimously

Sanford would like to have a subcommittee meeting before the day of the next LPCCC. Sanford will coordinate and circulate possible dates and times with the committee members.

11. Member Reports

Sanford: At today's meeting the SCWA Board will be honoring Rich Marovich for 21 years as the Streamkeeper.

Kluge: will be going to the BOR Mid Pacific Conference next month in-person.

Reay: last call for OneCreek paid internship tech program. PCC also helping at the South Fork Preserve ADA trails. PCC Updated the phone number (no more busy signals). Canoe tours for the docents at Solano Park.

Heter: request a tour of Putah Creek sometime in the future.

Nothing additional to report from other members.

12. Correspondence

As reported earlier, SCWA has received a draft of the Nishikawa Project (Site 20) Grant Agreement from the California Natural Resources Agency.

13. Next LPCCC Meeting:

The next meeting is Feb 10, 2022, 3:30-5:00 pm by zoom.

Meeting was adjourned at 4:42pm.

Jeff Tenpas' comments, submitted after the meeting, are below. Attachments to the comments are not included, as they have been previously submitted to the LPCCC.

Comments received by email.

Friends of Putah Creek

2736 Brentwood Place, Davis, CA 95618 - www.friendsofputahcreek.org

Memorandum

To: Max Stevenson (mstevenson@scwa2.com), Roland Sanford (sanford@scwa2.com)

From: Jeff TenPas, Friends of Putah Creek

Date: January 13, 2022

Re: Proposed *Nishikawa Chinook Salmon Restoration Project* on Putah Creek

Dear Max and Roland,

Please convey this correspondence to the LPCCC Board.

The purpose of the communication is to formally advise you and the LPCCC of significant shortcomings in the proposed *Nishikawa Chinook Salmon Restoration Project* on Putah Creek as submitted by the Solano County Water Agency (SCWA). The problems with the project are further described in the following report which summarizes the problems of a project of very similar design (the Winters Putah Creek Park project) located several miles upstream from the proposed Nishikawa project. The Winters Putah Creek Park project was also constructed by SCWA on a 1.25 mi long reach of Putah Creek through Winters, Ca in several phases beginning in 2010.

The problems of the Winters project are a reliable predictor of the outcomes to be expected of the proposed Nishikawa project. We therefore strongly believe that an independent technical review of the design of the Nishikawa project must occur before the grant is awarded and further damages to the creek occur under the guise of "restoration".

We believe this review should involve unaffiliated experts in riparian restoration, fish biology, and riparian hydrology who can objectively review the proposed project in light of the adverse results seen in the project in Winters and then advise as to the suitability of this design approach.

Toward that end, we are willing to assist in whatever manner in most appropriate and would like to schedule a Zoom meeting or conference call to discuss the possibilities. Please feel free to contact me if you have any questions or wish for any additional information.

Respectfully submitted,

Jeff TenPas

Review of the Proposed *Nishikawa Chinook Salmon Restoration Project*

Part I – Description of the Proposed Project

The proposed *Nishikawa Chinook Salmon Restoration Project* is a radical experiment in stream alteration involving the bulldozing and removal of virtually the entire riparian forest in a ½ mile reach of Putah Creek. This is followed by complete realignment of the stream and complete alteration of floodplain contours and importation of tens of thousands of cubic yards of a foreign, non-native fill. The fill would be spread and compacted with massive earth-movers into a uniform planar surface over the entire floodplain.

SCWA's detailed grading plans (see Sheet 5 of the attached project proposal) for Nishikawa show an extreme cut and fill alteration of about 3,000 feet of Putah Creek and its floodplain using the following plan:

- Complete clearing of 11 acres of mature riparian forest save for a few trees
- Complete regrading of all 11 acres of existing floodplain to a uniformly planar and featureless floodplain
- Use of 22,000 cubic yards of non-native, off-site excavation spoils to fill in the old stream channel and cut a new man-made channel

The proposed design includes the following major shortcomings:

- The plan for massive alteration on the floodplain is completely misaligned with the project's stated objective – constructing instream spawning habitat
- The cost for clearing and earthmoving on the floodplain (\$750,000) is much greater and disproportionate to the minor investment otherwise required for cobble and gravel to construct salmon spawning habitat
- The existing mature riparian forest is mostly native species and would be functionally completely destroyed by this stream alteration plan
- The proposed plan for diesel-geomorphology is completely contrary to Best Riparian Conservation Practices approved for Yolo Co by CDFW (see below)

Also note that most of the project area is free of invasive plants and does not need to be disturbed for their management as shown in the following figure from the Lower Putah Creek Watershed Management Action Plan.

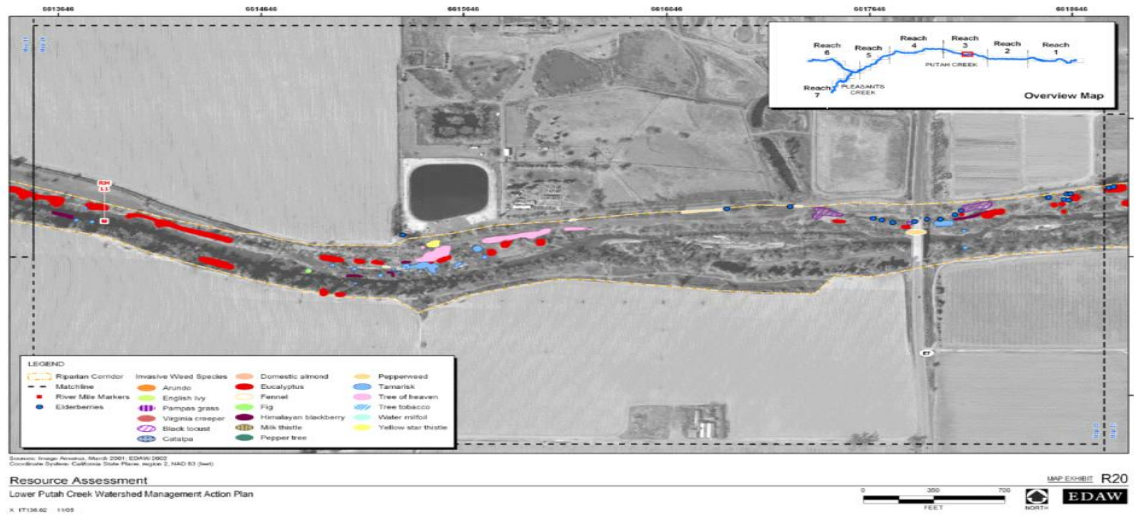


Figure 1. Invasive Plants in Nishikawa Project Area

The following figure shows the result of such a project as proposed for Nishikawa.



Figure 2. Winters Putah Creek Park in 2011. Floodplain cleared, filled, flattened, and compacted.

Part II – Conflict with Best Riparian Conservation Practices

Best Riparian Conservation Practices are identified in the Yolo County Resource Conservation Investment Strategy/Land Conservation Plan (RCIS-LCP, the "*Conservation Strategy*") as adopted by the Yolo Habitat Conservancy and approved by CDFW (see <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=157451&inline>). The proposed Nishikawa project, with its extreme reliance on heavy machinery to remake the stream and floodplain, is in direct conflict with these established best practices in the following manner;

1) To attain the goal of "*Maintaining the integrity of natural communities*" the *Conservation Strategy* recommends using only native soils and specifically advises against the use of imported fill, soil disturbances and compaction. The Nishikawa project plans call for complete regrading of the floodplain and importing 22,000 cubic yards of excavation spoils to use as fill. The fill will be spread and highly compacted by large earthmovers to a uniform planar surface that will be nearly impermeable to water movement. This sharply contrasts with the naturally stratified and porous structure of the existing floodplain.

2) To attain the goal "*Improving dynamic hydrologic and geomorphic processes in watercourses and floodplains in a way that increases structural and habitat diversity*", the *Conservation Strategy* recommends:

- "*Creating secondary channels and overflow swales that add riverine and floodplain habitat values by allowing channels to meander and naturally laterally move through the floodplain;*
- "*Providing greater topographic and hydrologic diversity, recognizing that depressional features such as ponds and back channels and high ground provide important refugia for species such as western pond turtle and that higher ground in floodplains can serve as wildlife refugia from floodwaters.*"

Instead the plan for the Nishikawa project calls for clearing almost the entire floodplain, making way for importing 22,000 cubic yards of fill, and grading the floodplain to a flat and featureless expanse.

3) To attain the goal of "*Maintaining fluvial equilibrium and protecting lacustrine/riverine systems supporting American beavers*", the *Conservation Strategy* recommends avoiding stream channelization, avoiding unnecessary vegetation removal, and targeting portions of streams that support American beavers for protection including protection of existing beaver dams.

Instead, the Nishikawa project would destroy existing beaver dams and dens, relocate the stream to a new narrower and shallower channel, decrease open water, fill ponds supporting beaver colonies, and replace high banks supporting occupied beaver dens with low shallow banks unsuitable for dens.

4) To attain the goal "*Maintaining and/or restoring and protecting stream processes and conditions*", the *Conservation Strategy* recommends maintaining subsurface flow, connecting groundwater hydrologically to stream flow, and expanding and protecting riparian vegetation. Instead the Project's proposed land-forming, fill, and earth-moving would destroy floodplain structure, disrupt and block groundwater flow paths, and disconnect the stream from the floodplain, as has occurred at Winters Putah Creek Park Project.

Part III – The Problems with the Winters Putah Creek Park Project

The proposed Nishikawa Project is almost identical in scope and design with the Winters Putah Creek Park Project which was designed and implemented by SCWA over the last 10 years. In the Winters project, the floodplain was almost completely cleared and graded to a planar surface sloped at 1-2% towards the stream, just as proposed for the Nishikawa project. The stream channel was almost completely altered to make it narrow and shallow, just as proposed for the Nishikawa project. And riffles were constructed for salmon spawning in Winters just as is planned for the Nishikawa project. According to the SCWA (TRPA, May 2020) "*Three existing riffles were augmented with additional gravel substrates and 14 new riffles were created at 200-foot intervals by importing 2,000 tons of salmon spawning gravel mix (Rich Marovich, personal communication).*"

The outcome is reviewed in the attached two documents that objectively present and discuss the Winters Putah Creek Park Project (see "*Winters Putah Creek Park - Part 1 - Case Study of a Failed Project_June-2018*" and "*Winters Putah Creek Park - Part 2 - Analysis of Project Failures_August-2019*"). We also strongly recommend a tour of the Winters project to gain first-hand understanding of the damaging impacts of the currently proposed project design.

1. Failure to create self-sustaining salmon spawning habitat. In Winters the remade channel and the 14 new manmade riffles with spawning gravels failed under the impact of natural fluvial geomorphic processes. Today, in the upper half mile (Phase 1) constructed in 2011 there is no measureable spawning habitat. In next reach (Phase 3) constructed in 2018, there are about 100 feet of spawning habitat but that is no measureable increase from pre-existing. In the next reach (Phase 2) there is fragmentary spawning habitat at stream edges and in the last reach (NAWCA 3) the small amount of spawning habitat was there before the Project. Riffles that were built were not resilient according to SCWA's own reports. Altogether there is an estimated 100 feet of spawning habitat that survives in the whole 6000 feet of altered stream. The 14 new riffles were scoured away or submerged by silt.

In the 2020 annual counts of fish on Putah Creek, the aquatic biologists reported, "...the high flows associated with Lake Berryessa spills during the late winter and early spring of 2019

resulted in sand deposition throughout the Winters Park channel restoration area that filled in many of the pools and covered many of the gravel riffles and the upper weir site " (see p. 15, "Results of October 2020 Lower Putah Creek Fish Surveys", June 10, 2021, by Tim Salamunovich, TRPA Fish Biologists).

In another report by a different consulting aquatic biologist to SCWA on the effectiveness of different strategies employed from 2003 to 2020 to enhance salmon habitat, projects were ranked from 0 (lowest effectiveness) to 5 (highest effectiveness). All of the Winters Putah Creek Park project phases were ranked 0 reflecting the overall ineffectiveness of massive stream alteration and channel realignment to improve salmon spawning habitat. (see p. 41, Report 6873, "Lower Putah Creek Gravel Bed Scarification Final Report" (Amended), April 30, 2021 by Ken Davis).

SCWA's attempts to build man-made spawning habitat were easily overridden by natural stream processes of scouring or silting. As stated in the widely read authoritative riparian restoration manual, "**Low-Tech Process-Based Restoration of Riverscapes: Design Manual**", "The desire to reduce uncertainty and precisely predict restoration outcomes has led to practices that tend to emphasize the stability of channels. Constructed features and attributes such as plan-form, channel width, location of pools and riffles are designed in such a way that they do not change through time. The emphasis on stability requires detailed engineering designs, modeling, and heavy equipment, all of which contribute to the high cost of restoration... However, population level response of target species [e.g. salmon and steelhead] to these restoration actions is equivocal."

2. Decrease in native fish and other wildlife populations. Native fish populations have declined in Winters Putah Creek Park over the past decade instead of gaining which was the whole intent of that project. Native fish counts in the Winters Putah Creek Park are typically less than in immediate upstream and downstream reaches of the Creek

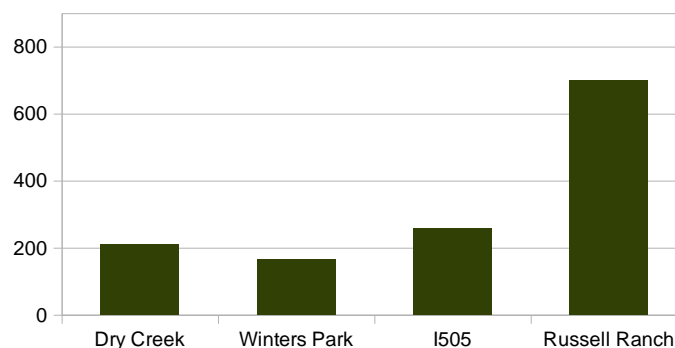


Figure 3. 2019 Fish Counts

Narrowing and reducing stream size likewise reduces in-stream habitat for fish – especially for small fry. Altering channels destroys undercut banks and replaces them with out-sloped banks lacking in cover for fish and this is reflected in the small number of salmon fry in the Winters Putah Creek Park compared to both upstream and downstream creek reaches.

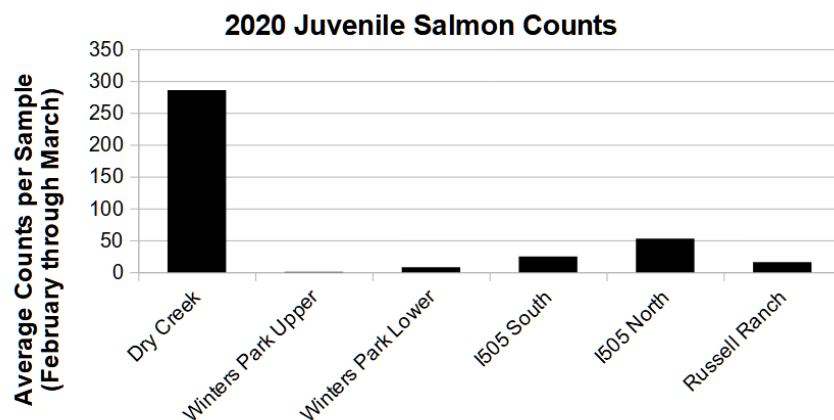


Figure 4. 2020 Juvenile Salmon Counts

There have also been noticeable drops in almost all other aquatic animals throughout the Winters Putah Creek Park since project completion including beavers and Western Pond turtles which are both indicative of a healthy creek ecosystem. This is entirely attributable to the

extensive alteration and loss of stream and riparian habitat directly caused by the stream alteration project.

3. Riparian forest loss and failure in revegetation. Like the proposed Nishikawa Project, the Winters Project began with near total clearing of the floodplain, destroying a mature and mostly native riparian forest. A handful of mature native trees were spared, some perched on pedestals, others having endured heavy traffic pounding over the root zone. In subsequent years, the mature trees spared in the Project died as a result of the project. At the same time as the mature trees were dying, replantings were failing also. There are areas where trees have been replanted three times and still after 10 years remain almost barren save for weeds.



Figure 5 Winters Putah Creek Park – Phase 2 – 2019. Replanting again, eight years after “restoration”, and two previous failed plantings.



Figure 6. Winters Putah Creek Park – Phase 3 - Trees Spared. Spared but perched on pedestals and dead or dying.



Figure 7. Winters Putah Creek Park – Phase 1 – Cottonwoods. Trees spared during construction, but cutoff from groundwater and dead.

4. Blockage of groundwater flow. Natural floodplains are stratified, with both coarse and fine layers, and the coarse sandy gravelly strata are highly permeable and carry groundwater laterally from the channel to the riparian forest. Earthmovers churn up these strata, destroy the structure of the floodplain, and build back massively compacted monolithic blocks of impervious fill. The fills block groundwater flow, deprive the riparian forest of groundwater, and block groundwater recharge.

The visible impacts of blocking the groundwater connection between channel and floodplain include the slow death of trees that were spared during the clearing (Figure 7), the failure of replantings (Figure 5), and a green line of vegetation about four feet wide at the streambank that is the visible indicator of the limit of available water (Figure 8).



Figure 8. The Greenline Effect – When a bank is nearly impermeable, there is only enough water penetrating the bank to water a thin greenline of vegetation.

The further result is a very significant drop (4000 acre feet annually) in groundwater recharge, evidenced by falling groundwater levels in a nearby monitoring well (Figure 9), and by stream gauge data that clearly shows a decrease in water loss from the stream. Finally, in 2017 SCWA investigated groundwater levels by digging a set of trenches which revealed groundwater levels had fallen more than 8 feet below the surface just 10 feet from the stream bank.

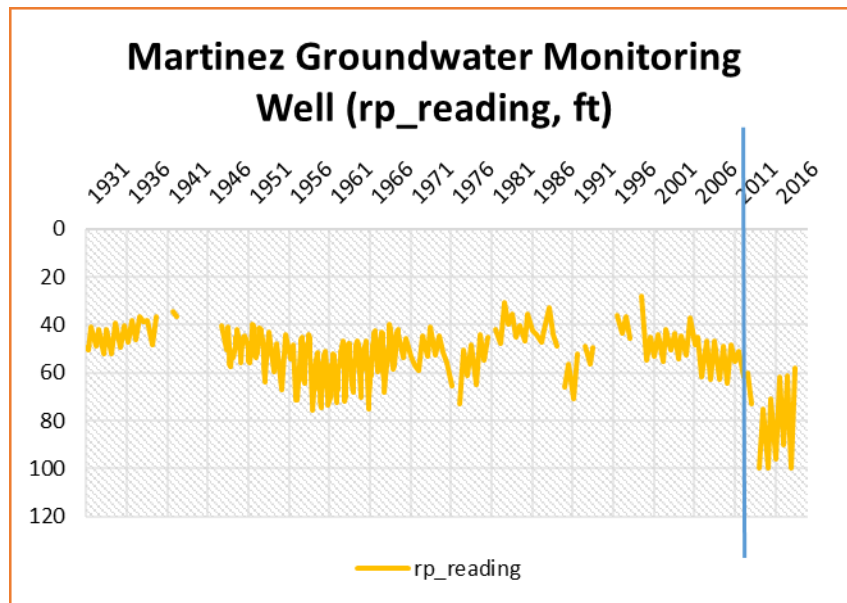


Figure 9. Groundwater Levels, Martinez Well, near Winters Putah Creek Park. Blue line indicates implementation date of Winters Project and the beginning of groundwater decline.

Part IV- Conclusions and Recommendations

It would truly be a mistake and a waste of restoration dollars to repeat at Nishikawa the experiment that has failed in Winters on so many levels. Cutting a mature riparian forest and importing, spreading, and compacting massive amounts of foreign excavated spoils with earth-moving equipment is destructive, not restorative. As has been clearly demonstrated in Winters, the exact same type of man-made channels and riffles proposed for the Nishikawa project will prove similarly destructive to the stream's ecology.

Friends of Putah Creek alternatively recommends that all restoration projects in Putah Creek must follow Best Riparian Conservation Practices selected for the region and approved by CDFW. These include:

- To retain as much as possible of the existing floodplain native plant canopy and root structure, do not use bulldozing as a primary means of removal of native and non-native vegetation.
- To prevent disconnection between the groundwater with the stream and to maintain optimal water mobility for plant growth, avoid dislocation and alteration of the existing floodplain soil strata and structure by, grading and importing and compacting non-native fill.

- Avoid using heavy machinery wherever possible to avoid plant damage and soil compaction.
- Work with the flow characteristics and topography of the stream itself and only augment spawning gravel where the existing conditions (depth and velocity) are already suitable for a sustainable spawning reach.
- Restore the riparian forest by only removing invasive vegetation and replanting with appropriate native species.

Attachments:

Nishikawa Chinook Salmon Restoration Application

Winters Putah Creek Park - Part 1 - Case Study of a Failed Project_June-2018

Winters Putah Creek Park - Part 2 - Analysis of Project Failures_August-2019