


SOLANO COUNTY WATER AGENCY



MEMORANDUM

Agenda Item No. 7

TO: Board of Directors

FROM: David B. Okita, General Manager 

DATE: October 13, 2011

SUBJECT: October General Manager's Report

The end of the hydrologic water year is September 30. Lake Berryessa capacity was almost exactly 1.3 million acre feet, 300,000 acre feet short of capacity and an increase of 200,000 acre feet over the same time last year. There is a chance that the reservoir will reach capacity this upcoming winter. State Water Project supplies are 80%, but because the Delta has been in excess conditions all year so far, we can take as much State Water Project water as we want. Next year's State Water Project allocations will be higher than usual due to better starting reservoir conditions.

Settlement negotiations on our Area of Origin litigation continue with good progress made. We will provide a brief update this meeting in closed session. We should have something more definitive for the November Board meeting.

If you have any questions please contact me at 455-1103 or by e-mail at dokita@scwa2.com.

Sept.2011.It7.mem

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SOLANO COUNTY WATER AGENCY



MEMORANDUM

Agenda Item No. 8

TO: Board of Directors

FROM: David B. Okita, General Manager 

DATE: October 13, 2011

SUBJECT: Lower Putah Creek Coordinating Committee Report

The Lower Putah Creek Coordinating Committee (LPCCC) just celebrated its 10th anniversary. The LPCCC's accomplishments have been much greater than anyone could have expected at its inception. At the Board meeting, Rich Marovich, the LPCCC Streamkeeper will be making a presentation on the many Creek restoration projects completed, in progress and planned. The LPCCC has received over \$10 million in grants to date.

The LPCCC was formed as part of the Putah Creek instream flow litigation settlement. Membership is split equally between Yolo and Solano interests. The following are the current members:

Solano

J. D. Kludge – Solano Irrigation District
Felix Riesenberg – Fairfield
David Okita – SCWA
Don Holdener – Maine Prairie Water District
Dennis Kilkenny – Landowner

Yolo

Harold Anderson - Winters
Stephen Souza - Davis
Andrew Fulks - UC Davis
Chris Rose - Putah Creek Council
John Vickery - Landowner

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The settlement agreement calls for SCWA to provide annual funding to the LPCCC in perpetuity. Funds are indexed and current year required funding is \$210,585. Since the LPCCC is not a legal entity, SCWA is the financial and administrative vehicle for the LPCCC. We provide some funding and staff services beyond what is required under the settlement agreement.

This year the LPCCC completed a Strategic Plan to guide its activities into the future. A copy is attached.

If you have any questions please contact me at 455-1103 or by e-mail at dokita@scwa2.com.

Oct.2011.lt8.mem

Strategic Plan

2011

Lower Putah Creek Coordinating Committee



Lower Putah Creek Coordinating Committee Strategic Plan Summary

Over the course of 2010, the Lower Putah Creek Coordinating Committee (Committee) held several strategic planning sessions. These facilitated sessions allowed the Committee to evaluate our progress over the last 10 years, priorities moving forward, and status of our implementation of the Putah Creek Accord.

The outcome of the strategic planning session was a defined Mission, Vision/Goals for 2020, a list of Shared Values, Objectives, and Actions. The Actions include tasks identified by the Committee, to be implemented over the first three years of this plan.

Actions identified by the Committee fall into the following categories:

- Public Outreach - Promote broad public interest and dialogue
- Community Engagement
- Creek Projects - Implementing the Watershed Management Action Plan (WMAP)
- Managing Accord Requirements - Making the most beneficial use of Accord flows
- Committee Governance

The Committee also developed a set of project selection criteria as part of the strategic planning process. This criterion is outlined in Appendix A, and will help prioritize and select project locations when grant funding becomes available.

The Committee is confident that this strategic plan will help guide us into 2020, with an emphasis on working with landowners, connecting the community with the creek, and restoring the environment.

The Committee will use this strategic plan to develop an annual work plan to guide the Committee's specific activities for the year.

Lower Putah Creek Coordinating Committee Strategic Plan

The Lower Putah Creek Coordinating Committee (LPCCC) is committed to its:

Mission

To protect, monitor, and enhance the resources of lower Putah Creek, within the framework of the Accord, while respecting property rights, serving as a forum for dialogue about issues, and promoting synergy among stakeholders in the Creek community.

Vision/Goals For 2020

To support and function within a socially diverse Creek community that successfully:

VG-I. Manages emerging creek issues with a respect for differing interests that promotes synergy and collaboration;

VG-II. Enhances the stream to enrich the Putah Creek community;

VG-III. Pursues a properly formed and functioning, biologically diverse, and low maintenance waterway that maintains beneficial uses of water;

VG-IV. Executes its commitments as set forth in the Accord; and,

VG-V. Holds a cultural norm that embraces the many values of the community.

Shared Values

SV-I. Sense of community; inclusiveness

SV-II. Mutual respect

SV-III. Respect for property rights

SV-IV. Decisions based on best available science, when possible

SV-V. Measuring progress within an adaptive management framework

SV-VI. Transparency and accountability

SV-VII. Being a learning organization

SV_VIII. Active collaborative approach

LPCCC Objectives

O-1. Maintain a forum for ideas, information and data exchange

O-2. Build community awareness, interaction and understanding

O-3. Restore and enhance the watershed to a self sustaining ecological condition

O-4. Optimize cooperative approaches to water and flow management to provide multiple community benefits

O-5. Display effective leadership and management of Committee processes

LPCCC Actions related to objectives

Public Outreach - Promote broad public interest and dialogue

Public Outreach Goals

POG -1. More personal contact between members and the community at large

POG -2. Direct contact with landowners

POG -3. Inspire the community to participate

POG -4. Town hall meetings

POG -5. Active and up-to date web presence, including frequent updates and news articles, in addition to data sources.

POG -6. Celebrate and publicize progress

POG-7. Capture new ideas and gather feedback

Public Outreach Tasks for years 1-3:

POT-A. Schedule Town Hall meetings on a semi-annual basis to obtain feedback from the community at large

POT-B. Work with PCC to distribute a quarterly newsletter/column

POT-C. Work with PCC, WPCC, UCD and others to develop educational materials and events to provide public education opportunities

Community Engagement

Community Engagement Goals

CEG-1. Adaptation to emerging issues

CEG-2. Coordination with agencies and other interested parties

CEG-3. Data collection, storage, and management

CEG-4. Annual Picnic or other gathering

Community Engagement Tasks for years 1-3:

CET-A. Maintain an active and inviting website that provides timely news and other information

CET-B. Track and participate in external changes in policy and regulation, including:

a. Bay-Delta Conservation Plan

- b. Central Valley Flood Plan
 - c. State Water Board reporting requirements
 - d. TMDL developments
 - e. Air Resources Board rules and regulations
- CET-C. Develop and deliver presentations at statewide conferences and events
- CET-D. Outreach to other areas in the State that may provide valuable interchange of ideas and methods (such as the San Joaquin)
- CET-E. Develop press releases to highlight issues, events, and progress on Creek management
- CET-F. Identify and apply for statewide award opportunities
- CET-G. Hold an annual festival that highlights the Creek.
- CET-H. Revisit the branding and logo development to revive and use the ideas
- CET-I. Increase the number of events that the Committee supports, conducts, and/or participates in, within the Putah Creek community.

Creek Projects - Implement the Watershed Management Action Plan (WMAP)

Creek Projects Goals

- CPG-1. Implement the WMAP
 - a. Channel restoration
 - b. Bank stabilization
 - c. Habitat enhancement
 - d. Invasive plant removal
 - e. Trash clean up
- CPG-2. Develop a sediment management plan
- CPG-3. Spawning assessment and analysis
- CPG-4. Fish passage assessment and analysis
- CPG-5. Wildlife and fish monitoring program
- CPG-6. Pursue voluntary conservation easements

Creek Project Tasks for years 1-3:

- CPT-A. Implement the WMAP
- CPT-B. Define project selection criteria for physical projects to identify priority types, diversity, and locations for restoration actions. The criteria should enable timely response to opportunities, while maintaining overall progress on creek-wide improvements (See Appendix A)
- CPT-C. Implement a bypass at Los Rios Farms dam
- CPT-D. Complete work at Road 106
- CPT-E. Channel realignment in lower reach
- CPT-F. Gravel augmentation in key spawning areas

- CPT-G. Continue non-native invasive species removal and control, including plants and animals (esp. New Zealand mud snail)
- CPT-H. Continue projects to increase canopy and shade cover in the riparian zone
- CPT-I. Maintain greenhouse operations
- CPT-J. Make landowners aware of conservation easements

Managing Accord Requirements - Make the most beneficial use of Accord flows

Managing Accord Requirements Goals

- MARG -1. Riparian diversion education about riparian law and reporting requirements
- MARG -2. Accord flow maintenance
- MARG -3. Groundwater interaction assessment and analysis
- MARG -4. Biological benefit assessment and analysis
- MARG -5. Floodplain management

Managing Accord Requirements Tasks for years 1-3:

- MART-A. Complete a sediment study
- MART-B. Conduct a water quality assessment and analysis that includes mercury and temperature parameters
- MART-C. Conduct (and maintain) a literature search to include pertinent data sources, especially regarding water quality in the Creek
- MART-D. Hold an annual workshop with riparian diverters each January
- MART-E. Develop and maintain a system to make diversion reporting easy and accessible
- MART-F. Establish a real-time means to enable feedback from riparian diverters
- MART-G. Develop a list of potential incentives and inducements for landowners to find alternate water sources, increase irrigation efficiency, and to actively cooperate with overall flow management.

Committee Governance

Committee Governance Goals

- CGG-1. Oversee the Streamkeeper
- CGG-2. Manage subcommittees
- CGG-3. Measure outcomes, including:
 - a. conformance with the WMAP
 - b. compliance with the Accord
 - c. riparian water diversion collaboration and compliance with law
- CGG-4. Reporting

CGG-5. Develop and maintain funding and resources

Committee Governance Tasks for years 1-3:

CGT-A. Seek new opportunities to increase public involvement in Committee meetings

CGT-B. Investigate ways to hold some meetings in conjunction with events, and/or outside of normal business hours

CGT-C. Combine the annual member reports with an adaptive management assessment of progress

CGT-D. Delineate a process for monitoring progress, and adjusting methods, policies and actions according to results (adaptive management method)

CGT-E. Develop future funding – grants, etc.

CGT-F. Strategic Planning

Implementation of this Strategic Plan will be done over the next ten year to the 2020 horizon. Since resources (funding and staff) are limited, the LPCCC will need to prioritize its goals, objectives and tasks. In developing its annual budget, a detailed work plan should be prepared that uses, as a foundation, this Strategic Plan. The LPCCC should examine available resources, status of ongoing projects and any new circumstances in the prioritization process. It is understood that not everything in the Strategic Plan is implementable all at once, and the LPCCC needs to use its judgment in determining what gets done in a given year.

Appendix A Project Selection Criteria

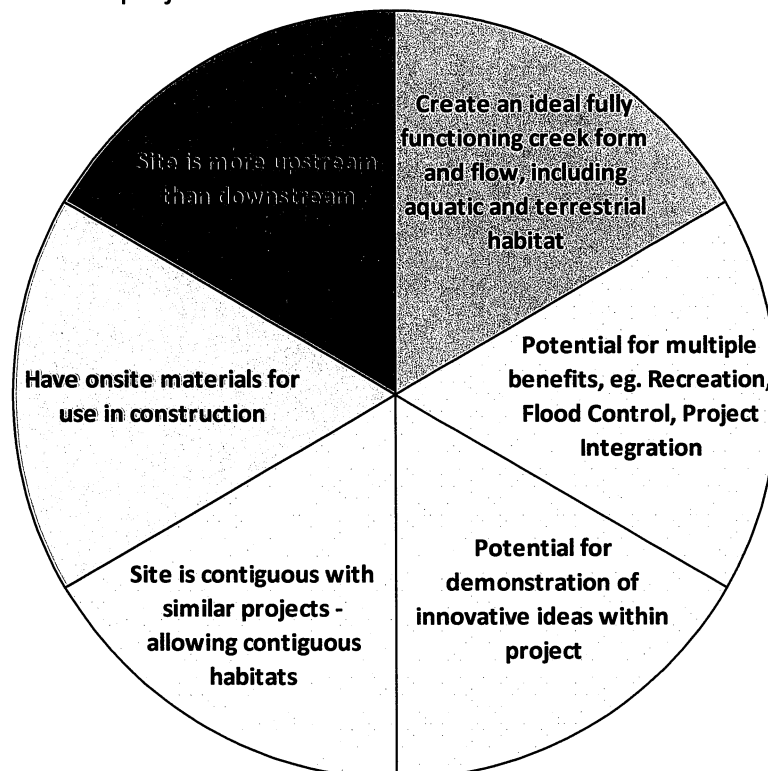
In the Strategic Plan, Creek Projects, Task B, specifies that the Committee will:

CPT-B. Define project selection criteria for physical projects to identify priority types, diversity, and locations for restoration actions. The criteria should enable timely response to opportunities, while maintaining overall progress on creek-wide improvements.

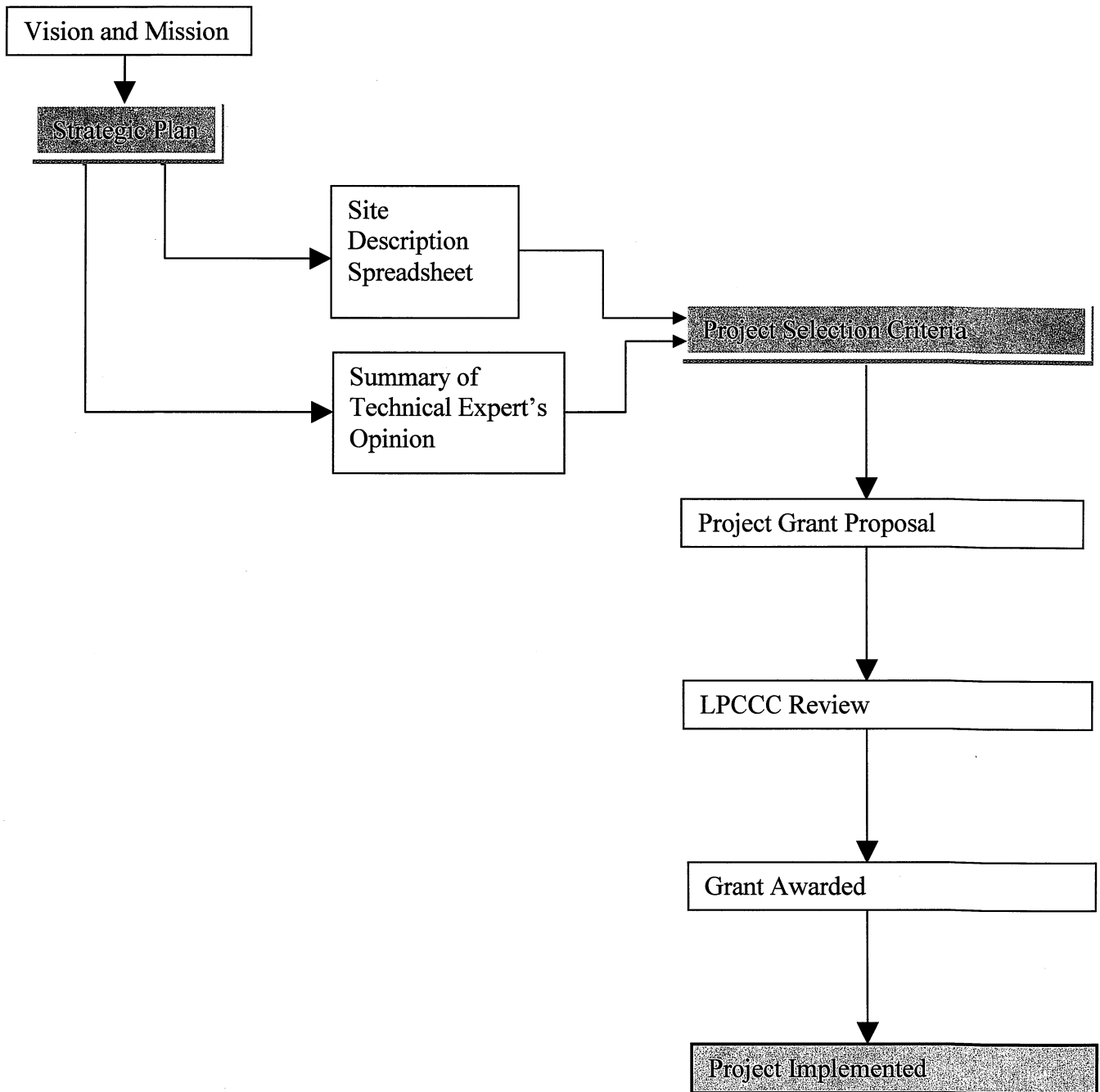
To develop project selection criteria, Subcommittee of the LPCCC: David Okita, Andrew Fulks, Herb Wimmer and JD Kluge met with our science advisory panel consisting of Peter Moyle (fisheries); Eric Larsen (geomorphology); Melanie Truan (wildlife) and Ron Unger (ecology) to receive expert opinion on prioritizing future restoration projects. A detailed summary of the discussion is included as Appendix B.

The science panel came to the general conclusion that correcting stream channel geomorphology to a more natural form was a high priority because re-forming the channel provides multiple benefits such as to fish, wildlife, riparian and upland plants, aesthetics, sediment management and temperature. The upstream part of Lower Putah Creek has the most environmental value, but the lower part of the creek near the Yolo Bypass provides an important resting area for migratory birds. Sediment transport is beneficial to the creek and needs to be considered in any creek improvement project. The creek has good biodiversity, but invasive species need to be controlled.

The meeting with the science technical panel led to a set of site selection process guidelines. We are opportunistic, facing each new emerging opportunity weighed against all ongoing projects and existing opportunities. Within that context, where possible, we will pursue grants and restoration work on projects that fit most of the criteria in the following chart:



Appendix B
Roadmap for use of the Strategic Plan and Project Selection Criteria



Appendix C

Summary of Science Advisory Panel and Notes from Meeting

On March 25, a Subcommittee of the LPCCC: David Okita, Andrew Fulks, Herb Wimmer and JD Kluge met with a science advisory panel consisting of Peter Moyle (fisheries); Eric Larsen (geomorphology); Melanie Truan (wildlife) and Ron Unger (ecology) to receive expert opinion on prioritizing future restoration projects.

Eric Larsen said he is most familiar with the creek from Lake Solano to I-505. He suggested that balancing flows and channel form is the most fundamental objective. The channel is out of natural alignment and out of natural form due to past dredging and gravel mining operations. Proper channel form takes into consideration velocity, temperature, riffle to pool ratio and substrate. A natural channel should create and dissolve flood plains. Dredged areas need to be filled.

Restoring natural channel form will restore natural ecological functions with the following benefits:

- Fish habitat will improve from lower water temperature, higher flow velocity, improved substrate and more diverse habitat
- Floodplain dynamics (natural scour, deposition and meander migration) will be restored leading to natural recruitment of native vegetation (e.g. cottonwoods) that are adapted to these processes
- Wildlife will benefit from conversion of open water to floodplain habitat and from the increased extent of natural riparian forest

Geomorphic restoration means restoring natural plan form and cross section profile of the channel, especially filling deep areas of the channel. A key source of sediment (including gravels) is Dry Creek. LPCCC has done bank stabilization projects on lower Dry Creek near the confluence with Putah Creek. Although un-stabilized banks could be a good source of sediment for Putah Creek, it is understood that the stabilization project protected properties along Dry Creek. The main source of sediment and gravel is from the upper reaches of Dry Creek away from the stabilization projects.

A discussion ensued about the value of sediment from Lake Solano to fill in deeper areas of the channel downstream. The fines are filling in deeper pools. It is possible to open the Putah Diversion Dam gates to get more sediment down the Creek. Several years ago there was a large discharge of sediment that covered spawning beds, but the beds have recovered and the sediment has moved to fill deeper pools providing a beneficial effect. When the Willow Canal breached and sent sediment into the Creek, the Creek recovered nicely. There is not a problem with fine silt deposition in Putah Creek. SCWA will be studying to see if Lake Solano is filling with sediment, A prior study about 10 years ago found it to be in equilibrium.

The Dry Creek project done by the LPCCC at the confluence is a good example of a project to restore the channel to a more natural state. That project captured some sediment, but the amount of sediment reduces as you go further downstream. It appears that we are getting about 100 feet per year movement of gravel downstream – which is good. The clay layer in Putah Creek does not support gravel well, thus is a poor substrate for salmon. Measures to restore gravel in the upper reaches of the Creek would be beneficial for salmon spawning. Sediment is starting to fill the UC Davis pool at the end of Hopkins Road.

Peter Moyle says that the Creek needs sediment as does that whole Bay Delta system. The Creek also needs more cover (tree canopy) and in-water structure such as fallen trees.

From I-505 to the Russell Ranch the Creek bed has down-cut steeply into the clay and acts as a chute. The solution to this is channel realignment.

In geomorphic restoration, sediment movement can be beneficial. Projects should be designed to waste sediment (erode) naturally.

Regarding flood control/capacity – DWR has jurisdiction to the Winters car bridge, but are most focused on the leveed areas. DWR will approve projects that are shown to be flood neutral by modeling studies. We can incorporate the structural changes we want into designs that would meet DWR requirements.

Peter Moyle is working on an analysis of fish data, the results of which will be published soon. The Accord restored a natural flow regime and native fish increased in numbers and extent. Native fish were always more prevalent in the cooler upstream reaches than downstream. Prior to the Accord, Stephenson Bridge was the downstream limit of native fish in summer. Since the Accord native fish have become dominant for three additional miles downstream to Pedrick Road. It may be possible to provide additional, beneficial habitat further downstream, but the UC Davis pond is an impediment. If the pond fills in over time, it may be possible to have more native fish downstream.

Salmon in the system are Fall-run strays from hatcheries. Only one pair was sighted this year in the Creek. Salmon in Putah Creek are impacted by conditions in the ocean/estuary that impact the overall population.

Salmon is not an important part of the Putah Creek fishery unless you can get salmon above the Putah Diversion Dam. It may be possible to then have a native run because gravel is limiting downstream of the Diversion Dam. This could cause conflicts with the existing trout fishery upstream of the Diversion Dam that is very valuable. More study is recommended before considering whether to provide passage for salmon and steelhead into the inter-dam reach.

We could reasonably attempt to establish a small run, dependent on outside strays, of salmon that return to Putah Creek to spawn. Salmon spawn wherever there is gravel. In Putah Creek this is upstream of UC Davis pond. Pedrick Road is the current limit of cold water suitable for salmon. 70 salmon are the estimated maximum level the Creek could support. Question: is it

worthwhile to do geomorphic channel restoration downstream of Pedrick? Temperature modeling would help answer this question. Temperature studies would also answer the question as to whether conditions are suitable for salmon smolts when they leave the creek in the spring. The Russell Ranch area has some potential for restoration.

National Marine Fisheries Service requires Peter to get a Section 7 permit to take Steelhead for his fish sampling program even though there is no evidence of steelhead in Putah Creek.

Pools have naturally diminished in depth and extent over time. Perhaps there is a need to update Gus Yates survey of the creek geomorphology.

Melanie Truan addressed the question of what Creek characteristics support wildlife what do not. The riparian corridor upstream of Pedrick Road supports more wildlife diversity than downstream. The foothills are a source of wildlife that funnels wildlife down the Creek to the Yolo Bypass. Downstream areas, in and near the Yolo Bypass are more important to migratory birds. Within this distribution, there are local hot spots of biodiversity. Improved stream channel conditions create more aquatic insects that are a valuable food source for the riparian food chain. Small mammals thrive on increased seed sources provided by native grass restoration.

Primary drivers of biodiversity are the width of the riparian corridor and connection to the floodplain. Heterogeneity of habitats is good. Shallow water promotes cottonwood and willows. Shrubs, especially flowering and fruiting species like toyon and elderberry provide abundant food sources and cover.

Rats and cowbirds are significant invasive predators. Rats prey heavily on birds, are nocturnal and live in nests in trees. Owls will eat rats. Cowbirds lay their eggs in the nests of other birds (called nest parasitism) and the unwittingly adopted cowbird chicks outcompete the host bird chicks. Active control would be beneficial. Cowbird trapping has been effective in reducing nest parasitism. Provision of nest boxes has increased populations of cavity nesting birds.

Habitat diversity leads to biological diversity. Weed control increases habitat diversity. Edges of the riparian corridor can be improved. Ideally there would be a transition from grass to shrubs to trees. In most areas there is an abrupt end to the riparian corridor – to agricultural lands. A wider, well transitioned riparian corridor can also shelter the corridor from hot winds and temperature impacts. Dense vegetation (such as hedgerows) on the edges of the corridor deters housecats and cowbirds.

Is walnuts (even native black walnuts) as good as native trees? Walnut orchards lack the diversity of native riparian forests.

What are limiting factors? One is the width of the riparian corridor. Do widening in narrow areas if possible. Avoid monocultures. Cavity nesting improvements – like nest boxes. Nest boxes, by determining hole size, can selectively help beneficial birds.

The Creek provides two very different habitats. At the bottom, at the Bypass, it serves as a refuge for migratory birds, including observations of coo coos and least bell verios. The City of Davis preserve is doing well as a bird habitat area.

The upper riparian corridor is the other important habitat segment along the Creek. Where the riparian corridor is wider, there is generally better habitat – like the ox bow upstream of Winters. Winters Putah Creek Park has potential, but suffers from being close to an urban area where cats and rats can be a problem.

The Wimmer property is an ideal example of a successful restoration. After an initial decline of wildlife after restoration, wildlife populations have quickly increased. There is diversity and balanced numbers of species. There are cavities for nesting birds and open grassland species. Shrubs will regenerate over time naturally.

Ron Unger suggested that we aim for a dynamic equilibrium in balance with a natural channel form with an overall pace of change in physical channel features, botanical communities and biological communities that is comparable to other natural streams that exhibit natural form.

The form of the channel should be in balance with flows. Our goal will be reached when 90% of the channel supports the habitat that it could support. There will be sediment transfer and meander, but no incision of the channel. Habitats should be diverse in space and time. It is important to minimize the need for active control and take measures that lead to a dynamic and self-sustaining system.

Sediment and gravel are available; we but need to do channel-form changes first. Heterogeneity is important, but big some patches of similar habitat probably cannot be avoided and are acceptable.

A 10-foot deposition of sediment at the Wimmer property is probable over the next 50 years. Current storm patters create increases in sediment measured in inches. Flood control impacts can be mitigated by lowering of terraces to create floodplains.

The science advisory panel agreed on the primacy of restoration of natural channel form to create diverse and self-sustaining habitats for fish and wildlife.