

Cache Slough Restoration Planning Project

Meeting #4

February 10, 2017, 9 am – 12pm

Meeting Notes

Introduction / Project Purpose and Objectives

Charles Gardiner welcomed the group and reviewed the agenda (see list of participants on page 9). The agenda was re-ordered to accommodate presenter schedules.

Charles reviewed the roadmap and discussion timing, stating the goal by June is to identify a scope of work for Phase 2. Between now and then, the discussions will focus on understanding what data and information is needed and what types of decisions will be made in Phase 2. The group will continue to sequence through the three major topics, adding additional detail and integration:

- Agricultural issues and valuations (today's topic)
- Water management – flood and water supply
- Restoration strategies – what these might mean for the area

Charles asked the group to revisit the roadmap and if there were any additional issues that should be added or identified.

Campbell Ingram noted that the purpose of Phase 1 is to demonstrate to ourselves (the group) and to the broader audience that we can move through data and information collectively and develop an overarching understanding how the topics overlay and fit together. The hope is that the County, agriculture, water supply and flood interests see from this process an early picture of where restoration might be most beneficial and where it could probably happen. The group is trying to identify where agriculture and flood have an interplay with restoration and where it might work well or not work well. First, the group can help create that picture from the relevant available information and see for ourselves what that picture looks like, which will then demonstrate to the outside world that it is valuable and meaningful.

At the end of Phase 1, the group should have better understanding and ideas. The group will decide collectively if we will put that understanding out beyond this group and describe what we will do in Phase 2. What the group is attempting is novel and powerful.

Study Area

The group reviewed the study area / restoration opportunity area (ROA) map. It is important for the group to have general consensus on what the geographical area of focus is.

Discussion and Agreement:

From a restoration standpoint, the boundary might be dependent upon what species are to be protected. It might be broader species distribution. For each type of information the boundaries might be different. The agricultural system might have different boundaries.

Cache Slough is part of a larger system whether from ecosystem, agriculture, or water supply perspective. The linkages are critical and will reveal the boundaries.

Function, value, and connectivity apply equally to agricultural systems and ecosystem. As the group develops more information and identifies the linkages, the boundaries will sort themselves out. The boundaries might be bigger than the Cache Slough ROA area, especially when taking climate change and future scenarios into account.

The group recommended and agreed that the study boundaries should remain flexible because the study area will arise out of the discussion of the available information and what the group decides to do. It is useful to have the legal Delta boundaries and the Cache Slough Restoration Opportunity Area (ROA) as lines on the map. The group will continue to revisit the study area and boundaries as new data and information are considered.

Sub-group Reports

The sub-groups on flood management and water management had not convened at the time of this meeting but plan to convene between now and the meeting in March. The two groups consist of:

- Water supply management – David, Mike, Alex, and Thomas
- Flood management – Eric, Mike, Mark, and Roberta

Gary Lemon was reached and he noted the importance of the Deepwater Ship Channel levees for the Army Corps of Engineers.

Discussion and Agreement:

Where are land use elements such as roads and bridges discussed? Should that infrastructure be included with the levees discussion? Roads, bridges, and other infrastructure can be universal data sets. There should be a category for information on utilities infrastructure. The group has the primary concern that the data is there and should not focus on how data are categorized.

Data Validation

The group reviewed the process for reviewing, validating, and including data and information (see data and information questions).

Discussion and Agreement:

How much of the information is narrative and how much is data? Most of what the group can see is data, but both data and narrative are important. The group generally agreed and noted that often the story begins with the narrative to inform

what data is important. The data is primary tool for the decision-making process, but the history and context is also important.

The group discussed how data is valuable for people who want it. It is important to keep in mind who the data is for, who is the target audience? Data does not mean much for certain groups like landowners and farmers. Think about the data from the farmers' perspective, look for where there are opportunities (i.e., ag infrastructure improvements). Put boundaries on the data, show opportunities that exist not just as restoration projects, but how restoration fits with flood protection and agricultural land use. Change the language about restoration opportunities that are perceived as threats by some audiences.

The group needs to think in terms of the perspectives of various audiences and how to create the narrative. Agreements from previous meeting regarding data sets:

- Data are accessible to everyone
- Transparent provider of the data source – so it is defensible and clear it is from an authoritative source.
- If there is consensus on the data sets, it will be included. If there is no consensus, the reasons will be documented so that the reasoning for questioning or rejecting the data is clear.

Agriculture and Land Use

Roberta Goulart (Solano County) and Jim Allan (Solano County Agricultural Commissioner) provided a high-level overview and history of agriculture in the county.

Jim recommended the group take a systems approach to any and all analysis. View the entire region and consider ecosystem as it relates to the conflict with the agricultural system. One cannot tell the story with just data; there must also be the narrative. There is a strong history of agriculture in the county. It is pivotal to see agriculture as a system throughout the region and in the Cache Slough area in particular.

There are several variables and there should be a system approach to the data. Jim provided the following examples of how agriculture is a system.

- In the 1949 crop report, sugar beets were the number 3 crop. It was number 2 or 3 all throughout the 1950s. There were sugar beet refineries all through Clarksburg, Woodland, Tracy, and Manteca. As the sugar beet refineries closed down, sugar beets dropped from the crop report. So, sugar beets went from being the number 2 or 3 on the list to being removed completely.
- The oral history of Liberty Island in the UC Davis library notes that peas, celery and asparagus were once grown there (some of the most valuable crops) because the area had good soils, water, transportation, and a work force.

1. Growers make choices about what to grow based on the systems and markets. Systems include soil quality, water availability, access to markets and processing facilities, and proximity to support resources (feed, fertilizer, equipment, etc.).
2. Farmers need to rotate crops to reduce pests and maintain soil quality— managed pasture, 8 to 10 years; alfalfa, 6 to 8 years.
3. Some markets have long-term durability. For example, some sheep farmers have been raising sheep for five generations.
4. The County Plan is designed to support and maintain the systems that support agriculture.
5. Growers are concerned about changes in the ecosystem. Habitat changes may result in changing requirements for diversions and discharges. On Bacon Island, the sunflower crops had to be terminated because increased habitat on adjacent islands increased the blackbird and starling populations that ate the sunflower seeds.
6. Habitat managers' objectives are potentially in conflict with agriculture. For example, increasing populations of macro-vertebrates (beaver, coyote, geese, and muskrats) can cause problems for farm activities, levees, and other systems.
7. Consider the interconnectedness of regional agricultural activities.
8. The RCDs and Solano Land Trust are doing work to establish wildlife corridors compatible with agriculture.
9. There is pressure from other projects (e.g., flood and water supply) to find restoration areas.
10. There are two general types of ecosystem to consider: eco-friendly agriculture and larger ecosystem restoration.
11. The LESA work is looking at agricultural values for the region. Another study is looking at the indirect and induced economic benefits of agriculture.
12. Understanding the agricultural system is challenging. Some crops need to be isolated (seed crops). Some crops have relatively stable markets (the canneries buy roughly the same volume of tomatoes every year).
13. The patchwork approach doesn't work for either ecosystem or agricultural systems.

Discussion Questions:

Is there a source of information about the market and infrastructure systems that support agriculture?

Is there information from other communities about the tipping point when crops and markets decline or fail? Past examples include the export market for asparagus and celery crops that died off from a disease and didn't return. Technology changed and the market consolidated in Salinas.

Agricultural Data and Information

The group reviewed available information on crop types in the study area.

Discussion and Agreement:

A lot of crops are part of a larger system, e.g., pastures and supporting feed supplies, duck clubs and crops to attract wildlife.

Almost all lands are Williamson Act lands. The County backfilled Williamson Act land funding and allowed continuous renewal when the State cut funding.

The crop mapping data is wrong from local landowners' perspective (in spite of ground-truthing). The actual crop planted is determined each year by the owner or operator. Don't get bogged down in the specific crop types; the value is in the land assets and agricultural potential.

The group agreed that it would be most valuable to map the value of the lands instead of the crops because the value is based on the flexibility to meet market demands. The agricultural value is influenced by the soil quality, water accessibility (irrigated or non-irrigated). This mapping is the most important until more information is available from the LESA analysis.

LESA (Land Evaluation Site Assessment)

Wendy Rash (Natural Resource Conservation Service, part of the US Department of Agriculture) presented an overview and update of LESA.

The LESA system was developed by the Natural Resource Conservation Service as a way to infuse local knowledge and local values into land protection and agricultural programs. The focus has been urban pressures on land development.

Cache Slough doesn't have urban pressures but the landowners see habitat conversion as a threat to their lifestyle, land holdings, and operations. One concern in the Cache Slough region is that the study is being done in a concentrated area, which limits the comparative ability to identify land values.

The LESA process has two ways of evaluating agricultural suitability:

1. Land evaluation - natural assets
 - a. What are the soils and water availability?
 - b. The soil types: while soil data is seemingly outdated, the information does not change much over time.
 - c. Water rights and infrastructure: water rights and availability that are defended by the State's North Delta Water Contract are critical asset for Cache Slough lands.
 - d. Climate: Cache Slough has a moderate growing climate.
2. Site assessment
 - a. Connectivity with urban areas.
 - b. Proximity to markets.
 - c. Proximity to labor.
 - d. Proximity to services important to running the business.

Most of Cache Slough is Class 2 (there are 8 classes) —an ideal area because it is close to the resources farmers and landowners need to do business. It has highly desirable soil (drainage, irrigation) for cultivated agriculture. It is far enough away from urban areas that the conflicts with urban uses are minimal.

The LESA process uses stakeholder input to establish a rating system. First, the team develops factors and puts a numeric value to the factors. Then the values are weighted and given a score, resulting in a final LESA score.

What is coming clear is that Cache Slough is a highly developed agricultural production center—wildlife benefit from range land, irrigated pasture and annual crops, and permanent crops.

LESA is still in the information gathering stage and identifying the factors that the landowners think are important. How can the features be considered and evaluated? The team is still thinking about how Cache Slough fits into the bigger model for the Solano and Yolo county comparison to show the value.

Discussion and Agreement:

1. What is the data need for water availability? It appears that the water availability is uniform across Cache Slough.
2. What is the LESA analysis looking at regarding crops? Could you use the soils information to identify maximum crop values for a parcel?
3. Are you valuing land by parcel? The LESA analysis is not putting a dollar value on lands. Dollar values could be used if you are considering mitigating impacts to agriculture.
4. For flood and agricultural infrastructure managers, putting restoration lands into easements doesn't work. The funding for the infrastructure needs to continue. Ag conservation easements don't work because they simply preserve something that is already happening.
5. It is important to understand economic loss and how to make up for it. It could be a large cost for restoration.
6. Moving levees would require soils from outside the area, another large cost.
7. State funds could help with infrastructure costs, so the goal is to look at multi-benefit projects.
8. Additional useful data and information:
 - a. Consider inundation risk.
 - b. Integrate the crops data into the soil classification. Identify permanent crops.
 - c. More information is needed about habitat benefits of agriculture—a habitat-friendly overlay. In-field habitat is an annual choice.
 - d. Use the mapping of irrigated lands—edge habitats will be visible.
 - e. The Solano HCP and Yolo Heritage Plan identify categories of habitat value. Use those to do some mapping. Don't worry about teasing out details for specific parcels.
9. The group agreed on the following priority mapping activities for agriculture:
 - a. Permanent and annual crops

- b. Irrigated and non-irrigated agriculture
- c. Connection to processing facilities
- d. Identification of markets, crops, and services closer to the tipping point (if possible)
- e. Availability of water may not distinguish lands in Cache Slough; also consider water supply infrastructure.

Solano County is conducting these agricultural system studies and programs:

- 1. LESA study
- 2. GIS mapping of agricultural and water supply resources (with FlowWest)
- 3. Indirect and induced impacts study using IMPLAN (June 2017)—shows multiplier effect for changes in commodities.
- 4. Stakeholder outreach, including data gathering and working groups

Issues

- 1. Capturing narrative information vs. mapped or quantified data – the balance of both (ongoing discussion)
- 2. Are there other areas where the group should be thinking about integration in a consistent way – data quality, availability, and then integration.
 - a. The synergies will show themselves as the group discussion continues.
- 3. Regarding LESA – Understand the economic loss, which is an important consideration. Agencies will have to pick up the lost revenue stream – investing in the infrastructure, flood protection, water supply, etc.

Questions

- 1. Where should the other land use elements like roads and bridges go? Should they be with levees? Answer – consider them universal elements that will be reviewed and discussed with each topic.
- 2. What is our process going to be for validating and confirming the data? (ongoing question for the group to consider)
- 3. LESA – challenge of identifying value scores where it is difficult to determine values without the broader county context.
- 4. Is LESA getting down to the crop level? LESA soil suitability for producing crops. Soil productivity will help identify what types of crops could be grown. (not on a year-to-year basis). It may identify what are the potential yields – that process is intensive so LESA may not capture that.
- 5. Does LESA convert the score to the economic value? LESA process tries not to look at dollars as a measurement. One reason is it changes over time.

Actions

- 1. Revisit the data sets in the spreadsheet (located on the shared site) (All)
- 2. Add/confirm roads, utilities, and other standard infrastructure (SFEI)
- 3. Sub group 1 to review the physical data sets on flood. (FlowWest)
 - a. Mark, Mike, Eric, Roberta
- 4. Sub group 2 to review the water management infrastructure. (FlowWest)
 - a. Mark, David, Mike, Alex, Thomas

5. Sub-group look at the data for irrigation infrastructure (Mark/Bethany)
6. Move the discussion on LESA results to June meeting (Catalyst)
7. Add future scenarios as a discussion topic for March (Catalyst)
8. Everyone review the revised version of the Management Questions (ongoing)
 - a. Apply the same questions to each category - keep a consistent structure
 - b. Keep the future scenarios in the mindset as it applies integrate to the Management Questions
 - c. What do we know and what don't we know?
 - d. Maybe more detailed questions
 - e. Capture the opportunities as well as the impacts
9. Determine if a July meeting is needed to discuss phase 2 scope (Campbell)
10. Determine how the work of this group gets communicated out beyond this group. How do we communicate the phase 1 work? (All)
11. Reminder that the share site is available for the group:
<http://cache.restorationplanning.org>.
12. For comments on the management questions or meeting notes send comments to Charles or Linadria at Charles@catalystgroupca.com or Linadria@catalystgroupca.com

Next Meeting

The goal for the next meeting is to conduct a deeper discussion on restoration strategies and analysis, on Cache Slough specifically. Also discuss the integration of issues on all the topics and review of the roadmap. Begin thinking about phase 2.

The next meeting is Friday, March 10, 2017 from 9 am to noon, location – Solano County Administration Building, 675 Texas Street, Fairfield, 94533

Participants

David Okita	California ECO Restore
Christina Sloop	CA Department of Fish and Wildlife
Carl Wilcox	CA Department of Fish and Wildlife
Michael Perrone	CA Department of Water Resources
Tim Smith	CA Department of Water Resources
Jeff Juarez	Delta Stewardship Council
Martina Koller	Delta Science Program
John S. Currey	Dixon RCD
Mark R. Tompkins	FlowWest
Bethany Hackenjoss	FlowWest
Eric Nagy	Larsen Worrel: Associates
Wendy Rash	Natural Resources Conservation Service, USDA
Mike Hardesty	Reclamation District No. 2068
Campbell Ingram	Sacramento-San Joaquin Delta Conservancy
Beckye Stanton	Sacramento-San Joaquin Delta Conservancy
Tony Hale	San Francisco Estuary Institute
Pete Kauhanen	San Francisco Estuary Institute
Sam Safran	San Francisco Estuary Institute
Roberta Goulart	Solano County
Jim Allen	Solano County
William Femlen	Solano County
Tracy Ellison	Solano Land Trust
Thomas Pate	Solano County Water Agency
Roland Sanford	Solano County Water Agency
Brett Milligan	UC Davis
Doug Brown	Yolo County/Douglas Environmental
Charles Gardiner	Catalyst
Linadria Porter	Catalyst