TULE CANAL CHARRETTE OUTCOMES

FULL REPORT
DATES: JANUARY 28 - 29, 2021

EXECUTIVE SUMMARY

WE ENVISION A TRANSFORMED TULE CANAL AS AN INTEGRATED CORRIDOR THAT ENGAGES PEOPLE, SUSTAINS FARMERS, PROTECTS PROPERTY, AND PROVIDES DIVERSE WILDLIFE HABITAT

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Yolo County, located in North California with 200,000 people, is a region with some of the most important biodiversity and agricultural lands in the nation. A few statistics: 4 small cities, 57,000-acre Yolo Bypass (including the 16,000-acre Yolo Bypass Wildlife Area), an important segment of the Pacific Flyway, the Sacramento River (the longest river in California) as a border, and critical habitat for endangered and threatened species. During flood events, the Yolo Bypass transports five times the average flow of the Sacramento River to protect the Sacramento region. All water drains west to east to the Tule Canal, which turns into the Toe Drain in the southern part of the Bypass and eventually empties out into the Cache Slough Complex, eventually reaching the Pacific Ocean. The Tule Canal is a diverse and varied waterway with a diverse and varied set of stakeholder priorities.

Our aim through the Tule Canal Charrette in January 2021 was to bring stakeholders together to come closer to a shared vision for this complex environment which stretches the entire length of the 40-mile Yolo Bypass on the eastern side.

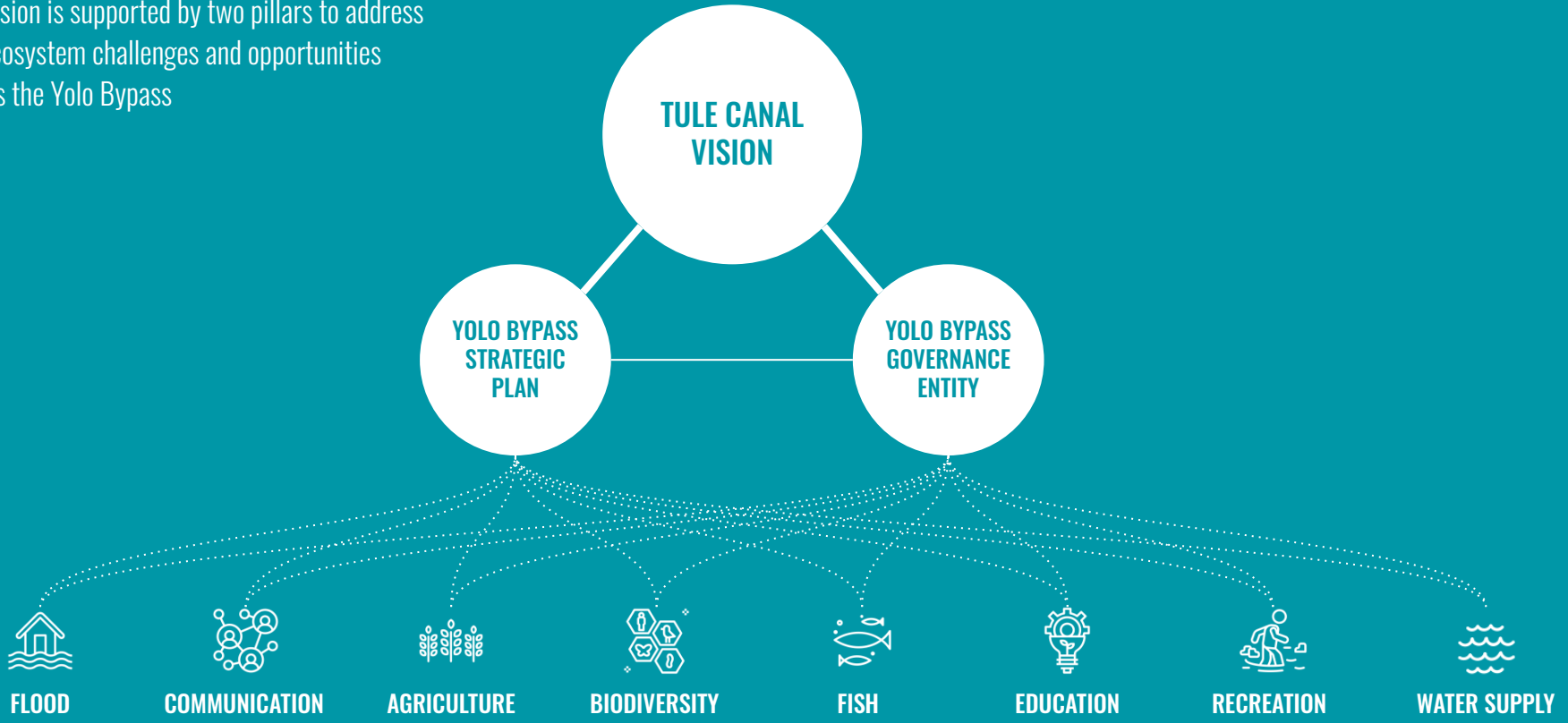
Our process began in 2012, when the County initiated the first Yolo Bypass Drainage and Water Infrastructure Improvement Study. In 2014, the final study identified 12 projects, a number of which are now completed and others of which are in progress. In December 2020, an update to that study was completed - identifying a new suite of projects to improve drainage and water supply infrastructure in the Yolo Bypass. Like these projects before it, the Charrette's work began with talking to landowners, land managers, and other stakeholders. Listening to those who know the Tule Canal and Toe Drain best, and recognizing this knowledge and grassroots process, is critical to a successful outcome.

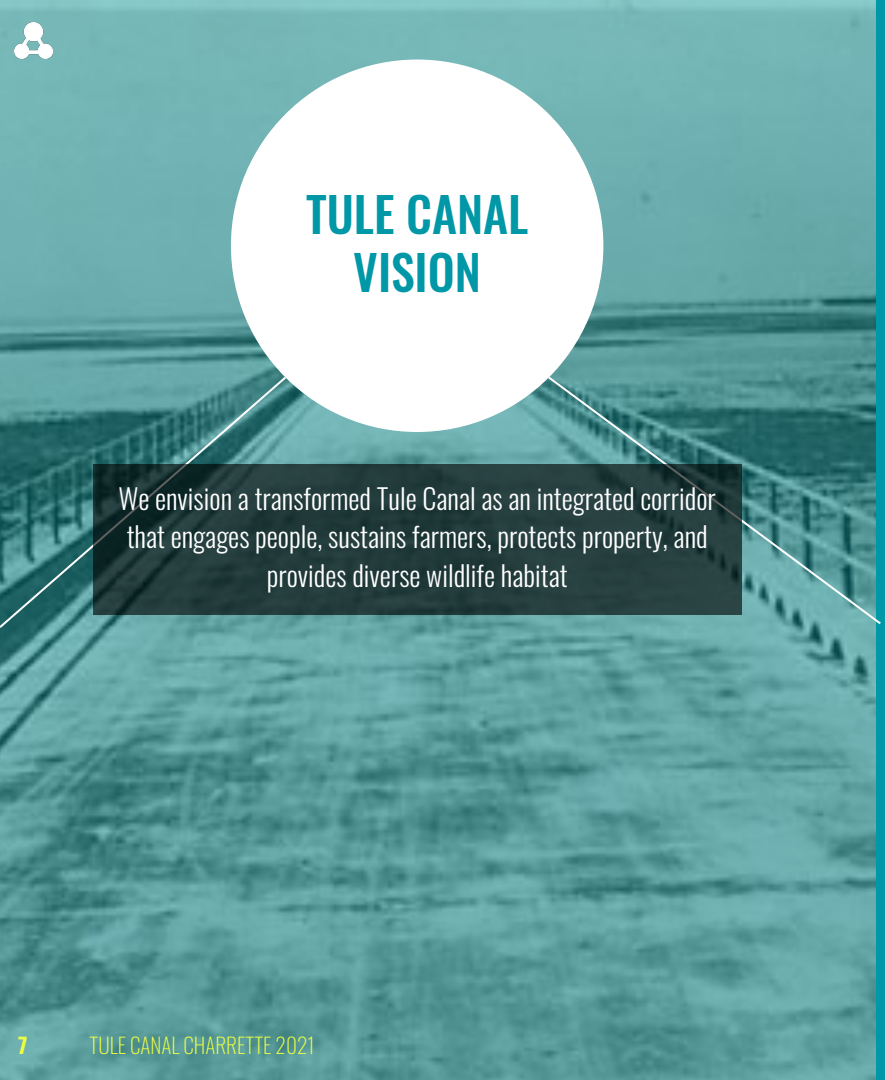
Our priorities included the protection of wildlife habitat, improvement of flood control,preservation of sustainable agriculture, and expansion of recreation and environmental education opportunities.

Our outcomes are three actions – a multi-functional Tule Canal, a Yolo Bypass Strategic Plan,and a Yolo Bypass Governance Entity - all in service of a multi-benefit Yolo Bypass vision.

OUR FRAMEWORK FOR ACTION

Our vision is supported by two pillars to address the ecosystem challenges and opportunities across the Yolo Bypass





TULE CANAL VISION

We envision a transformed Tule Canal as an integrated corridor that engages people, sustains farmers, protects property, and provides diverse wildlife habitat

AGRICULTURE

- Enhance wildlife-friendly agriculture
- Preserve the majority of agricultural land
- Ensure growers can reliably plant and harvest

BIODIVERSITY

- Create a sinuous, meandering, braided channel
- Set back levees to allow additional hydraulic roughness
- Improve connectivity to the Sacramento River
- Convert unproductive agricultural land to habitat
- Create bench to provide additional fish habitat
- Remove fish passage barriers
- Create riparian woodland and scrub, wetland and pollinator habitat

COMMUNICATION

- Develop videos, habitat StoryMaps, and art
- Create multi-benefit “strike team”
- Develop information hub
- Streamline permitting
- Create landowner committee

EDUCATION

- Implement a new educational curriculum which integrates art and technology
- Create an event program, including tours and conferences
- Develop a web site, interpretative signs, and other coordinated educational material

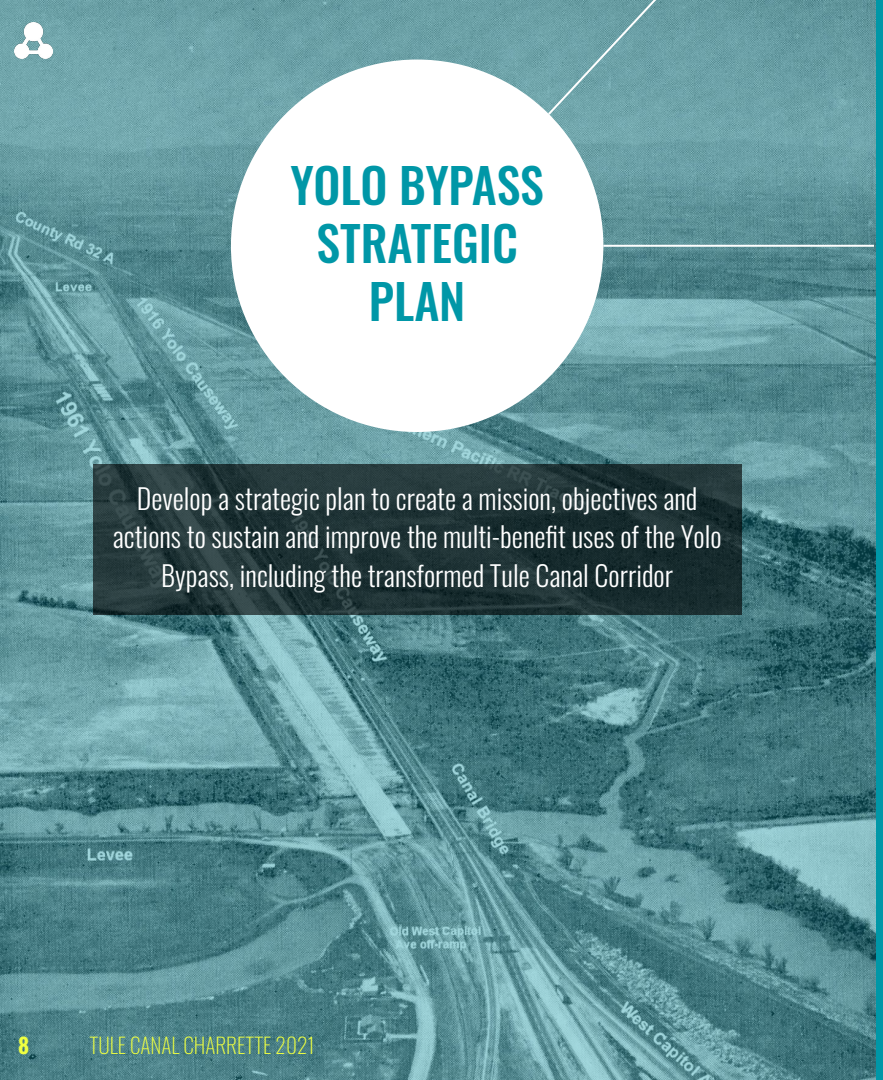
RECREATION

- Develop a recreational corridor integrated with habitat and recreation goals
- Increase public access while maintaining high habitat values
- Improve signage consistent with educational curriculum
- Implement a recreation partnership with local agencies and nonprofits
- Create new recreation opportunities tied to educational curriculum

WATER

- Increase flood conveyance capacity
- Reduce in-channel vegetation and sedimentation
- Screen intakes + operate intakes in real time
- Improve pumps, crossings, and other water-related infrastructure
- Increase groundwater recharge

YOLO BYPASS STRATEGIC PLAN



Develop a strategic plan to create a mission, objectives and actions to sustain and improve the multi-benefit uses of the Yolo Bypass, including the transformed Tule Canal Corridor

THE PLAN WILL ENVISION THE STEPS NECESSARY TO CREATE:

- Project priorities
- Governance structure
- Planning process to ensure all future projects integrate multiple benefits early in the design process
- Data management program and a data-sharing portal
- Adaptive management program
- Operation and maintenance structure
- Realistic long-term funding plan
- Innovative, dynamic communication platform
- Problem-solving culture among stakeholders that builds trust and minimizes conflict
- Opportunities to innovate operations through adoption of new technologies
- Streamlined, programmatic permitting process
- Strategy to maximize use of water, including potentially shared water rights, staggered operations, and consolidated diversions
- Centralized hub for all Yolo Bypass information

YOLO BYPASS GOVERNANCE ENTITY

Create a new Yolo Bypass governance entity to implement the Strategic Plan; the entity will construct habitat and recreation projects, streamline permitting and administrative processes, implement a Bypass-wide operation and maintenance program, expand education programs, secure and manage funding, and ensure robust communication among stakeholders.

CONSTRUCT HABITAT AND RECREATION PROJECTS

- Create a multi-benefit project strike team to facilitate project implementation
- Ensure recreation opportunities and public access points are identified early in project planning process
- Develop signage

EXPAND EDUCATION PROGRAMS

- Develop digital tour experiences
- Organize event program (conference, forum, gathering)
- Develop curriculum
- Develop educational partnerships between nonprofits

SECURE AND MANAGE FUNDING

- Identify long-term, stable funding sources
- Apply for grants
- Explore fees and taxes

ENSURE ROBUST COMMUNICATION AMONG STAKEHOLDERS

- Create and constantly improve information hub
- Develop branding
- Ensure equitable outreach to all stakeholders
- Create a landowner council to amplify agricultural voices

IMPLEMENT OPERATION AND MAINTENANCE PROGRAM

- Maintain lands and waterways for flood conveyance and drainage
- Implement adaptive management program
- Partner with state agencies to increase enforcement of regulations as needed
- Assist with levee maintenance, similar to a local maintaining agency (LMA)

STREAMLINE PERMITTING AND ADMINISTRATIVE PROCESSES

- Continuously update the Yolo Bypass Strategic Plan
- Advocate for streamlined permitting
- Create Yolo Bypass Keeper position

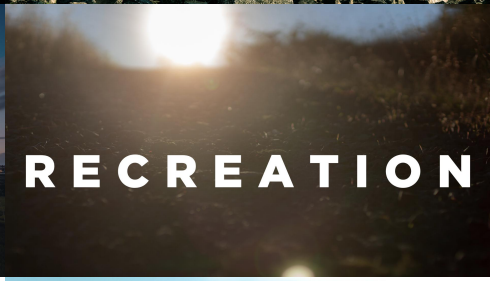
PROCESS

What we did, what it produced and what we're doing about it

71 PARTICIPANTS GATHERED ACROSS 10 WORKING GROUPS

Each working group was tasked with envisioning a future for the Tule Canal/Toe Drain which served the multi-benefit needs of diverse stakeholders - and taken through a process of ‘retrocasting’ - to develop a shared vision and a plan to get there together.

Working groups included landowners, policy makers, conservation scientists, hunters, farmers, educators, engineers and ecologists.



OUTCOMES: 3 CLEAR THEMES ACROSS WORKING GROUPS

CHANGE MINDSET

The need to be open to change and the desire to identify improvement in the Tule Canal: There is consensus that change is needed, that status quo doesn't work to move forward with real change in the Tule Canal.

COMMUNICATIONS

The need to rethink communications platforms with the express objective of more effectively including landowners in decision making processes, producing public-facing content to generate increased interest in the health and biodiversity of the land, and engaging a broader array of up and downstream parties through convenings and targeted communications.

TRUST IN GOVERNANCE

The need to revise and improve governance structures to enable long-term planning, reliable maintenance, and rolling permitting to improve the pace and scale of project completion, maintenance, improvements and restoration work. The need to rethink funding and financing structures for shared infrastructure maintenance and improvements.

12 BIG IDEAS & TEAM RECOMMENDATIONS

Specifically articulated multi-benefit improvement projects, within and adjacent to the Tule Canal extending south from the Fremont Weir into the Yolo Bypass Wildlife Area

PRODUCED 12 BIG IDEAS

1. TULE HABITAT CORRIDOR
2. MULTI-FUNCTIONAL TULE CANAL
3. MULTI-BENEFIT PROJECT STRIKE TEAM
4. TULE CANAL DISTRICT: A NEW GOVERNING ENTITY
5. TULE CANAL TOE DRAIN PROJECT
6. TULE CREEK
7. TULE CANAL ENHANCEMENT AND FLOODPLAIN RECONNECTION
8. STATE OF THE YOLO: AN ANNUAL CONFERENCE
9. ENVIRO EDUCATION: FRAMEWORK FOR A STATEWIDE, FORMAL, REQUIREMENT
10. TULE CANAL RECREATION PARTNERSHIP
11. NORTH BAY AQUEDUCT ALTERNATIVE INTAKE PROJECT
12. NORTHERN TOE DRAIN CORRIDOR AND MANAGEMENT PLAN

FLOOD TEAM 1

TULE HABITAT CORRIDOR

IN SUPPORT OF PROPOSED STRATEGY

Tule Canal Habitat Corridor: Establish a landscape scale vision for infrastructure developments which is compatible with the Big Notch and Fremont and Sac Weir widening projects from Fremont Weir to Interstate 80 and which is built in collaboration with landowners and compatible with their uses and future plans.

The Habitat Corridor will address specific needs for the landowning entities along the Fremont Weir to I-80 corridor while enabling widening projects to move forward. This will allow landowners to sustain agricultural production. It will maintain and improve local support for widening projects and provide appropriate incentive to landowners for implementation of easements along the corridor.

1

FLOOD

COMMUNICATION

AGRICULTURE

BIODIVERSITY

FISH

EDUCATION

RECREATION

WATER SUPPLY

FLOOD TEAM 1

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

Create A Tule Canal Habitat Corridor

- Ensure compatibility with Fremont Weir "Big Notch" project and Sac Weir widening
- Ensure compatibility with landowner uses and future plans and incentivize landowners to implement easements along the corridor
- Levee setbacks to accommodate additional vegetation or "roughness"
- Retain Tule Pond as part of the "Big Notch" to offset giant garter snake impacts

Develop Tools To Balance Competing Interests

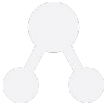
- Upper Elkhorn - Incorporate Valley Elderberry Longhorn Beetle mitigation bank into riparian complex and avoid green sturgeon conflicts
- Tevelde, Knaggs, Conaway: build 200-500-ft wide corridor along west floodplain

Maintain Agricultural Production And Farmland

- Agricultural maintenance: sustain current production levels and utilize latest technologies to achieve this
- Maintain farmland, enhance farm operations by putting easements on corridor adjacent to Tule Canal (will reduce future taxes)

Establish Additional Conditions To Riparian Corridor

- Create and maintain diverse habitat corridor along Tule Canal: Plant soft, woody, riparian vegetation along Tule Canal where available
- Maintain recreation opportunities
- More details related to LEBLS, Swanston, Sac Bypass, and South of I80



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KEY FINDINGS

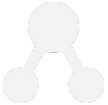
IN SUPPORT OF PROPOSED STRATEGY

PLAN

- All interested parties are collaborating to maintain viable agriculture with fish migration through the Bypass
- Everyone is talking about the same thing
- Local support

GOVERNANCE

- Long-term operation & maintenance funding
- Sustainable funding source
- Fund the enhanced corridor with flood money and use the benefits to offset long-term operation and maintenance costs
- Use creative ways to tie funding to flood projects
- Improve funding to agricultural operations to offset impacts from enhancing fish habitat
- Project funding



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FLOOD TEAM 2

MULTI-FUNCTIONAL TULE CANAL

BIG IDEA

2

Multi-functional, system-wide re-design of the Tule Canal for the benefit of flood conveyance, agriculture, habitat, water supply, recreation and education.

The Tule Canal was originally a borrow ditch and needs to be re-designed for multi-function to meet the flood and drainage demands of today. A multi-functional solution must also address downstream impacts of any re-design. It must also enhance wildlife corridors, passage and habitat.

- **FLOOD**
- COMMUNICATION
- AGRICULTURE
- BIODIVERSITY
- FISH
- EDUCATION
- RECREATION
- WATER SUPPLY

FLOOD TEAM 2

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

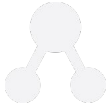
Multi-functional Tule Canal

- Remove fish barriers + design features in a way that maintains water conveyance and existing land usage
- Create extra capacity to accommodate multiple functions with flood + drainage as primary drivers + accommodation of riparian/scrub corridor
- Enhance and facilitate wildlife corridors, passage and habitat
- Add fish-friendly structures to improve canal management + operation; improve access for fish to and from floodplain and create a bench for frequent inundation to improve fish passage

Ensure And Improve Fish Habitat And Passage

- Screen diversions
- Replace ag crossings
- Create riparian corridors
- Remove non-native vegetation
- Create buffer of upland area between canal and uplands/floodplain
- Automated/managed drainage infrastructure

Systemwide Monitoring Program



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FLOOD TEAM 2

KEY FINDINGS

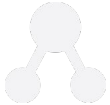
IN SUPPORT OF PROPOSED STRATEGY

PLAN

- Methodologies to minimize conflict, reduce silos, streamline coordination, improve communication and cross-agency collaboration
- Win-win situation with existing land uses – reconciliation

GOVERNANCE

- Establishment of a local governance system (maybe a joint powers authority) for Yolo Bypass
- Yolo Bypass Management and Maintenance Agency, funded by state and federal government with Board made up of landowners and regulatory agencies
- Having a Local Maintenance Agency as a lead is very important/beneficial for project implementation
- Management should be at the local level
- Operations and decision-makers should exist more at the local level; state and federal agencies should have input
- Fully operational funding mechanisms for the long-term implementation, maintenance, and management of Tule Canal and associated floodplains (for example, Mississippi River system where federal government pays for operation & maintenance)
- Ongoing management and maintenance will be essential and should be facilitated through system-wide coordinated effort
- Programmatic permitting for routine maintenance (sediment, vegetation, etc.)



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WATER SUPPLY

COMMUNICATION TEAM

MULTI-BENEFIT PROJECT STRIKE TEAM

3

BIG IDEA

Multi-agency, multi-stakeholder team focused on facilitating project implementation through effective communication during planning and design, shared understanding of technical information, and robust external communication; includes participation of a Yolo Bypass Keeper - a newly created position for an individual who's express job is to retain and amplify critical information across the Yolo Bypass and Cache Slough region.


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WATER SUPPLY

COMMUNICATION TEAM

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

- Develop Information Hub
- Streamline Permitting
- Ensure Equitable Outreach To All Stakeholders
- Create A Landowner Council

- One central clearing house for Yolo Bypass information + data including initiatives, projects, plans, regulations and data
- Ensure that values are widely and equitably communicated
- Single point of contact or hub of information, continuously updated
- Visually engaging communications including video storytelling, art storymap
- Mandatory that children learn about the intersection of water, flood, habitat and agriculture in regional school curricula
- Prioritize communications with elected officials, regulators
- Branding and outreach create personal connection to the Bypass: Prioritize ensuring that people feel connected to the Bypass, communicate climate change in a way people can understand and couple hat with action options
- Establish a centralized entity or group of individuals who focus on updating communications, outreach, public engagement and multi-stakeholder education

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

PLAN

- All entities and stakeholders in alignment
- Streamlining processes to get to action
- Clarity of positions and messages
- Use language and terminology that is accessible to all
- Agreement on what is necessary and important
- Ability to visualize a future condition
- Shared understanding of the value of the Yolo Bypass and Tule Canal

GOVERNANCE

- Establish coordinated maintenance entity
- All information, groups, and initiatives are found in one place
- Yolo Bypass Keeper to coordinate/communicate to all users (ag, water supply, flood, fish, habitat)
- Establish multi-benefit strike teams focused on implementation
- Show consistency with “cutting the green tape” initiative
- Funding agreements that fund staff to improve communication
- Consistent funding for state priorities
- Fewer layers of government
- Federal authority delegated to the state
- Inclusive decision-making
- Forums that promote communication
- Be open to new, unanticipated ideas or concerns
- Communication as a process with building blocks to a common understanding
- Communication that reaches everyone
- Ample funding and resources to support communication
- Lack of trust in government; need to build credibility
- Don’t want to take responsibility
- Silos, not seeing the big picture, unwilling to work together
- Not being included early enough
- Unwilling to move outside comfort zone + Lack of equal access to technology

AGRICULTURE TEAM

TULE CANAL DISTRICT: NEW GOVERNING ENTITY

BIG IDEA

Establish new governing entity with funding to manage the Tule Canal for drainage and other purposes from top of the bypass to the delta. The historic use of the TC to drain fields that remain in agriculture should be the primary use of the system.

- Ensures that the canal is maintained for its original intent (drainage) while also meeting new demands on the system (i.e. fish passage, habitat corridor, etc.).
- Critical components: some degree of local control, nimble structure – able to respond quickly to solve problems, reliable and sufficient revenue.

AGRICULTURE TEAM

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

- Preserve The Majority Of Agricultural Land
- Ensure Growers Can Reliably Plant And Harvest
- Enhance Wildlife-friendly Agriculture
- Creation Of "Tule Canal Improvement Plan"

- Drain fields in time to plant (April 1), but need to provide rearing habitat for salmon until March 15 (when draining needs to begin)
- RDs are being asked to maintain levees beyond their original functions and don't have a program like the Delta Levee Subventions Program to cover this work
- Habitat loss in the Central Valley has led to a biodiversity crisis (monarch butterflies, salmon, pollinators, etc) and it is unclear how to address the crisis without reducing the footprint of agriculture
- Stakes are limited to agriculture, wildlife, and flood conveyance – all "quiet" stakeholders and hard for most people to understand (everyone has a voice)
- Aged infrastructure (old pumps, etc.) present a constant barrier to management
- Management of Bypass lands is necessary to prevent invasive species and roughness (e.g. trees that impede flood conveyance)
- Figure out ways to maximize ecosystem benefits and ag in a complimentary way (e.g. Lower Elkhorn Basin Levee Setback Project)
- Plant pollinator habitat
- More events like Bats and Brew, Duck Days
- Watershed-scale BMPs and enhancements to improve groundwater recharge, improve forage production, and support natural ecology

AGRICULTURE TEAM

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

PLAN

- Creation of “Tule Canal Improvement Plan”

GOVERNANCE

- Not enough money and science to make the best decisions
- Stable, sufficient revenue stream
- It is difficult to generate a long-term revenue stream to fund operation (reliability of money)
- Restored habitat has to be managed, which costs money (amount of money)
- Sacramento County beneficiaries of the Bypass (e.g. SAFCA) provide financial support for sustainable agriculture
- Functional and civil government body adaptively manages Bypass to balance needs of ag, flood, fish, bird, etc (e.g. JPA) and is supported by funding

BIODIVERSITY TEAM 1

TULE CANAL TOE DRAIN PROJECT

5

BIG IDEA

Adaptive management program to oversee and enable a multi-benefit improvement to the tule canal and toe drain while advancing scientific research and public access.

PROGRAM COMPONENTS INCLUDE:

Communication: a formal structure among landowners and other stakeholders to facilitate transfer of information and common understanding of operations and proposed improvements.

Landscape: sinuous, braided tule canal/toe drain with oxbows and other natural features which: (a) improves connectivity to the sacramento river, (b) improves terrestrial and aquatic habitat to benefit native species, (c) includes treed riparian zones on either side of the canal/toe drain and (d) improves existing drainage and water supply system to support wetlands and wildlife-friendly agriculture.

Public access + education: new trails/public access points and new associated education programs to advance appreciation of biodiversity.

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

- Create A Sinuous, Meandering, Braided Channel
- Set Back Levees To Allow Additional Vegetation
- Improve Connectivity To The Sacramento River
- Expand Wetlands
- Create Riparian Habitat With Trees
- Create Pollinator Habitat
- Convert Unproductive Agricultural Land To Habitat
- Remove Fish Passage Barriers
- Create Bench To Provide Additional Fish Habitat

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

- A sinuous, braided channel with a diversity of habitat, riparian vegetation, and recreation opportunities ,as well as oxbows and other natural features
- Riparian zones lines east and west sides of Tule Canal, including trees
- Increase diverse habitat in the Tule Canal to support terrestrial and aquatic species
- High-quality wetlands managed as a whole system to provide superior habitat
- Improve the productivity and habitat value of wildlife-friendly agriculture, including habitat for migrating waterfowl and other endangered species
- Improve connectivity to the Sacramento River
- Create new walking and biking trails and other public recreation opportunities, complemented by education programs, to advance appreciation of biodiversity, focused in areas with minimal impact to habitat
- Expand education opportunities and connect existing education programs to foster support for biodiversity, with an emphasis on underserved communities
- Reduce poaching
- Restore natural hydrologic processes through a more consistent connection with the Sacramento River and floodplain
- Improve aesthetic value of Tule Canal
- Expand biodiversity to allow more fishing and hunting opportunities, including recruiting youth and other people to enjoy these activities
- Create riparian zones to benefit terrestrial, aquatic, and plant species, including challenging existing norms that don't allow the planting of trees
- Network of trails facilitating public access to and enjoyment of the Tule Canal
- Centralized messaging board forecasting river and stream conditions
- Publicly accessible application or web site displaying map of entire Yolo Bypass with all water inputs
- Apps for self-guided nature tours of Yolo Bypass public areas and restoration areas
- Coordinated system of Water Surface Elevation, flood prediction, and water quality measurements, as well as upcoming Bypass-wide action, to communicate across all stakeholders
- Remove legacy mercury and pesticides
- Implement an ecosystem-wide approach to restoration
- Develop voluntary agreements with landowners on their own timeline (e.g. 40, 50 years) to support the goals of the strategic plan, including implementing

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

PLAN

- Yolo Bypass Framework (vision for the entire Bypass), including the Tule Canal/Toe Drain, resulting in political buy-in from all three levels of government, landowners, and other stakeholders
- Creating of a robust, long-term vision, mission, and measurable actions (strategic plan) for the Yolo Bypass, including the Tule Canal, supported by state, federal, and local officials, landowners, and other local stakeholders
- Achieve common understanding of biodiversity and expand the measure of biodiversity beyond local and regional ranges
- Broad understanding of ecosystem services associated with Tule Canal
- Compromise among policy makers to resolve differing priorities for Tule Canal improvements
- Support for ecosystem-wide projects versus a single species focus (elimination of species tunnel vision)
- Establishes communication method to address fear of change, willingness to compromise, and understanding of current water supply operations
- Use long-term vision to develop large-scale projects that are proactive, rather than reacting to species decline

GOVERNANCE

- Yolo Bypass Conservation Authority (Bypasswide governing entity) evolved from the Yolo Bypass-Cache Slough Partnership charged with implementing the Yolo Bypass Framework, composed of a Board and staff, with significant funding (and will be a point of contact for all landowners)
- A coordinating entity to manage projects and maintain the drainage and water supply system
- Streamlined, effortless communication among Bypass stakeholders
- Improve collaboration with agencies responsible for controlling mosquito populations and reduce the need for control
- Achieve an optimal Bypasswide drainage system to support wildlife-friendly agriculture, recreation, vegetation composition, and aquatic and terrestrial species habitat
- Sufficient funding for education and outreach
- Sufficient funding for restoration and maintenance of restored lands
- Increased funding to support permitting staff to expedite projects
- More flexible permitting framework to allow for creative solutions to restoration in flood zones and funding to support efficient permit processing

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

GOVERNANCE (Continued)

- A statewide tax to fund Yolo Bypass improvements, including staff for coordinating entity
- Countywide tax to support local wildlife-friendly agriculture, implementation of the Yolo HCP/NCCP, maintain new recreational opportunities, and support the nonprofits providing environmental education
- Ongoing, stable funding from the Sacramento Area Flood Control Agency, State Water Contractors, and the State of California
- A single agency responsible for all Bypass issues that is above state and federal agencies
- Advance scientific understanding related to management options and proposed improvements through an adaptive management program
- Develop communication system and protocol, supported by state-of-the art technology, to ensure landowners, wildlife habitat managers, and other Yolo Bypass stakeholders can share information efficiently and effectively
- Hold monthly meetings to enable better communication among stakeholders
- Develop branding and informational campaign managed by the Yolo Bypass Conservation Authority to each visitors about Bypass history, the importance of biodiversity, and encourage outdoor recreation
- Merge local nonprofits in Yolo County to share resources, volunteers, and expand programs with a focus on educating Californians and other visitors on the value of Yolo County ecosystems, with a special program on the Yolo Bypass

BIODIVERSITY TEAM 2

TULE CREEK

BIG IDEA

A corridor connecting the 3 wildlife areas in order to improve biodiversity through variation of landscapes, elevations, habitat types, and natural processes.

Transformation of the Tule Canal into a functioning creek with space to accommodate ecological processes and a mosaic of habitat types.

6

FLOOD

COMMUNICATION

AGRICULTURE

BIODIVERSITY

FISH

EDUCATION

RECREATION

WATER SUPPLY

BIODIVERSITY TEAM 2

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

- Reconfigure the Tule Canal to provide rearing habitat for salmon and other wildlife habitat; meandering, braided channels, islands for terrestrial habitat, and kayaking/biking/hiking
- Tule Canal as a multi-benefit diversified waterway
- Functional, process-driven habitat corridor of sufficient width to support special status species beyond fish species
- Tule Canal as backbone to connect all three Wildlife Areas
- Include high ground refugia for wildlife species during high flows
- Pollinator strips and habitat
- Develop a land exchange; swap low-value lands for habitat
- Resilient; doesn't need human maintenance
- Varied landscapes, elevations, vegetation, refugia
- Open water, emergent marsh, riparian scrub, riparian woodland
- Create a "mini-river"
- Achieve primary and secondary production
- Utilize natural processes
- Create GIS database of current and planned habitat within the Bypass and develop areas where additional habitat can be restored or enhanced, and where connectivity for various species needs to occur
- Create or identify accurate 3D hydrodynamic and hydrologic models that can better predict where roughness can coexist with hydraulic capacity
- Model to integrate biology, project operations, and ag needs for water and ag operations
- Improved life-cycle models for all species of interest

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

PLAN

- Single purpose projects may preclude best outcome
- Values changing over time; may impact trade-offs
- Regional understanding of the value of the Bypass
- Comprehensive multi-species landscape plan for Yolo Bypass as an integrated part of the Sacramento River system

GOVERNANCE

- Yolo Bypass governance forum
- JPA of interested parties with stable long-term funding
- Establish an entity which manages invasive species throughout the Bypass
- Programmatic permits to enable fast-track project permitting
- Develop permitting strategy which links the various projects to ease permitting burden
- Green bonds for habitat improvements and ecological services
- Farmers give 10% of incremental net productivity in exchange for more productive water availability (e.g. if management of bypass increases productivity, farmers would share their benefit)
- Anyone downstream who benefits from a project or service would pay for that benefit to further the health of the Bypass
- State/federal appropriations for robust, real-time water and fish system-wide monitoring
- Carbon trade offs for creating ecological improvements; secondary market for related companies
- Generate revenue through County recreation

FISH TEAM

TULE CANAL ENHANCEMENT AND FLOODPLAIN RECONNECTION

BIG IDEA

Remake the Tule Canal into a high-quality fisheries habitat resource that also fulfills water supply and conveyance requirement, improves in-stream habitat quality, enhances river connections, and modifies and better connects the yolo bypass floodplain to provide volitional seasonal rearing habitat.

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FLOOD

COMMUNICATION

AGRICULTURE

BIODIVERSITY

FISH

EDUCATION

RECREATION

WATER SUPPLY

FISH TEAM

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

Establishment of system for local landowner economic incentives for restoration and management

Focus on ecosystem management over single-issue/ single-species management

- Excellent fish passage
- High-quality in-stream and riparian habitat
- Reduced predation risk and easy access to the floodplain for fish
- Highly connected Tule Canal and Yolo Bypass provides seasonal rearing habitat
- Centralized funding information hub

PLAN

- Focus on ecosystem management over single-issue/single-species management

GOVERNANCE

- Establishment of a maintenance and management entity with necessary authority to manage any resource that crosses numerous property boundaries
- Integrated and expedited ecosystem permitting
- Centralized funding information hub
- Water fee/acreage fee/equitable funding mechanism – create a revolving fund where local interests support at least a portion of the costs associated with the restoration, management, and maintenance of the Tule Canal

EDUCATION TEAM

STATE OF THE YOLO: AN ANNUAL CONFERENCE

BIG IDEA

Multi-day interdisciplinary conference which will uplift experiences of others in the basin to create shared understanding and concrete partnerships, advance scientific understanding, celebrate successes, connect the yolo basin with needed innovation opportunities, and bring in a broad diversity of stakeholders in the basin and downstream for a deep discussion of needs and opportunities.

This is a place where agencies (at all levels), political leaders, landowners, students, volunteers, press, community members and ngos can work together. The experience will include sessions on science, current projects, new policies and legislation, agriculture, education, art, funding opportunities. There will be breakout groups to collaborate on projects, field trips and curricula.

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EDUCATION TEAM

ENVIRO EDUCATION FRAMEWORK FOR A STATEWIDE, FORMAL, REQUIREMENT

BIG IDEA

A framework for a statewide mandated focus on environmental education in public schools which will include water, agriculture, flood control, water delivery and supply, watershed understanding and management, habitats, climate change, multi-benefits projects, landscape management, and the future of agriculture in our state.
this curricula will have specific iterations for each grade, K-12.

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EDUCATION TEAM

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

Implement a new educational curriculum which integrates art and technology

Create an event program, including tours and conferences

Develop a website, interpretative signs, and other coordinated educational material

- Establish Tule Canal environmental programs, including plants
- Formal, required statewide Environmental Education Framework (part of curriculum)
- Annual State of the Yolo Bypass conference
- Annual art and photography show associated with the conference
- Consistent message of species benefiting from the work, importance of flood conveyance and groundwater recharge, history of the land
- Every student in Sacramento region visits Yolo Bypass/Tule Canal
- Education network through Department of Education
- Robust media education program
- Streamlined database, incorporating iNaturalist and other applications
- Wildlife webcams
- Scientists keeping educators up to date
- Virtual tours to address access issues
- Fund schools so they can afford to pay for field trips
- Program to radio tag birds and mammals so people can watch/monitor migratory movements
- Yolo Bypass storymap
- Interpretative signs and incorporate iNaturalist
- Virtual tours guided by waypoints in google maps or other public sources

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

- Tourist posted for Yolo Bypass/Tule Canal education tours in Sacramento Airport
- Annual Yolo Bypass Career Day
- Celebrate 40th anniversary of Yolo Basin Foundation and other events
- Physical building for environmental education in the Bypass
- Volunteer restoration/planting days, other field days
- State/County fair photography contest for Yolo Bypass
- Multi-divisional state agency tour of the Bypass
- Work with landowners to allow regular access for education programs
- Website with free curricula for Yolo Bypass/Tule Canal education programs
- Trail connecting all public lands in Yolo Bypass (e.g. City of Davis Wetlands, Putah Creek, YBWA)
- Affordable public access to Yolo Bypass (e.g. public transportation, carpool, road maintenance)
- Education to generate public support for projects
- Create line of communication between the press and scientists to educate the public about the importance of the Bypass
- Create a culture of environmental stewardship
- Create different communication avenues (e.g. presenting a conferences)

PLAN

- Deciding on a message and making it personal (why should I care?)
- Consistent messaging across groups, including educators
- Tailored avenues of communication for specific audiences

GOVERNANCE

- Yolo Bypass Coordinating Entity (including communication and education)
- Inclusiveness (tribes, universities, public and private partnerships)
- Good relationships with landowners, press, political leaders, and schools
- Sustained partnerships (local, national, international)
- Consistent funding sources for education at all levels
- Federal birdwatching stamp program to fund environmental education and access
- Work with local water agencies to provide funding for water education field trips
- Federal tax on non-consumptive use equipment to fund education and access
- Connect environmental educators with District Offices of Ed
- Robust volunteer base

TULE CANAL RECREATION PARTNERSHIP

BIG IDEA

10

Improve and enhance existing recreational opportunities that are clear in scope, acces, and vision - and which include all necessary infrastructure.

Improve biodiversity through variation of landscapes, elevations, habitat types, and natural processes.

RECREATION TEAM

KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

- Develop A Recreational Corridor Integrated With Habitat And Recreation Goals
- Implement a recreation partnership
- Create New Recreation Opportunities Tied To Educational Curriculum
- Increase Public Access While Maintaining High Habitat Values
- Improve Signage Consistent With Education Program

- Create a recreational corridor the length of the Tule Canal that would include access for both consumptive and non-consumptive purposes that is funded annually with state funding
- Improve and enhance existing recreational opportunities that are clear in scope, access, and vision and include all necessary infrastructure
- Create raised trails in the Vic Fazio Yolo Bypass Wildlife Area
- Revise CDFW lease of Central Valley Flood Protection Board properties (expires in 2017) to include proper infrastructure and access for management by CDFW or another agency
- Expand recreation to multiple purposes, e.g. hiking/biking, hunting
- Plan for adequate parking areas at project conception
- Create signage: where to fish, where to fund, and other education/regulatory signage that lets visitors know where they can go
- Create regulatory signage that clearly outlines what is allowed and where, including property boundaries, access points, boat launches
- Develop adequate and dedicated parking for public areas, ideally outside the floodplain and easily visible
- Create floodplain benches or habitat outside of the flood system for terrestrial wildlife to escape floodwaters

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

PLAN

- Project proponents not considering existing or future recreation opportunities when developing projects
- Need well-defined and managed public access/parking planned in projects at the inception of the project
- Adequate parking areas planned at project conception
- Clear definition of what is specifically allowed on the levee
- Recreational stakeholders meeting to outline problems and mitigate: public access, floodwater hunting, parking, trash dumping, trespass, levee access
- Policy paper on potential funding opportunities to fund maintenance of existing and future infrastructure
- Collaboration and compromise between parties

GOVERNANCE

- Identify a champion to lead the development of the Tule Canal Recreation Partnership by identifying stakeholders and elect individuals to represent those groups
- Recreational stakeholders meeting to outline problems and mitigate: public access, floodwater hunting, parking, trash dumping, trespass, levee access
- Form a partnership between local, state, and federal agencies and private and public landowners and stakeholders to implement and maintain a path similar to the American River Parkway
- Study to evaluate creation of a new maintenance agency to maintain all projects/programs in the Bypass with steady funding from both the federal and state government
- Provide O&M funding
- Staff and fund enforcement efforts, as well as addressing vandalism and trash
- Adequate funding for operations and enforcement
- Negative portrayal of consumptive recreation users from public and political leaders
- Decline in hunting/fishing/outdoor pastimes
- Website developed to outline access and regulations (one stop shop)
- Agreements to outline roles and responsibilities (MOU or analogous)

WATER SUPPLY TEAM

NORTH BAY AQUEDUCT ALTERNATIVE INTAKE PROJECT

BIG IDEA

Construct an alternative intake for the NBA and other water users in the region that diverts from the Sacramento River to provide improved water quality, flexibility, and positive flows in Cache region.

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WATER SUPPLY

WATER SUPPLY TEAM

NORTHERN TOE DRAIN CORRIDOR AND MANAGEMENT PLAN

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BIG IDEA

Develop a project that widens riparian corridor, eliminates non native exotics, removes sediment as necessary, addresses water supply inflow.

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KEY RECOMMENDATIONS

IN SUPPORT OF PROPOSED STRATEGY

- Increase Capacity
- Reduce In-channel Vegetation And Sedimentation
- Screen Intakes
- Operate Intakes In Real Time
- Improve Pumps, Crossings, And Other Water-related Infrastructure
- Increase Groundwater Recharge

- Global water availability & curtailments, including those resulting from biological concerns, limit local supply
- Water quality concerns are increasing with restoration projects, including increases in organic carbon and methylation of mercury
- Primrose and beaver dams clog the canals used for agricultural water diversions
- Need to evaluate costs and benefits of screening intakes
- Need technology for real-time operations of intakes
- Difficulty implementing infrastructure improvements, even with environmentally beneficial, due to regulatory process
- Risky to farm in the Bypass, so more limited local investments – need to consider public benefits of landowner improvements.
- Coordinated effort to identify & apply for programs that can improve land management
- Ability to improve awareness through education and engagement on global and local water supply issues
- Alternative intake for the North Bay Aqueduct
- Resolve channel capacity in the Ridge Cut
- Sites Reservoir
- Consolidate ag diversions, perhaps with alternative intake
- Find ways to stagger ag operations to maximize use of water
- Create shared water rights agreements, perhaps by region
- Retire low-value agricultural lands where restoration is likely to be more beneficial
- Fix drainage bottleneck at Rio Vista
- Build Lisbon Weir modification
- Clean out and maintain the Toe Drain so it has full capacity

KEY FINDINGS

IN SUPPORT OF PROPOSED STRATEGY

PLAN

- A widely endorsed vision for the region (not just flood or species)
- Imagine a flood control system as a whole to limit unnecessary intermediate costs as restoration is completed
- Shared vision with all stakeholders (agency, landowners, local government, regulators, etc.)
- Culture shift within agencies and policy buy in to larger regional vision
- Not a common understanding of the environmental crisis; depends on where you sit
- Lack of broad understanding of the importance of the region

GOVERNANCE

- Create a Bypass-wide agency with regular monthly meetings to address issues, keep people informed, one-stop-shopping for coordination and information with funded staff
- Locally led, comprehensive organization that could tackle projects throughout the Bypass
- Could be a JPA of existing organizations
- Expand the Yolo Bypass Partnership to include all stakeholders
- Build relationships to the point where people understand each other's needs and perspectives
- Change represents risk and lack of trust makes change harder
- Lack of data to support changes
- Need stage gauges that support improved forecasting
- Technological platform that allows every stakeholder in the region to know the vision and how we are getting there together
- Cutting green tape for multi-benefit projects
- Flexible operations for whole system
- Good coordination between agencies and landowners
- Incentives for improved agricultural practices that are better for climate and environment
- Revisit how all of the facilities are coordinated to optimize value
- Develop a funding mechanism that can also fund operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) work
- Districts are smaller and cost are rising fast; no mechanism to pay for projects alone
- Capital funding is easier to secure; sustained funding for O&M more challenging to secure
- Long-term federal appropriations
- Dedicated state funding for a time-certain

PROJECT ASSETS

WORKSHOP ASSETS + CONTACT INFORMATION

CHARRETTE INVITATION
LINK

STAKEHOLDER SPREADSHEET
LINK

CHARRETTE AGENDA
LINK

VIDEO: GROUP PITCH PRESENTATIONS
AVAILABLE UPON REQUEST

MURAL WORKSPACE BOARDS
LINK

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