MINUTES OF THE SPECIAL MEETING OF THE
BOARD OF DIRECTORS OF
VISTA IRRIGATION DISTRICT

April 18, 2019

A Special Meeting of the Board of Directors of Vista Irrigation District was held on Thursday, April 18, 2019 at the offices of the District, 1391 Engineer Street, Vista, California.

1. CALL TO ORDER

President MacKenzie called the meeting to order at 9:00 a.m.

2. ROLL CALL

Directors present: Miller, Vásquez, Dorey, Sanchez, and MacKenzie.

Directors absent: None.

Staff present: Brett Hodgkiss, General Manager; Lisa Soto, Secretary of the Board; Don Smith, Director of Water Resources; Randy Whitmann, Director of Engineering; Frank Wolinski, Director of Operations and Field Services; Marlene Kelleher, Director of Administration; Greg Keppler, Engineering Project Manager; Mark Saltz, Water Resources Specialist; and Ramae Ogilvie, Administrative Assistant.

Other attendees: Doug Gillingham, Gillingham Water Planning and Engineering, Inc.; Don MacFarlane, DLM Engineering, Inc.; J.P. Semper and Paige Russell, Brown and Caldwell; Kathy Haynes, HDR; Ken Weinberg, Ken Weinberg Water Resources Consulting, LLC.

3. PLEDGE OF ALLEGIANCE

Director Sanchez led the pledge of allegiance.

4. APPROVAL OF AGENDA

19-04-54	***Upon motion by Director Miller, seconded by Director Dorey and unanimously carried (5 ayes: Miller, Vásquez, Dorey, Sanchez, and MacKenzie), the Board of Directors approved the agenda as presented.***

5. PUBLIC COMMENT TIME

No public comments were presented on items not appearing on the agenda.

6. WATER SUPPLY PLANNING STUDY

See staff report attached hereto.

Director of Engineering Randy Whitmann provided background regarding the Water Supply Planning Study (Study) by first recalling two studies the District undertook in 2012 and 2013, one assessed rehabilitation alternatives for the Vista Flume (Flume), and the other analyzed the District's cost of water, comparing local water costs to the cost for purchased treated water from the San Diego County Water Authority (Water Authority). Mr. Whitmann noted that based on the results of these two studies, the District

decided at that time to stay the course with the Flume and not moving forward with a third study to review various water supply alternatives.

Mr. Whitmann discussed events that have happened since the previous studies were completed, noting that proceeding with the Study at this time makes sense. First, long-term solutions for repairing the Flume are different and more costly than what was proposed in the previous study, affecting the cost of local water. Second, the District's updated Master Plan that was completed last year, included a brief analysis of the District's operations without the Flume. The analysis highlighted that the District relies heavily on the Flume during the Water Authority's annual 10-day aqueduct shutdowns; therefore, if the Flume were eliminated from the District's system, additional infrastructure would be needed during these shutdowns, adding to the cost of purchased treated water from the Water Authority. Lastly, Mr. Whitmann noted that the Carlsbad Desalination Plant has come online, and the cost of that water affects the Water Authority's all-in melded rates. Additionally, the San Luis Rey Indian Water Rights Settlement (Settlement Agreement) is now in place, and the District has clearly defined obligations pursuant to the Settlement Agreement.

Mr. Whitmann introduced the consultant for the Study, Doug Gillingham, who introduced the key members of his team: J.P. Semper and Paige Russell of Brown and Caldwell; Ken Weinberg of Ken Weinberg Water Resources Consulting, LLC; Kathy Haynes of HDR; and Don MacFarlane of DLM Engineering, Inc. Mr. Gillingham summarized the intent of the Study by stating that the Flume has been repaired many times over its 90-year existence, and the time has come to stop repairing it and make a decision to either overhaul it or eliminate it in favor of other alternatives. This Study will weigh both cost and non-cost factors in this decision. Mr. Gillingham and his team presented information for the Board via a PowerPoint presentation (attached hereto as Exhibit A).

Mr. Gillingham commented that this Study is very complicated. He reviewed the four main questions to be investigated: 1) what it will take to rehabilitate or replace the Flume; 2) how system improvements required due to the elimination of the Flume will change the system; 3) what are the long-term costs of operating and maintaining all the components of the District's local water supply and treatment system; and 4) what might the District do with its local water rights and allocations if it were to retire the Flume. Mr. Gillingham then outlined how the Study would be conducted, noting that it would be done in three phases. Phase 1,"Project Identification", which involved preliminary planning for the Study, is complete. Phase 2, "Coarse Screening", will include the development of preliminary cost estimates and non-cost factor ratings. Phase 3, "Fine Screening", will evaluate water supply and exchange alternatives with the intent of identifying a preferred project or projects for the Board's consideration. Mr. Gillingham stated that following the Course Screening phase, the Board will be updated with the second workshop, likely in July.

Mr. Gillingham stated that the question at the heart of the Study is whether "To Flume" or "Not To Flume". He said that the goal of the day's workshop was to identify the goals and objectives of the Study, the evaluation criteria, and the long-list alternatives. The Board concurred that "To Flume" or "Not To Flume" has been a somewhat daunting question that has needed to be answered for some time.

Mr. Gillingham reviewed the evaluation criteria for the Study, which includes cost and non-cost factors. Mr. Gillingham commented that some alternatives in the "To Flume" or "Not To Flume" decision could be costly and may require debt financing. The Board collectively was open to debt financing, if needed; it was acknowledged that the preference of the Board is to operate the District debt-free. Mr. Gillingham reviewed some of the non-cost factors, which include supply reliability, operational flexibility, water quality, environmental protection, and agency relationships. Mr. Gillingham said that his team will focus mainly on cost factors but will present the non-cost factors for the Board to determine their value.

President MacKenzie said that due to the gravity of the subject, her intention as Board President is for the Board to go through the Study and workshop process together as a whole with no subcommittee assignments. Mr. Gillingham advised that the goal is to have the Study completed by the end of 2019.

Ms. Paige Russell of Brown and Caldwell presented an overview of alternatives for rehabilitating the Flume. She noted that a pilot project was done in 2010 on the MW Bench of the Flume with high-density polyethylene (HDPE) pipe that was successful; however, Ms. Russell said that this method would not be feasible for all bench sections due to limited access for heavy equipment and tight radial bends of some of the bench sections. She stated that the best alternative will have to be determined bench by bench. Ms. Russell reviewed some of the alternatives. She provided clarification regarding a map (Slide 21 of the PowerPoint), that shows all of the different alignments of the Flume. Director Miller commented that it would be helpful to have a map that shows which sections of the Flume need to be rehabilitated and which sections are in good condition, such as the section that was replaced by a developer as part of their project.

Director Miller pondered if the Board would ever entertain constructing an entirely new alignment for the Flume; if not, he commented that it seems to be a waste of time and resources evaluating the idea as a viable option. President MacKenzie requested that the consultants limit their assessment of this as an option to a thumbnail sketch to include just the basics of the size of the pipe, the cost per foot, and the total miles to be constructed.

The Board requested that the Study address California Environmental Quality Act (CEQA) requirements that would come into play if the District decided to install a pipe within the existing Flume structure. Mr. Gillingham responded that it is possible that replacement of the Flume in place could qualify for a CEQA categorical exemption for maintenance and repair of existing facilities with no expansion of capacity. He commented that there are many caveats to this type of exemption, so it would have to be looked at closely during the implementability assessment. Mr. Gillingham added that if the chosen alternative were to lead to requirements imposed by CEQA, the current Study could serve as documentation showing that the District performed proper alternatives analysis.

President MacKenzie expressed a concern that the Flume itself could be a historical monument, and cultural impacts may need to be considered. Mr. Gillingham mentioned another concern regarding the existing Flume alignment, which will be discussed more at the next workshop, is a water quality and security aspect associated with the operation of a treated water conveyance in a non-pressurized facility. He added that the District's permit from the California State Water Resources Control Board, Division of Drinking Water (State) authorizes the use, but it is nevertheless something that should be discussed because the continued use may be an exception that would have to be permitted by the State.

J.P. Semper of Brown and Caldwell reviewed the improvements that would be needed to ensure reliability if the Flume were eliminated from the District's system. He said one option would be to add new treated water storage at a cost of about $60 million; less costly options would be to increase interconnectivities with the City of Oceanside (Oceanside) and the Vallecitos Water District (VWD). Mr. Semper mentioned another factor to consider, and least costly, is a project that is currently on the books for the Water Authority to install an isolation valve that would allow the District's supply to remain whole during Water Authority 10-day aqueduct shutdowns.

Mr. Semper discussed the Boot and Bennet areas, which have been placed by the Local Agencies Formation Commission (LAFCO) in the sphere of influence of VWD, indicating that it may be most practical for these areas to be annexed by VWD should the Flume be retired from service. Mr. Whitmann reviewed how the annexation costs for the Boot and Bennet areas to VWD were calculated, stating that the District's infrastructure in these areas is aged, and VWD believes the District would have to pay them for

taking on these assets with reduced lifespan. He also indicated that increased demand on VWD's system might trigger the collection of capacity fees as well.

Mr. Don MacFarlane discussed raw water system and treatment costs, which would be added to other costs associated with the "To Flume" option. To be considered in the "Not To Flume" costs would be the remaining cost obligations associated with the Settlement Agreement and other local facilities agreements. Additionally, the long-term costs associated with the maintenance, repair, and replacement of the wellfield, the conveyance system, Lake Henshaw, and the Henshaw dam, the diversion structure, the Escondido canal, etc. will be assessed. He discussed long-term ownership options for Lake Henshaw and the Warner Ranch, which could include ownership as-is, selling the Warner Ranch, or perhaps selling it to a buyer that would allow for the continued operation of the facilities for water supply purposes; these options affect both sides of the question of "To Flume" or "Not To Flume".

The Board discussed how it feels about the possibility of selling the Warner Ranch if the Flume were eliminated from the District's system. The Board's comments all indicated a willingness to look at alternatives, including this option, and see how the Study unfolds. The Board noted concerns about how this decision (selling Warner Ranch) might impact issues related to the Sustainable Groundwater Management Act, the Settlement Agreement and the San Pasqual Undergrounding Project.

Mr. Ken Weinberg discussed local water exchange options, which are associated mainly with the "Not To Flume" option. He noted that possible exchange partners include the City of Escondido (Escondido) and Rincon del Diablo Municipal Water District as well as the Water Authority or the Indian tribes. Mr. Weinberg discussed these and other possible exchange scenarios, commenting that the evaluation of these opportunities to exchange or sell local water to other users is a key factor in the evaluation of the "Not To Flume" option. He said that the cost benefit of each option will be assessed.

Director Miller commented that an analysis of the impact on Escondido, should the District eliminate the Flume, would be useful information to have when considering potential partnerships. He also stated that another good question to ask would be whether more water could be purchased from Oceanside via the Robert A. Weese Filtration Plant. Director Vásquez said that he believes the San Luis Rey Indian Water Authority would be the most interested in taking over the watershed at Lake Henshaw and the Warner Ranch. The Board briefly discussed these and other ideas about exchange partnerships with Mr. Weinberg.

Mr. Gillingham stated the according to his rough calculations the cost of treating raw water at the Escondido-Vista Water Treatment Plant and conveying it through a newly replaced Flume could cost about $1,800 per acre foot; the all-inclusive cost of purchasing treated water from the Water Authority is currently about $1,700 per acre foot. These rough calculations show that the cost of various alternatives are likely going to be close and that there may not be an obvious answer to the question of "To Flume" or "Not To Flume". Mr. Gillingham said that based on the day's discussion he believes his team has good direction how to proceed. Next, the team will begin assigning numeric values and performing calculations regarding the alternatives discussed; preliminary results of the team's analysis will be presented at the next workshop (tentatively planned for July).

The Board expressed appreciation for the work done so far and for the way the Study has been laid out in a comprehensive and methodical manner. The consensus of the Board was that it is ready to face the question at hand, "To Flume" or "Not To Flume", and make decisions that have been a long time coming. The Board expressed interest to see what information will be presented at the next workshop and an openness to consider the ideas presented. The Board thanked Mr. Gillingham and his team for a fine presentation. Mr. Hodgkiss thanked the Board for taking on this very complex matter and for their willingness to make hard decisions regarding "To Flume" or "Not to Flume".

7. COMMENTS BY DIRECTORS

The Board members discussed their respective calendars in July for possible scheduling of the next workshop. Mr. Hodgkiss requested that the Board members email him their availability for dates between mid-July to mid-August.

8. COMMENTS BY GENERAL MANAGER

None were presented.

9. ADJOURNMENT

There being no further business to come before the Board, at 11:08 a.m. President MacKenzie adjourned the meeting.

Jo MacKenzie, President

ATTEST:

Lisa R. Soto, Secretary
Board of Directors
VISTA IRRIGATION DISTRICT

VISTA IRRIGATION DISTRICT

STAFF REPORT

Agenda Item: 6

Board Meeting Date: **April 18, 2019**
Prepared By: **Randy Whitmann**
Approved By: **Brett Hodgkiss**

SUBJECT: WATER SUPPLY PLANNING STUDY

RECOMMENDATION: Conduct Water Supply Planning Study workshop.

PRIOR BOARD ACTION: On October 10, 2018, the Board approved the Request for Proposal for a Water Supply Planning Study. On January 23, 2019, the Board authorized the General Manager to enter into an Agreement for Professional Services with Gillingham Water for the Water Supply Planning Study in an amount not-to-exceed $324,800.

FISCAL IMPACT: Unknown at this time. The Water Supply Planning Study will evaluate long-term rehabilitation/replacement of the Vista Flume (Flume) with other alternatives. Once the Water Supply Planning Study is complete, a preferred project alternative will be identified and the estimated costs incorporated into future budgets.

SUMMARY: The District maintains capacity rights from two sources, raw water treated at the Escondido-Vista Water Treatment Plant (EVWTP) located at Lake Dixon and multiple treated water connections along the San Diego County Water Authority's (SDCWA's) aqueducts. To reduce costs, the District typically maximizes the locally treated water supply at EVWTP and relies on the 11-mile Flume for conveyance into the District. During a planned 10-day shutdown along the Second Aqueduct, the District is dependent on the Flume. With the Flume approaching its useful life, and long-term rehabilitation/replacement costs estimated to range between $35 and $75 million, proceeding with the Water Supply Planning Study has been determined necessary to properly evaluate the potential alternatives.

DETAILED REPORT: The Water Supply Planning Study is designed to support a decision by the District as to the future of the Flume. Many factors weigh in the comparison of alternatives. The evaluation of alternatives related to rehabilitating or replacing the Flume will seek to account for the full current and future cost of the District's local water supply operation as well as the benefits to the District afforded by access to and management of its own local water supply. Likewise, the analysis of alternatives related to retiring the Flume altogether will seek to account for the current and future costs of purchasing additional imported water, the possible need for additional treated water storage and/or other delivery reliability improvements, the future of the Boot and Bennett areas, and options to exchange the District's local water. The comparison of alternatives and the selection of a preferred alternative(s) will be guided by criteria of costs, reliability, water quality, environmental protection, existing water supply obligations and assets, and other factors to be explored.

The Water Supply Planning Study includes three workshops with the Board as follows:

- Workshop No. 1 – Project Identification and Preliminary Planning: review and reach preliminary consensus on the project objectives, evaluation criteria and an initial 'long-list' of alternatives to be evaluated through a coarse screening analysis.

- Workshop No. 2 – Coarse Screening / Alternatives Evaluation: review preliminary results of the coarse screening analysis, refine and confirm findings and identify a 'short-list' of alternatives to be advanced into a fine screening analysis.

- Workshop No. 3 – Fine Screening / Alternatives Refinement: review the results of the fine screening analysis and confirm a preferred project alternative for implementation.

The attached review package provides an initial draft of the project objectives, evaluation criteria, and an alternatives list based on initial meetings with staff; the workshop will afford the Board the opportunity to provide input on these elements prior to advancing to the coarse screening process.

ATTACHMENTS: Workshop Agenda and Reference Materials

AGENDA

VID Water Supply Planning Study

Planning Workshop No. 1:
Project Identification and Preliminary Planning

9:00 a.m. Thursday April 18, 2019
VID Offices

PURPOSE: Review, explore, and refine a) project goals and objectives, b) evaluation criteria, and c) long-list alternatives.

COMMENTARY: The question before the District, of whether to invest in replacement of the Vista Flume, is big, complex, and consequential. Before diving into the analysis and due-diligence work needed to answer the question, it is beneficial to first refine the question itself, to make sure we are all on the same page and aiming at the right target. Workshop No. 1 provides a forum for that early planning review and course refinement.

AGENDA:

1) INTRODUCTION
    a. Purpose of today's workshop
    b. Project Overview / To Flume or Not To Flume
    c. Major elements on the Balance Scale
    d. Study process / Start at the beginning

2) PROJECT GOALS AND OBJECTIVES
    a. Initial draft
    b. Reaction / Questions / Discussion
    c. Refined goals and objectives

3) EVALUATION CRITERIA
    a. Initial draft
    b. Reaction / Questions / Discussion
    c. Refined criteria

4) LONG-LIST ALTERNATIVES*
    a. Initial draft
    b. Reaction / Questions / Discussion
    c. Refined long-list

    * The review sequence will be repeated for each of the following categories:
        i. Box 1: Flume Rehab/Replacement
        ii. Box 2: System Improvements / Boot and Bennett
        iii. Box 3: Raw Water System and Treatment
        iv. Box 4: Local Water Exchange Options

5) NEXT STEPS / SCHEDULE / ACTION ITEMS

6) ADJOURN

VISTA IRRIGATION DISTRICT

Water Supply Planning Study

Workshop No. 1 Reference Materials

April 2019

Prepared by:

GILLINGHAM WATER
Gillingham Water Planning and Engineering, Inc.

CONTENTS

1. Project Introduction and Study Area Exhibits

1.1. Project Introduction

BACKGROUND AND OVERVIEW

The Vista Flume (Flume) is nearing the end of its functional service life. The Flume is an integral component of the District's water supply system, providing for delivery of the District's historical rights to water from the San Luis Rey River to the District service area. Local water is blended with raw imported water and treated at the Escondido-Vista water treatment plant, where it feeds the Flume.

The capital investment needed to replace or rehabilitate the Flume will be significant. Accordingly, prior to making an investment decision, the District wishes to weigh carefully the merits of investing in the Flume against the merits of other water supply alternatives, including that of retiring the Flume altogether and relying on Water Authority deliveries in its place. To support its decision, the District has determined to conduct the Water Supply Planning Study 2019 to develop an objective and complete evaluation and comparison of alternatives.

PROJECT OBJECTIVES (Preliminary overview, to be refined during Workshop No. 1)

The goals of the study are as follows:

1) **Alternatives Evaluation (To Flume or Not To Flume):** Identify and evaluate alternatives for rehabilitating or replacing the Flume, and weigh these against alternatives for retiring the Flume, including options for exchanging the District's local water.

2) **Decision Support:** Provide analysis and recommendations that are clear, complete, and objective, and conduct planning workshops with District staff and the Board to facilitate project understanding and support the District's decision process.

SCOPE OF WORK

The scope of services is structured into four tasks, as follows:

- TASK 1: Preliminary Planning / Project Identification
- TASK 2: Alternatives Evaluation / Coarse Screening
- TASK 3: Alternatives Refinement / Fine Screening
- TASK 4: Project Management

1.2. Workshop No. 1

The purpose of workshop No 1 is to review, explore, and refine a) project goals and objectives, b) evaluation criteria, and c) long-list alternatives.

The question before the District, of whether to invest in replacement of the Vista Flume, is big, complex, and consequential. Before diving into the analysis and due-diligence work needed to answer the question, it is beneficial to first refine the question itself, to make sure we are all on the same page and aiming at the right target. Workshop No. 1 will provide a forum for that important early planning review and course refinement.

1.3. Study Area Exhibits

The following exhibits are attached:

1) VID Local Water System Schematic (VID)
2) Water Supply Facilities Overview (HDR)

Vista Irrigation District - Local Water System

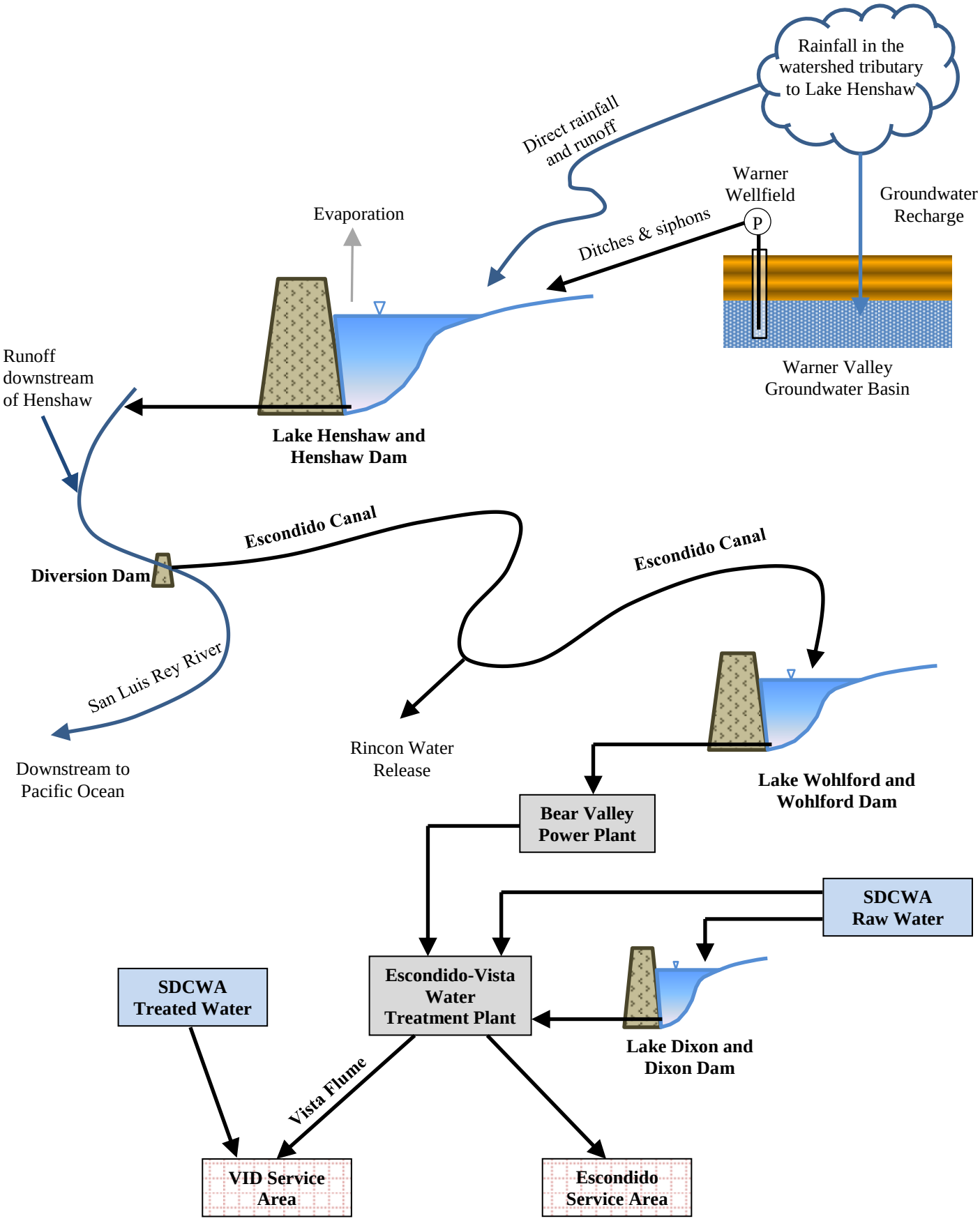
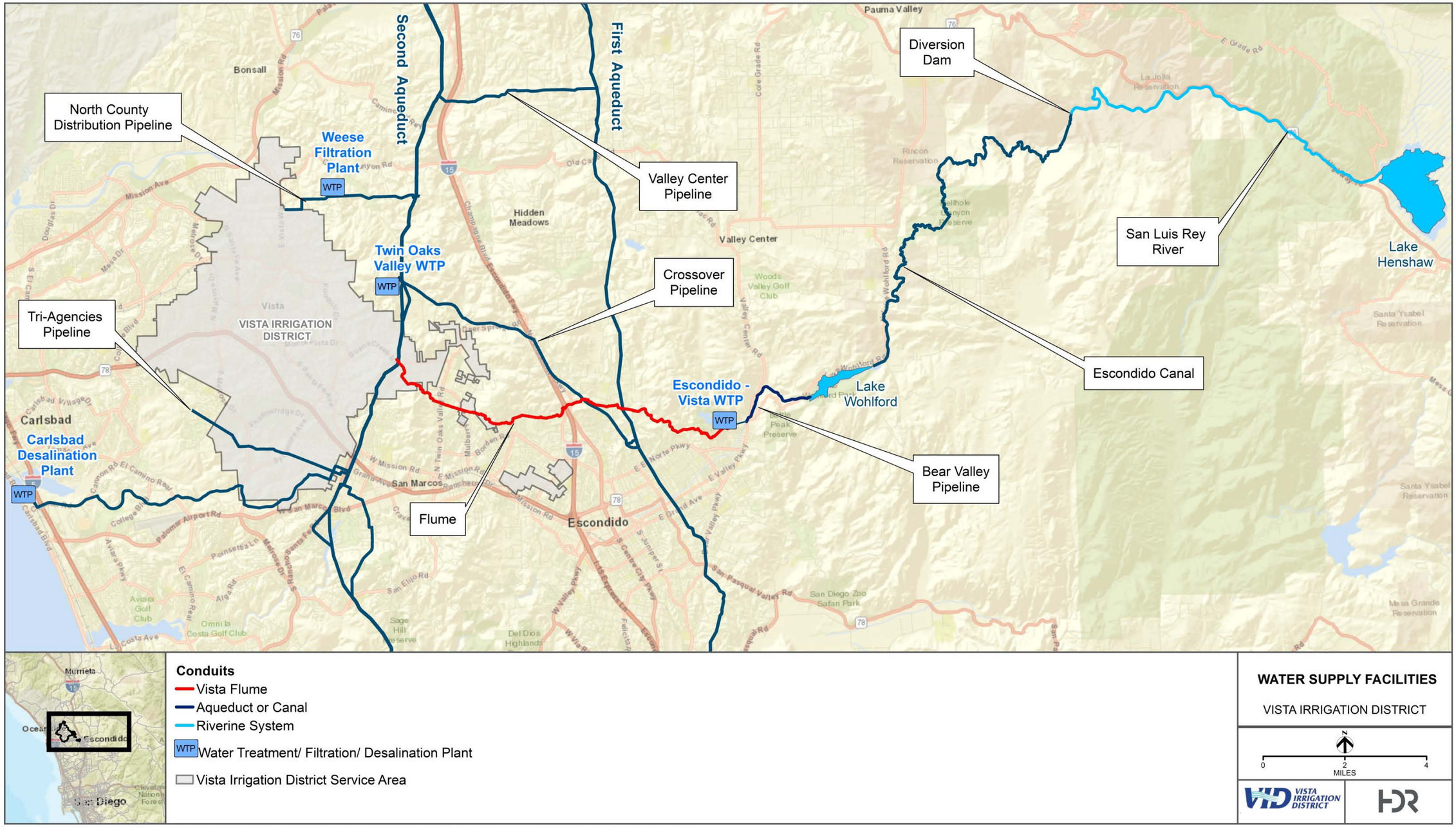


Figure 4-2. Regional Water Supply Facilities



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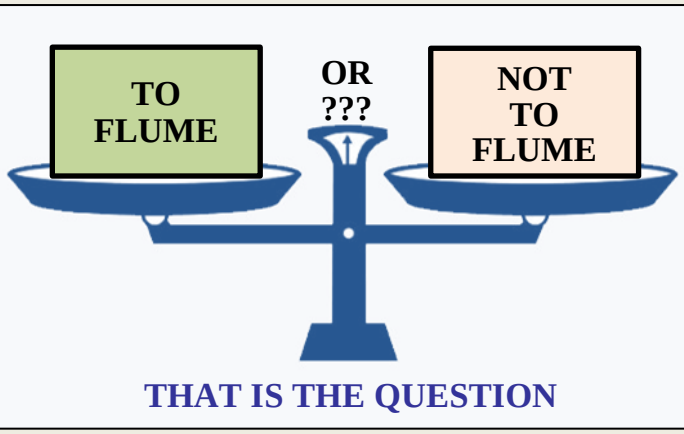
2. Project Goals and Objectives

2.1. Initial Draft

BIG PICTURE / OVERARCHING QUESTION:



The overarching question. The principal goal of the Water Supply Study is to weigh the alternatives and answer the question, and to do so based on analysis that is clear, complete, and trusted.

APPROACH AND METHODS:

1) Completeness: Consider all aspects of the District's water supply operation and a full range of project alternatives (see Section 4, Long-List Alternatives).

2) Evaluation Criteria: Weigh all relevant cost and non-cost factors consistent with the District's Mission Statement "to provide a reliable supply of high quality water that meets the needs of its present and future customers in an economically and environmentally responsible manner" (see Section 3, Evaluation Criteria).

3) Stakeholder Input: Seek input and buy-in from all key stakeholders, including board, staff, and affected entities.

4) Decision Support: Provide analysis and decision support that is clear and complete. Include sensitivity analysis for key decision variables.

2.2. Reaction Prompts

1) Overarching Question: Does To Flume or Not To Flume capture the overarching question and objective of the study? Is it on target? How should it be refined or expanded?

2) Approach: Are there other approach aspects – ingredients to success – that need to be captured and incorporated?

3) Sensitivities / Red Lines: Are there issues or sensitivities that bound the breadth of the study?

4) Success: Aside from answering Question 1 (To Flume or Not To Flume), is there anything else that defines a successful Water Supply Planning Study?

3. Evaluation Criteria

3.1. Initial Draft

SUMMARY STATEMENT: The study will weigh both cost and non-cost factors of the To Flume and Not To Flume alternatives. Costs will be a significant driver of preferences, but non-cost factors of supply reliability and operational flexibility, water quality, environmental protection, agency relationships, and other factors will weigh on the balance scale. Evaluation criteria established at the beginning are subject to refinement as the study progresses.

Cost Criteria

COST CRITERIA	CRITERIA DESCRIPTION / DISCUSSION
Maximize Economic Efficiency	Minimize total project capital, operating, and life-cycle costs.
1) Minimize life-cycle costs	Life-cycle costs are a measure of the project's total capital and operating costs, and may be expressed either in terms of Net Present Value or Equivalent Annual Costs. For the WSS, the project team anticipates expressing life-cycle costs in terms of **dollar per acre-foot ($/AF)** unit cost of water supplied. These costs may also be converted to water rate impacts. In all of these cases, the use of life-cycle costs assumes: a) a neutral preference between capital and annual costs when compared at an appropriate discount or interest rate; and b) a neutral preference between PAYGO and debt-financed funding at appropriate interest rates. These assumptions may be modified by the additional criteria listed below.
2) Capital vs. Annual Costs	See cost criteria no. 3
3) PAYGO vs. Debt-Financing	The District has a historical preference for PAYGO financing and the avoidance of debt, but would consider debt financing if needed to fund capital improvements while managing rates.
4) Risk and Liability	The study will seek to identify risk and liability issues in terms of costs, such as insurance costs. Risk and liability factors not fully captured by costs may also appear on the list of Non-Cost criteria.
5) Stranded Assets / Sunk Costs	The study will consider the salvage value of any stranded assets, but otherwise will evaluate project costs without regard to sunk costs. Sunk costs may be considered as a Non-Cost factor.
6) Opportunities for cost-sharing and financial assistance	Consider opportunities for cost-sharing, grant funding, and low-interest State loans.
7) Other?	

MEASUREMENT / SCORING: Cost factors will be measured **quantitatively** in terms of dollars, dollars per acre-foot, and possibly in terms of rate impacts.

Non-Cost Criteria:

NON-COST CRITERIA	CRITERIA DESCRIPTION / DISCUSSION
Maximize Supply Reliability and Operational Effectiveness	Maintain appropriately high levels of supply reliability, operational flexibility, and water quality
Supply reliability	Maintain ability to provide high levels of service reliability to customers, including uninterrupted service during scheduled aqueduct shutdowns
Water quality	Favor projects that comply with current water quality and sanitary protection regulations and that minimize water quality challenges
Maintainability	Favor projects that are easier to maintain
Minimize operational complexity	Favor projects that minimize operational complexity
Other	
Minimize Environmental Impacts / Protect Environmental Resources	Favor projects with fewer adverse environmental effects or that provide environmental benefits
Minimize adverse effects	Favor projects that minimize adverse environmental effects such as may be associated with Flume rehabilitation or replacement
Protect environmental resources	See *Intrinsic Values* criteria group
Community Impacts	Favor project with fewer adverse community impacts
Other	
Maximize Implementability	Favor projects with fewer obstacles to implementation and greater certainty of implantation feasibility.
Permit and CEQA Feasibility	Consider permit and CEQA feasibility and favor projects with fewer obstacles to permit success.
Stakeholder agency benefit / support	Favor projects that enhance regional cooperation and shared benefits
Existing obligations / Settlement Agreement	Honor all obligations of the Settlement Agreement and other legal agreements
Schedule	Favor projects with shorter schedules or that best align with District CIP budget planning
Other implementation risk	Consider all project implementation risk factors and favor projects with lower risk.
Intrinsic Values	Consider the “intrinsic values” of the larger mission of the District’s local water supply operation
Various	Environmental stewardship (Warner Basin), other

MEASUREMENT / SCORING: Cost factors will be measured **qualitatively** in terms of relative preference. The weighing of costs against non-cost factors will be guided by the project team and ultimately determined by the board. Possible scoring rubric below:

DRAFT SCORING RUBRIC FOR NON-COST FACTORS:

- Significantly Preferred / Advantageous
- Preferred / Advantageous
- Neutral / Meets objectives
- Constrained / Not Preferred
- Significantly Disadvantaged / Potential Fatal Flaw

3.2. Reaction Prompts

Cost Factors

1) PAYGO vs. Debt Financing: How should the District's historical preference for PAYGO be factored into the study and the evaluation criteria?

Non- Cost Factors

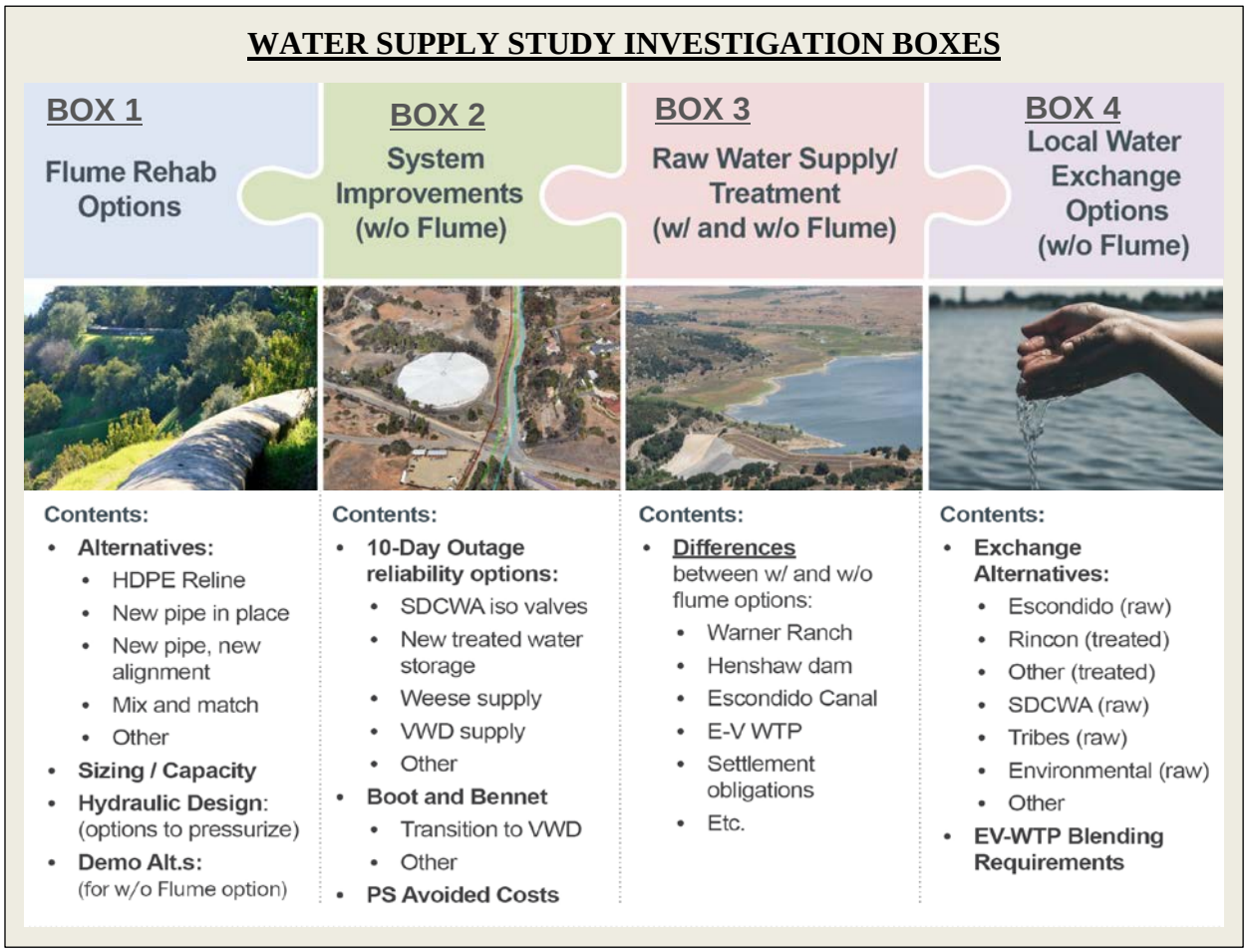
2) General Categories and Components: Are these the right categories and components?

3) Stakeholder Input: The District will approach and engage stakeholders to understand interests in local water exchanges, project alternatives, and impacts. How should the weight of this component be influenced by their input?

4) Intrinsic Values: How should the study account for the intrinsic values of the District's history with the Warner Ranch and all its operations (e.g., local water supply, recreation, land leasing, etc.)?

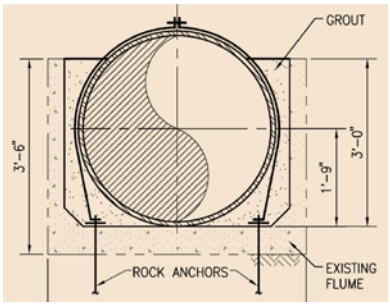
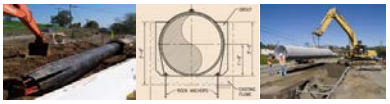
4. Long-List Alternatives

SUMMARY STATEMENT: The study is complex. The issues and variables weighing on the Flume Balance Scale are many, each with their own alternatives. Conceptually, the issues may fall into four **Investigation Boxes**, as introduced below and further described in the following pages.



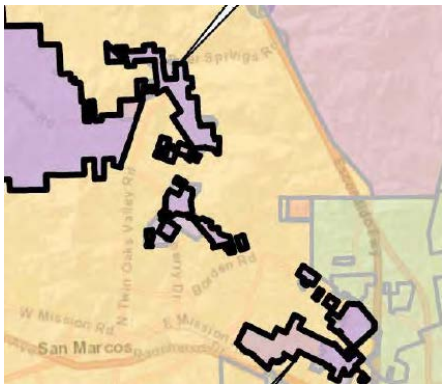
4.1. Box 1: Flume Rehabilitation and Replacement Options

The Flume provides important supply reliability benefits to the District during aqueduct shutdowns and is the only conveyance to supply water to the Boot and Bennett areas of the District.

BOX 1: FLUME REHABILITATION / REPLACEMENT	
Long-List Alternatives	**Notes**
1) HDPE Pipe Reline 	• District completed MW Bench pilot project in 2010 • Could be built in phases over time • Retains existing flume structure for armor protection and security; existing structure subject to continued deterioration or failure • Results in unpressurized or very low pressure operation; additional water quality protection measures may be required • May be impractical for some bench sections due to limited construction access and too-tight bends
2) New Pipe in Place 	• Construct new pipeline within existing flume easement • Sub-alternatives for pipe within existing flume walls, or without walls but on top of existing flume floor, or for buried pipe with complete demolition of flume • Could be built in phases over time • Results in unpressurized or very low pressure operation; additional water quality protection measures may be required
3) New Pipe in New Alignment 	• Construct new pipeline in public rights-of-way • Allows for pressurized flow (beneficial for compliance with standard water quality safeguards) • Presumes demolition of existing flume structure and possible quitclaiming of existing easements • Potential for temporary traffic and other construction impacts • Would lose prior rights
4) Combinations / Mix & Match 	• The three main rehabilitation/replacement options could be mixed and matched for optimum economy and constructability
5) Other **???**	• Previous District studies have considered alternative technologies such as carbon fiber lining and found these to be impractical or insufficient for long-term flume rehabilitation.

4.2. Box 2: System Improvements (Without Flume)

If the Flume were retired, the District may need to make other arrangements and may incur additional costs to maintain delivery reliability and to provide for service availability to the Boot and Bennett areas.

BOX 2: System Improvements (w/o Flume)	
Long-List Alternatives	**Notes**
1) Maintain Supply Reliability 	Alternatives: • SDCWA Isolation Valves: These would allow the Water Authority to limit treated water aqueduct shutdowns to one or the other of the two Second Aqueduct treated water pipelines, such that the District would continue to receive full service. • Additional Treated Water Storage: The District could construct additional treated water storage, such as by upsizing the planned Pechstein II. • Weese Supply: Current or expanded access to the Oceanside Weese WTP. • Vallecitos Interconnections: Current or expanded access to VWD facilities • New WTP: The District could construct a new water treatment plant adjacent to Pechstein. This is likely to be impractical due to costs and other considerations, but will be explored as part of Coarse Screening. • Combination / Mix & Match: a combination of the above may be necessary to achieve reliability. • Other?
2) Boot and Bennett Areas 	Alternatives (see Box 2 Notes below): • Extend District facilities: The District has determined that extension of District facilities to serve the areas independent of the Flume would be impractical to due cost and other factors. LAFCO has placed the areas within the Sphere of Influence of VWD. • Interagency Service Agreement with VWD: The District has determined that permanent service to these areas by VWD, while keeping the areas within the District, is unlikely due to VWD disfavoring such an arrangement. • VWD Annexation: This alternative appears the most likely outcome were the Flume retired. The District could be responsible for annexation and capacity payments to VWD of between zero and approximately $30 million.

3) Avoided Pumping Costs	Deliveries to the District from the Water Authority's VID3 connection are at a higher hydraulic gradient than flume deliveries. This may allow for pumping cost savings and avoided pump station capital costs if the Flume were retired.

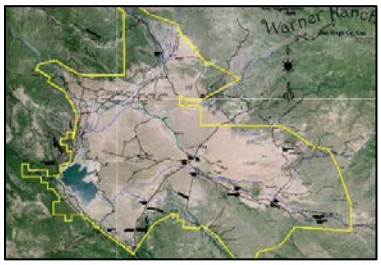
Box 2 Notes
Boot and Bennett Areas: The Boot and Bennett areas are within the sphere of influence and eventually will be served by Vallecitos Water District (VWD) under the To Flume scenario. If the Flume were retired, the presumption is that the Boot and Bennett area reorganization process with LAFCO and VWD would be accelerated, for which the District might incur significant costs. The costs for this reorganization, potentially including annexation fees, capacity fees, payment for the transfer of existing facilities, and physical conversion of systems, would need to be studied to determine what is fair for both parties.

4.3. Box 3: Raw Water System and Treatment

Note: Box 3 is a big box, holding lots of components. Many of the components can be weighed neatly as a function of costs, but this box contains a healthy dose of non-cost factors as well, including history, District mission, and more.

The investigation of the various components of Box 3 will focus on the *differences* in outcomes between the To Flume and Not To Flume options. If certain components incur the same costs, or the same benefits, or the same risks for ether of the overarching options, then the study can shift its resources to focus on components that weigh differentially on the balance scale.

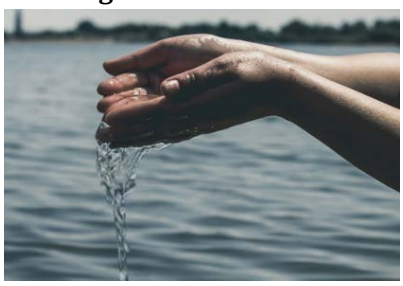
BOX 3: Raw Water System and Treatment	
Long-List Alternatives	**Notes**
1) Component Ownership 	• Maintain current ownership • Sell or relinquish ownership • Analysis to consider cost and other differences for each and all of the system components: o Warner Ranch o Henshaw dam o Escondido Canal o E-V WTP o Etc.

2) Treatment Plant Upgrades 	• Use of local water is constrained by current need to limit local water blend to no more than 40 percent (60 percent imported water). Treatment plant upgrades and/or other water quality improvement measures might be able to lessen or remove this constraint. • The issue affects the average annual local yield available to the District.
3) Cost Estimating Approaches **$$$**	• Plan for periodic replacement of facilities including Henshaw Dam and Escondido Canal (2012 Study approach) • Plan for periodic repair and rehabilitation or facilities rather than replacement
4) Warner Ranch 	• District owns 43,000 acres. See question/prompt No. 2 below.

Box 3 Questions / Reaction Prompts

Warner Ranch: If it were possible to transition ownership of the Warner Ranch to a governmental, tribal, or NGO entity, while maintaining the ability to operate the wellfield, would this be something the District would consider?

4.4. Box 4: Local Water Exchange Options

BOX 4: Local Water Exchange Options	
Long-List Alternatives	**Notes**
1) Exchange Partners 	Possible exchange partners include: • Escondido (raw) (has first right of refusal) • Rincon (treated) • Other retail agency (treated) • SDCWA (raw) • Tribes (raw) • Environmental (raw) • Other Notes: • Settlement Agreement requires the water supply system must be operated as it is today, and provides little incentive for Tribes to purchase VID share of local water • Study goal is to determine exchange feasibility and the compensation available to the District.

Box 4 Questions / Reaction Prompts
Exchange Options: The Settlement Agreement constrains but does not eliminate options available to the District to lease, sell, or otherwise exchange its local water. The study will consider options for arrangements with Escondido, other retail agencies including Rincon, and the Water Authority, as well as possible arrangements with the Tribal Nations and as use for environmental enhancement or restoration. Are there policy preferences, constraints, or opportunities that should guide this review?

Exhibit A

VISTA IRRIGATION DISTRICT

Water Supply Planning Study

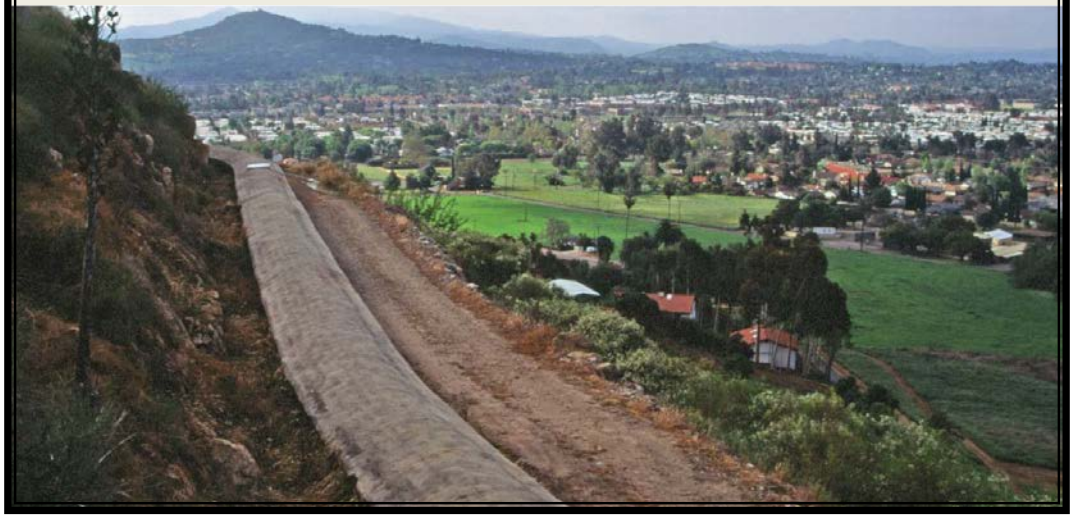
Workshop No. 1

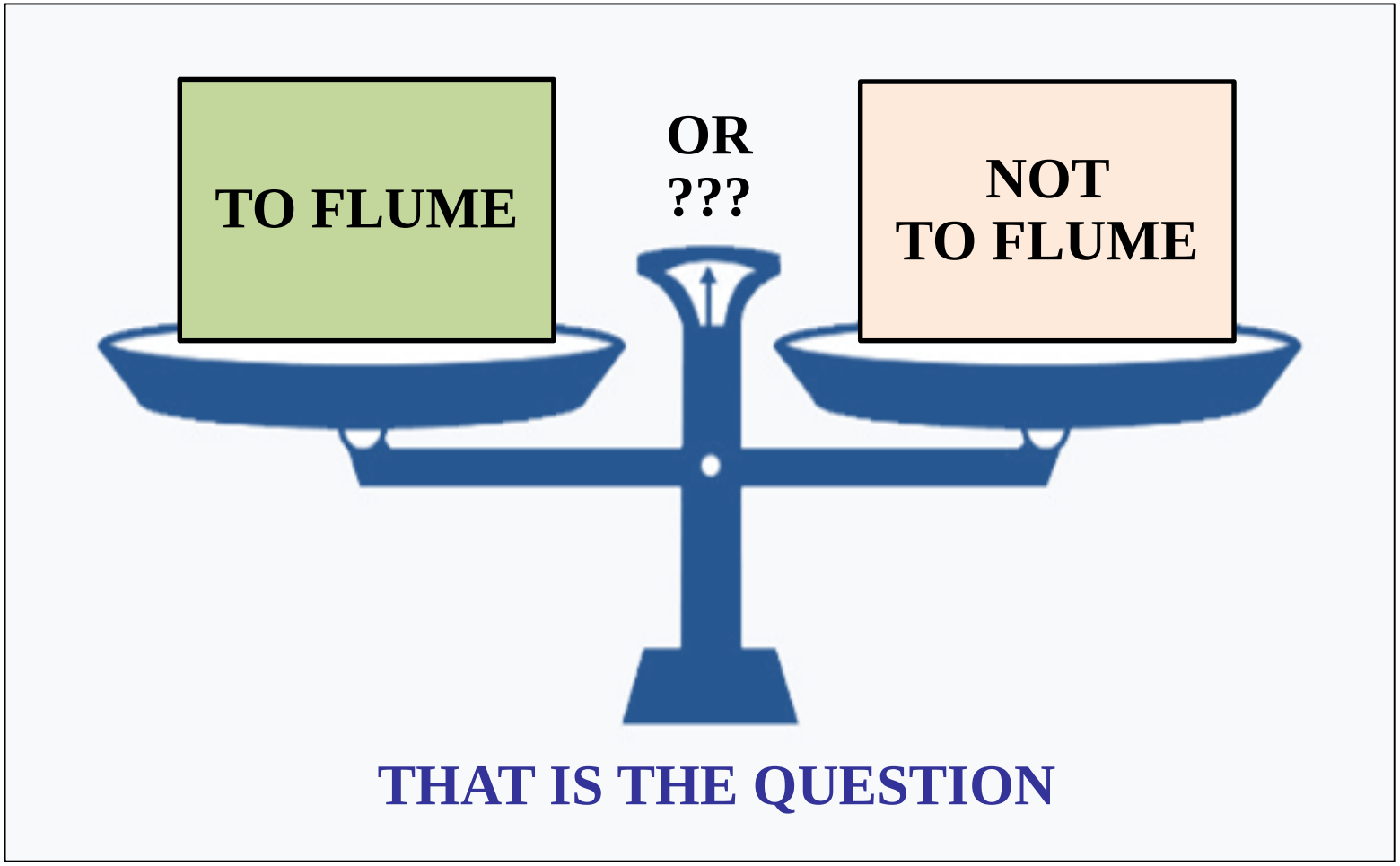
April 18, 2019

GILLINGHAM WATER
Gillingham Water Planning and Engineering, Inc.

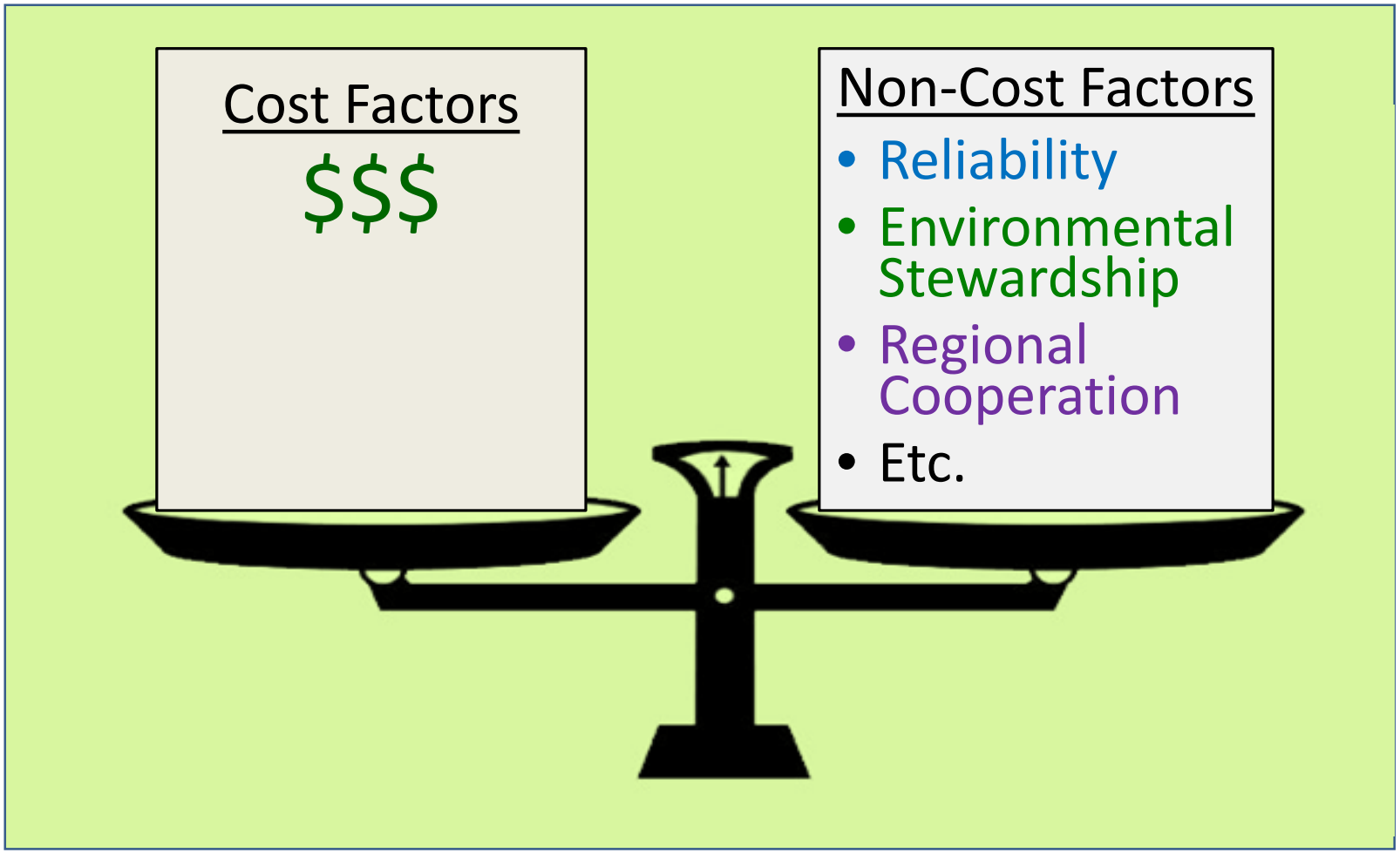
THE VISTA FLUME

PROVIDING RELIABLE WATER SERVICE SINCE 1926

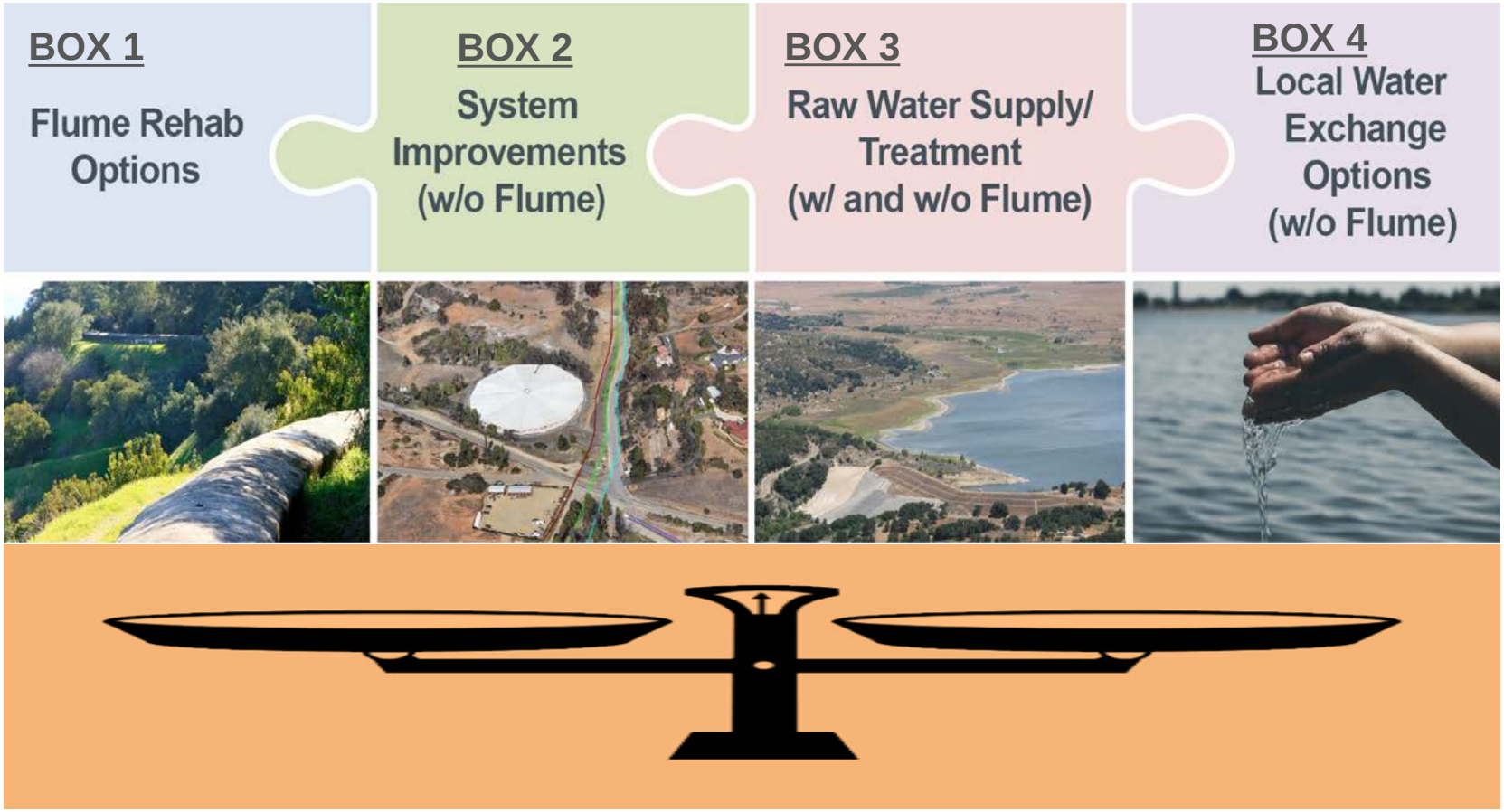



TO FLUME
OR
???
NOT
TO FLUME
THAT IS THE QUESTION

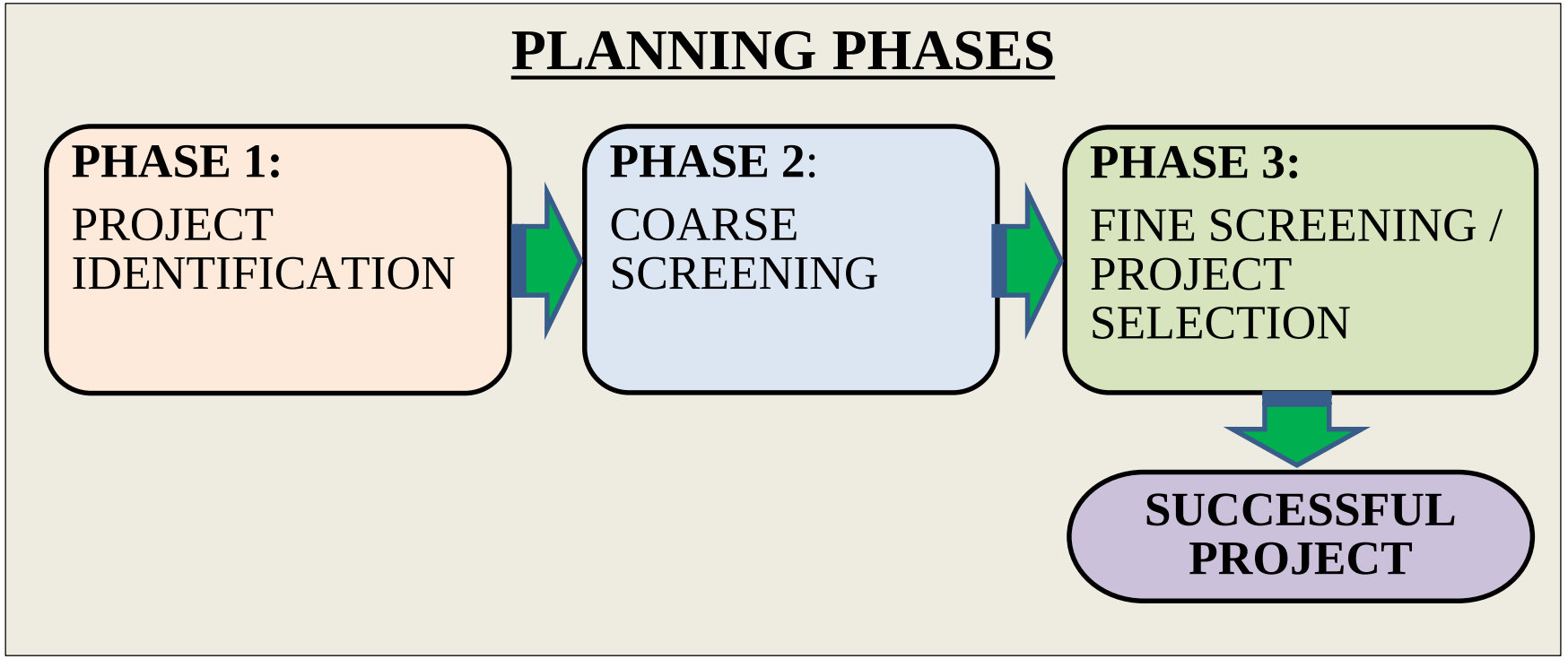
The Study will weigh both cost and non-cost factors . . .



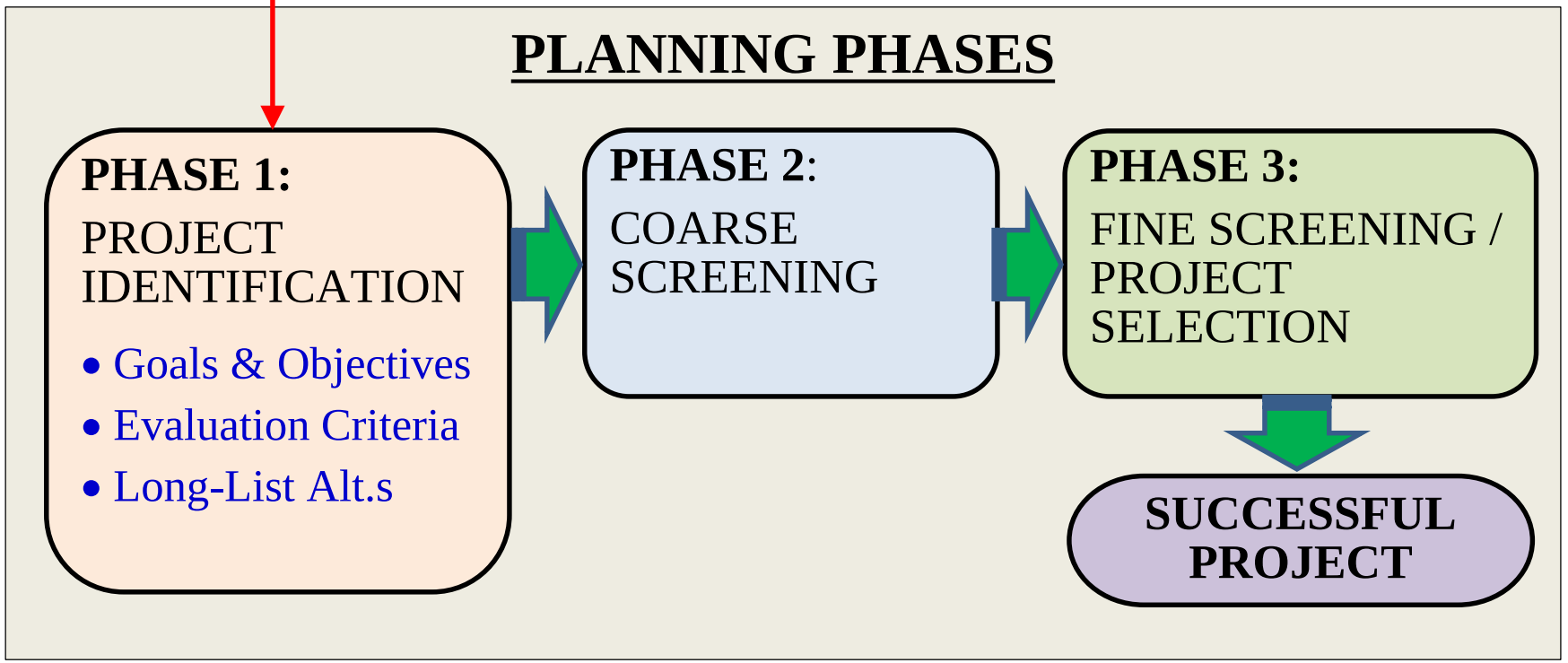
. . . and weigh the influence of the several categories of study issues



Study Process: Three Phases



Study Process: Start at the Beginning



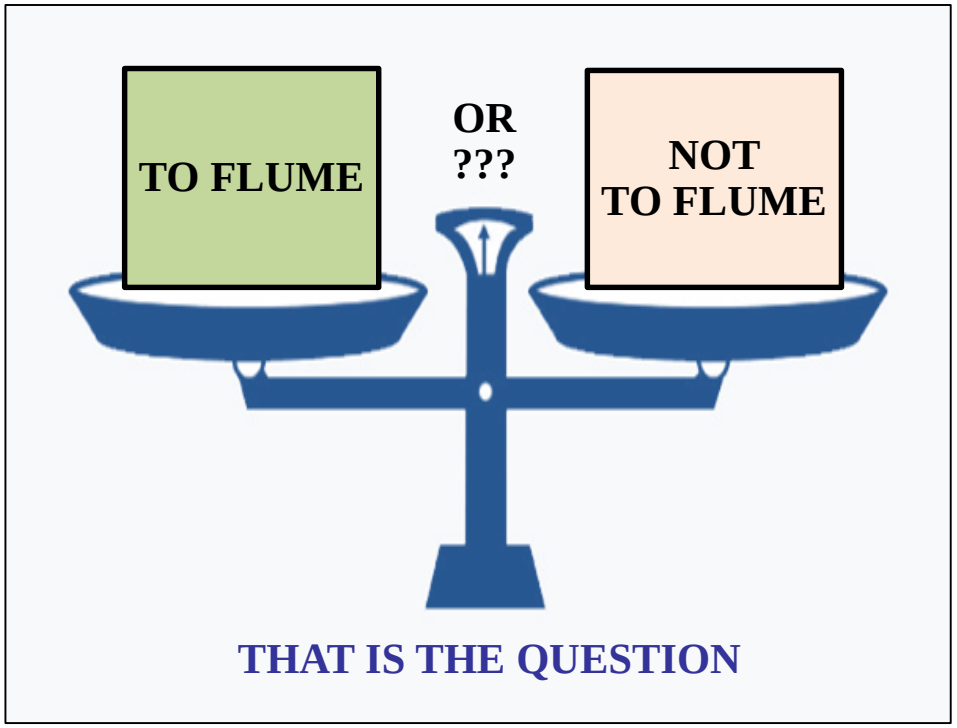
AGENDA

1) INTRODUCTION
2) GOALS AND OBJECTIVES
3) EVALUATION CRITERIA
4) LONG-LIST ALTERNATIVES
5) NEXT STEPS / SCHEDULE / ACTION ITEMS
6) ADJOURN

a) Initial drafts
b) Reaction / Questions / Discussion
c) Refinement

GOALS AND OBJECTIVES

Goals and Objectives / Approach:



- Be **comprehensive and complete**
- Factor in the right **evaluation criteria**
- Gather **stakeholder input**
- Provide clear and objective **decision support**

Goals and Objectives / Approach:

REACTION PROMPTS

1) Overarching Question: Does To Flume or Not To Flume capture the overarching question and objective of the study? Is it on target? How should it be refined or expanded?

2) Approach: Are there other approach aspects – ingredients to success – that need to be captured and incorporated?

3) Sensitivities / Red Lines: Are there issues or sensitivities that bound the breadth of the study?

4) Success: Aside from answering Question 1 (To Flume or Not To Flume), is there anything else that defines a successful Water Supply Planning Study?

EVALUATION CRITERIA

Evaluation Criteria: Cost Factors

COST CRITERIA
Maximize Economic Efficiency
1. Minimize life-cycle costs
2. Capital vs. Annual Costs
3. PAYGO vs. Debt-Financing
4. Risk and Liability
5. Stranded Assets / Sunk Costs
6. Opportunities for cost-sharing and financial assistance
7. Other

- Report costs in:
  - $ Total
  - $/AF
  - Rate impact

Evaluation Criteria: Non-Cost Factors

NON-COST CRITERIA
Maximize Supply Reliability and Operational Effectiveness
Minimize Environmental Impacts / Protect Environmental Resources
Maximize Implementability
Intrinsic Values

Draft Scoring Rubric:

- Significantly Preferred / Advantageous
- Preferred / Advantageous
- Constrained / Not Preferred
- Significantly Disadvantaged / Potential Fatal Flaw
- Neutral / Meets objectives

Evaluation Criteria:

REACTION PROMPTS

1) PAYGO vs. Debt Financing: How should the District's historical preference for PAYGO be factored into the study and the evaluation criteria?

2) General Categories and Components: Are these the right categories and components?

3) Stakeholder Input: The District will approach and engage stakeholders to understand interests in local water exchanges, project alternatives, and impacts. How should the weight of this component be influenced by their input?

4) Intrinsic Values: How should the study account for the intrinsic values of the District's history with the Warner Ranch and all its operations (e.g., local water supply, recreation, land leasing, etc.)?

LONG-LIST ALTERNATIVES

BOX 1

Flume Rehab Options

BOX 2

System Improvements (w/o Flume)

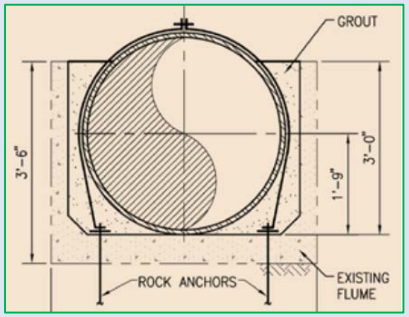
BOX 3

Raw Water Supply/ Treatment (w/ and w/o Flume)

BOX 4

Local Water Exchange Options (w/o Flume)

Box 1:
Flume Rehab / Replacement

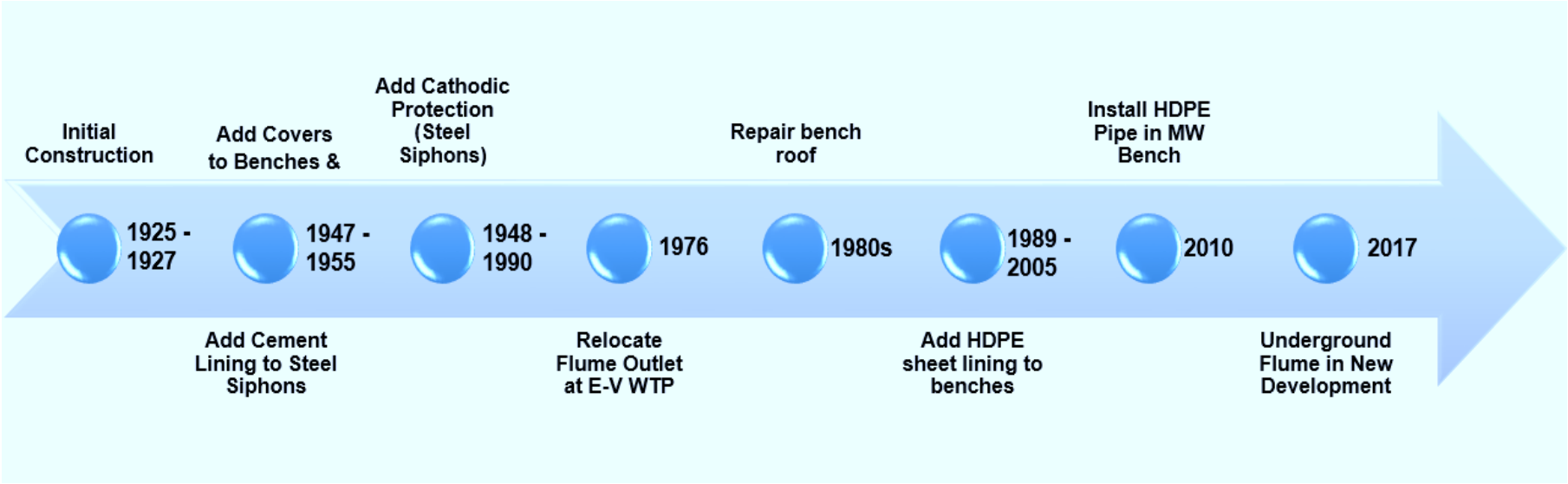


Paige Russell, P.E. – Brown and Caldwell

J.P. Semper, P.E. – Brown and Caldwell

Kathy Haynes, P.E. -- HDR

Flume Timeline: 90+ Years of Water Supply to the VID Service Area

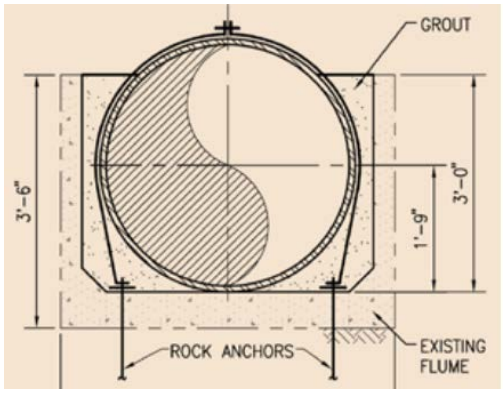


Background: HDPE Lining of MW Bench

- Heavy equipment needed
- Not feasible for all bench sections
- Evaluate bench-by-bench

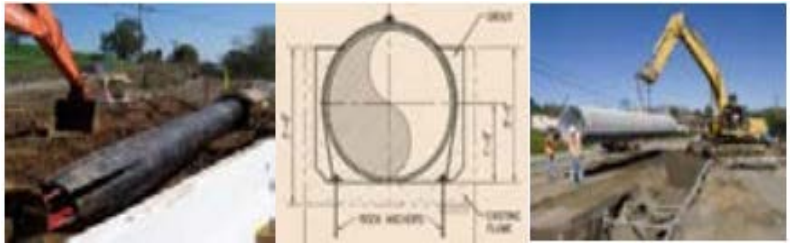
Options:

Rehab HDPE Line



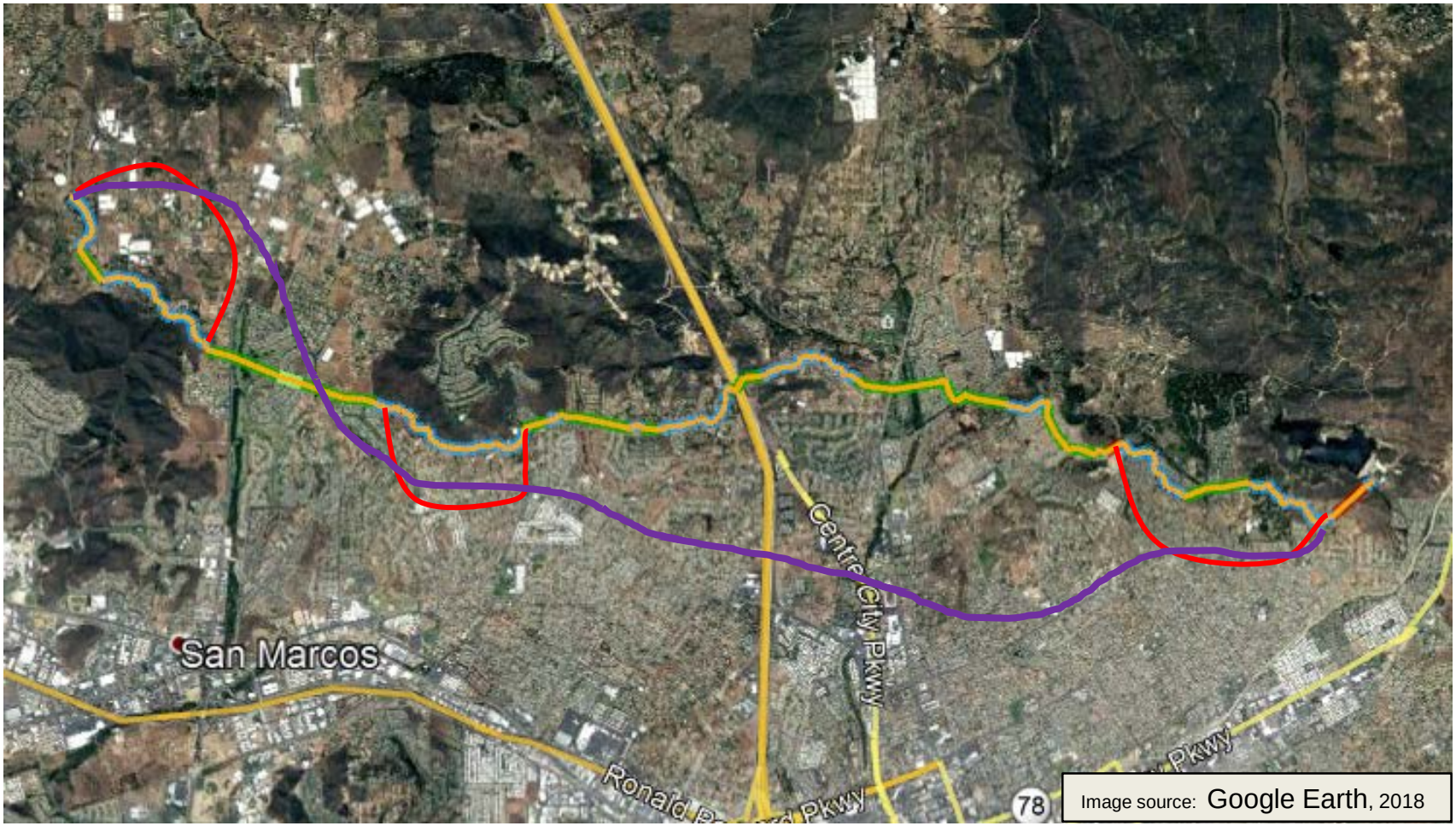
New Pipe In-place

New Pipe /
New Alignment



Combination / Mix & Match

Options: Rehab., Replace, or Combination

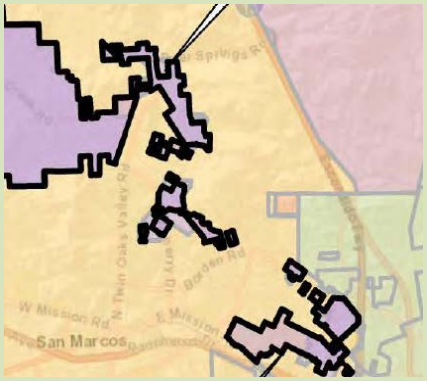


Box 1 Alternatives:

REACTION PROMPTS

1) Any initial input? The next phase of the Study, Coarse Screening, will begin to explore these alternatives in detail.

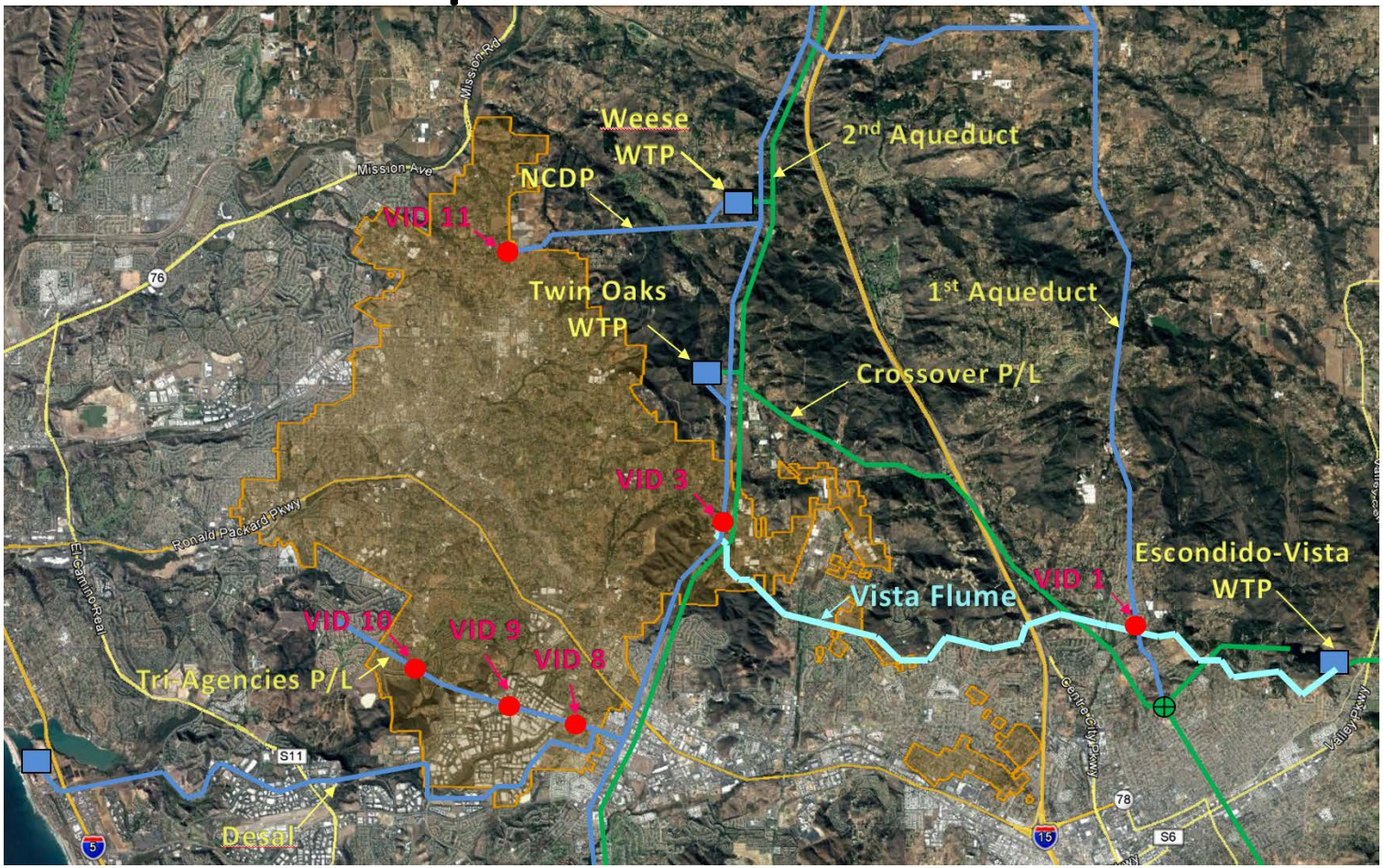
Box 2:
System Changes (w/o Flume)



J.P. Semper, P.E. – Brown and Caldwell

Doug Gillingham, P.E. – Gillingham Water

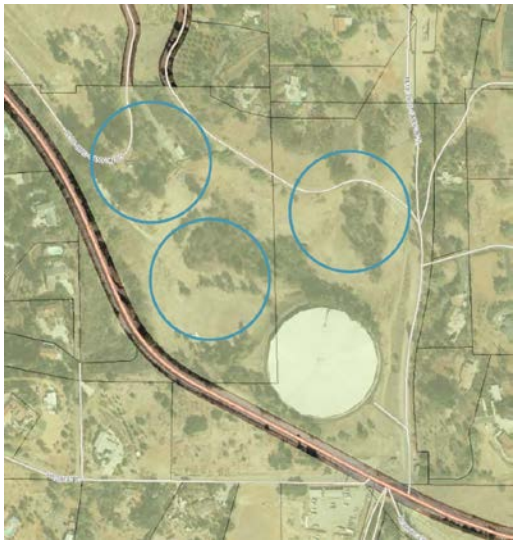
Delivery Reliability: Improvements may be needed to compensate for loss of flume



- Issue is reliability during scheduled 10-day aqueduct shutdowns

Delivery Reliability:

Alternatives to be considered include:



New treated water storage

$$$

Oceanside and VWD Interconnects

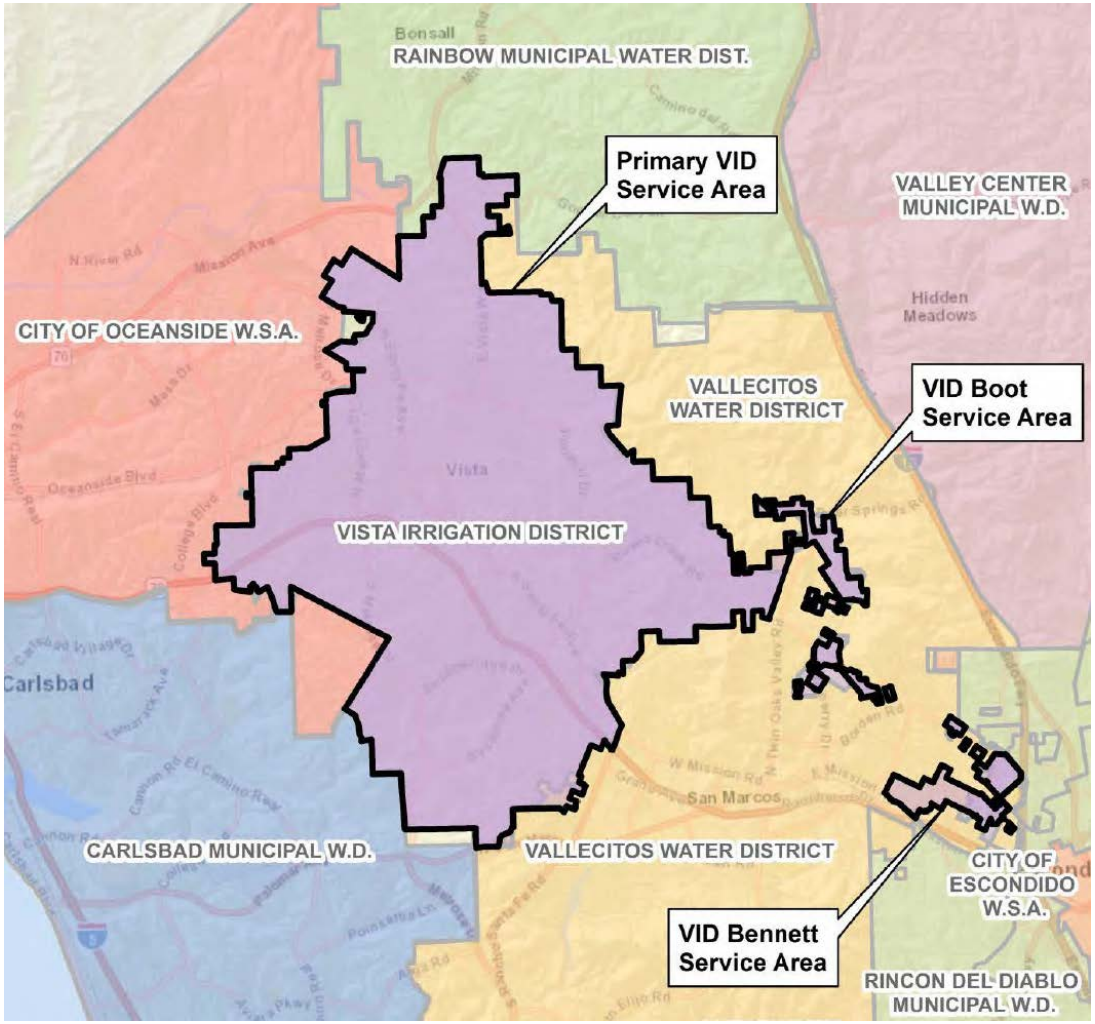
$$

SDCWA Isolation Valve Project

$

SDCWA Isolation Valve project looks promising. Reliability costs to the District of a Not To Flume alternative may be small.

Boot and Bennett: Retirement of Flume likely to accelerate transfer to VWD



- LAFCO reorganization process
- VWD regular annexation and capacity fees ~$30 million
- District could be responsible for some or all of cost

Box 2 Alternatives:

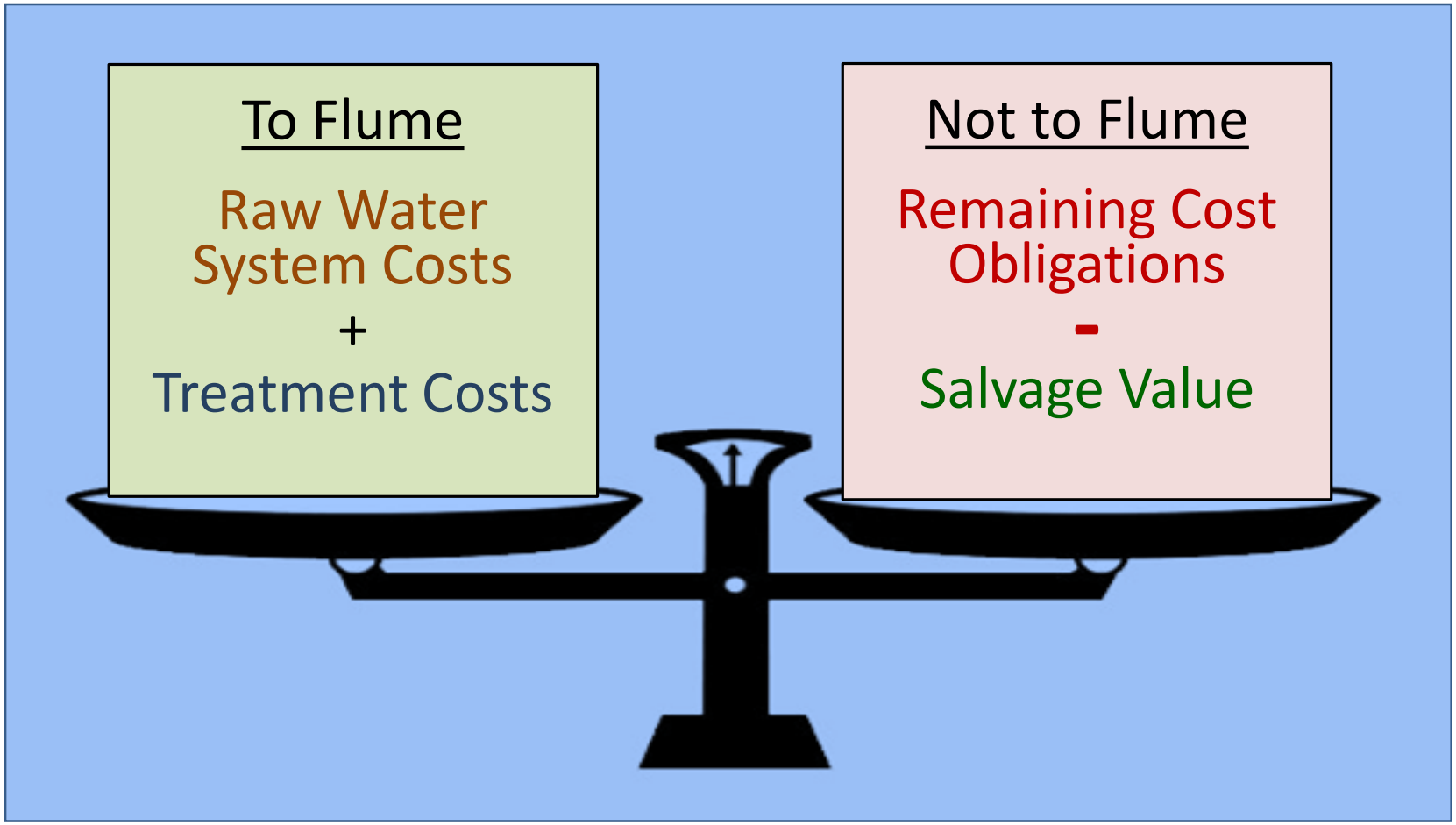
REACTION PROMPTS

1) Any initial input? The next phase of the Study, Coarse Screening, will begin to explore these alternatives in detail.

Box 3:
Raw Water System and Treatment

Don MacFarlane, P.E. – DLM Engineering

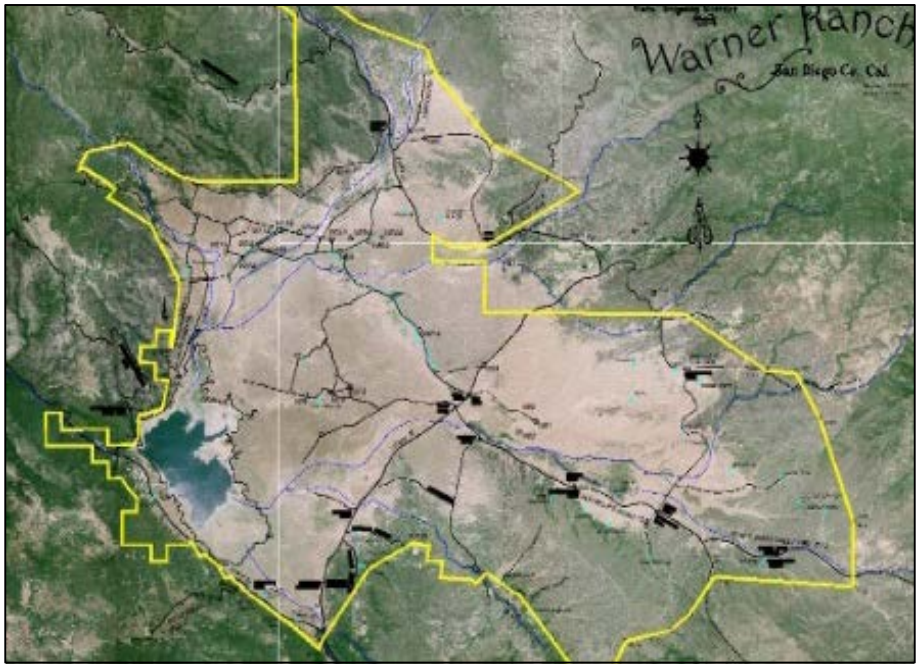
Box 3 Issues: Cost Considerations



Box 3 Issues: Assigning Long-Term Costs for Maintenance, Repair, and Replacemment

Project team will recommend preferred cost methodology

Box 3 Issues: Long-Term Ownership Options



1) Retain ownership as is
2) Sell Ranch land but retain right to operate facilities
3) Transition all ownership

Options Apply equally for To Flume and Not to Flume

Box 3 Issues: Treatment and Blending requirements reduce local yield

- Typical blend ratio: 40% local / 60% SDCWA
- Next phase of study (coarse screening) will investigate further

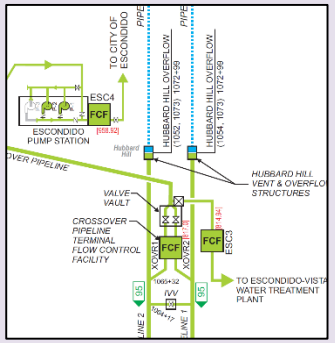
Box 3 Alternatives:

REACTION PROMPTS

1) Warner Ranch 1: If it were possible to transition ownership of the Warner Ranch to a governmental, tribal, or NGO entity, while maintaining the ability to operate the dam and wellfield, would this be something the District would consider?

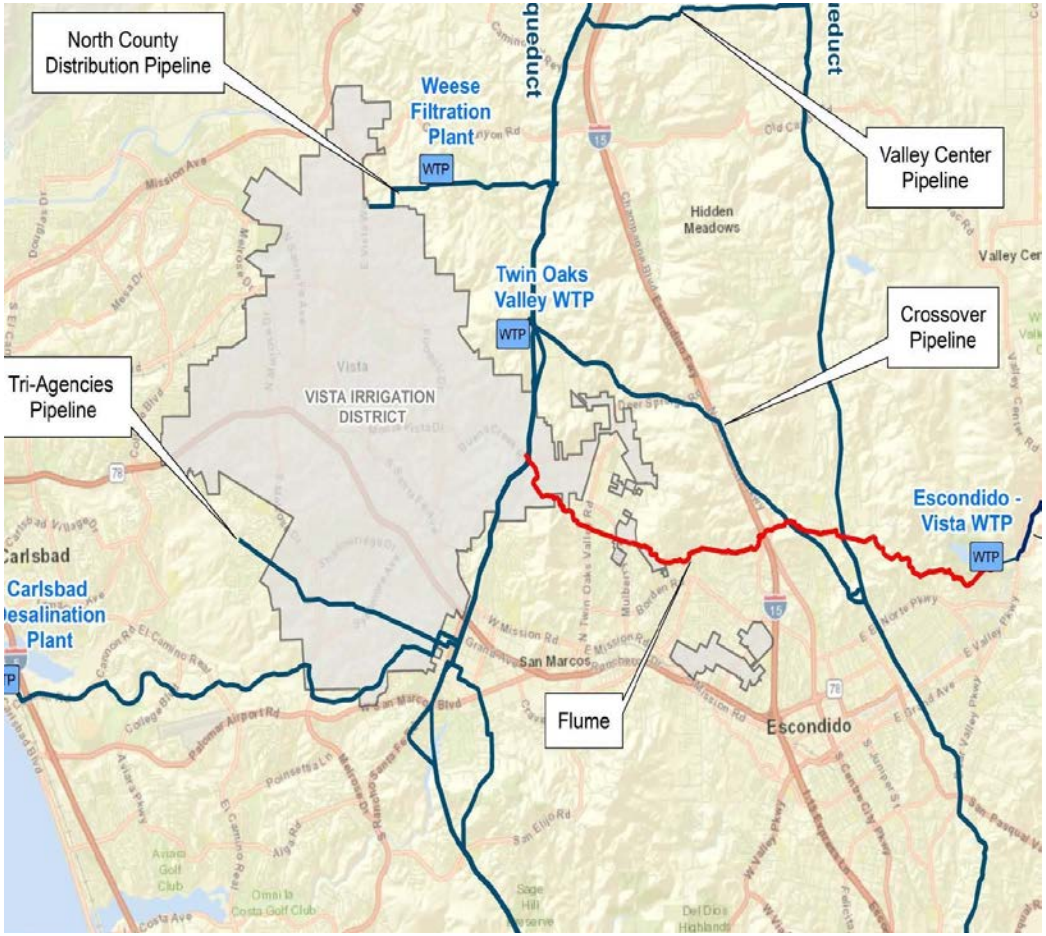
2) Warner Ranch 2: Conversely, if it were determined that the preferred course was to transfer all rights and responsibilities for the local water system, would the District consider retaining ownership of the Warner Ranch?

Box 4:
Local Water Exchange Options



Ken Weinberg – Weinberg Water Resources

Box 4 Alternatives: Possible Exchange Partners



- Escondido (raw) (has first right of refusal)
- Rincon (treated)
- Other retail agency (treated)
- SDCWA (raw)
- Tribes (raw)
- Environmental (raw)
- Other?

Box 4 Alternatives: Notes

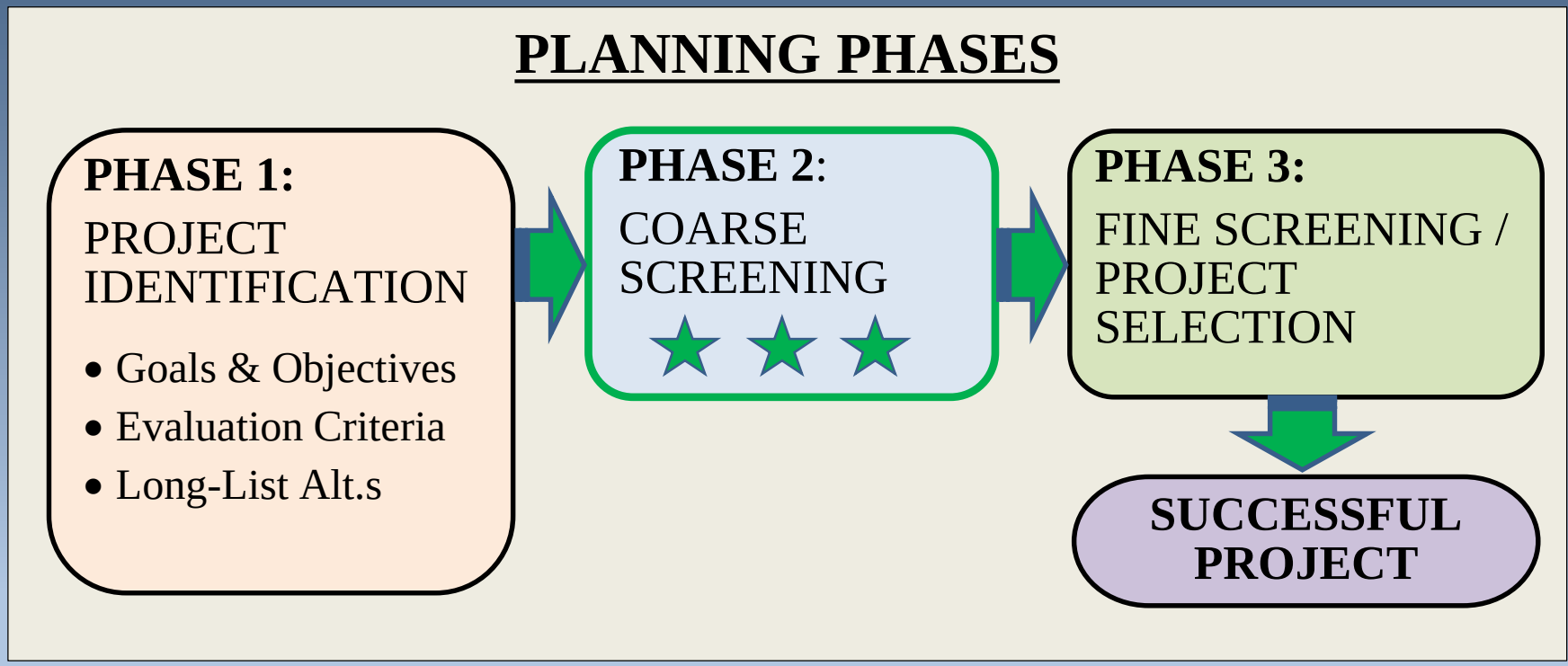
- Settlement Agreement requires the water supply system must be operated as it is today, leaving little incentive for Tribes to purchase VID share of local water
- Study goal is to determine exchange feasibility and the compensation available to the District.

Box 4 Alternatives:

REACTION PROMPTS

1) Exchange Options: The Settlement Agreement constrains but does not eliminate options available to the District to lease, sell, or otherwise exchange its local water. The study will consider options for arrangements with Escondido, other retail agencies including Rincon, and the Water Authority, as well as possible arrangements with the Tribal Nations and as use for environmental enhancement or restoration. **Are there policy preferences, constraints, or opportunities that should guide this review?**

NEXT STEPS / SCHEDULE



Planning Workshop No. 2: ~July 2019