

SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, CA
Board of Directors Meeting
Agenda
February 17, 2015 at 1:30 p.m.

Teleconference Location: 10213 Overland Trail
Cherry Valley, CA 92223

- 1. Call to Order, Flag Salute**
- 2. Statement Regarding Teleconferencing**
 - This meeting is also being held at a Teleconference Location which has been identified on the agenda.
- 3. Roll Call**
- 4. Procedures for holding meeting at the Teleconference Location**
- 5. Adoption and Adjustment of Agenda**
- 6. Public Comment**

Members of the public may address the Board at this time concerning items relating to any matter within the Agency's jurisdiction. To comment on specific agenda items, please complete a speaker's request form and hand it to the board secretary.
- 7. Consent Calendar:**

If any board member requests that an item be removed from the Consent Calendar, it will be removed so that it may be acted upon separately.

 - A. Approval of the Minutes of the Regular Board Meeting, February 2, 2015*
(Page 3)
 - B. Approval of the Minutes of the Engineering Workshop, February 9, 2015*
(Page 8)
- 8. Reports (Discussion and Possible Action)**
 - A. General Manager's Report
 1. Operations Report
 2. General Agency Updates
 - B. General Counsel Report
 - C. Directors' Reports
- 9. New Business (Discussion and Possible Action)**
 - A. Consideration of Tunnel Study Proposal from Brierley Associates* (Page 10)
 - B. Consideration of Environmental Justice Study Proposal from Aspen Environmental Group* (Page 57)
 - C. Consideration of Cost Sharing Agreement with City of Banning and Banning Heights Mutual Water Company* (Page 63)
- 10. Topics for Future Agendas**

11. Announcements

- A. Finance and Budget Workshop, February 23, 2015 at 1:30 p.m.
- B. San Geronio Pass Regional Water Alliance – Technical Committee Meeting February 25, 2015 at 4:30 p.m. – Banning City Hall Conference Room
- C. San Geronio Pass Regional Water Alliance Meeting February 25, 2015 at 6:00 p.m. – Banning City Council Chambers
- D. Regular Board Meeting March 2, 2015

12. Adjournment

***Information included in Agenda Packet**

(1) Materials related to an item on this Agenda submitted to the Board of Directors after distribution of the agenda packet are available for public inspection in the Agency's office at 1210 Beaumont Avenue, Beaumont during normal business hours. (2) Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection at the Agency's office, located at 1210 Beaumont Avenue, Beaumont, California 92223, during regular business hours. When practical, these public records will also be made available on the Agency's Internet Web site, accessible at: www.sgpwa.com (3) Any person with a disability who requires accommodation in order to participate in this meeting should telephone the Agency (951 845-2577) at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation.

SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, California 92223
Minutes of the
Board of Directors Meeting
February 2, 2015

Teleconference Location: 10213 Overland Trail
Cherry Valley, CA 92223

Directors Present: John Jeter, President
 Bill Dickson, Vice President
 Mary Ann Melleby, Treasurer
 Blair Ball, Director
 Ron Duncan, Director
 Ray Morris, Director (via teleconference)
 Leonard Stephenson, Director

Staff Present: Jeff Davis, General Manager
 Jeff Ferré, General Counsel
 Tom Todd, Finance Manager
 Ken Falls, Operations and Maintenance Manager
 Cheryle Rasmussen, Executive Assistant

1. **Call to Order, Flag Salute and Roll Call:** The meeting of the San Gorgonio Pass Water Agency Board of Directors was called to order by Board President John Jeter at 1:30 p.m., February 2, 2015 in the Agency Boardroom at 1210 Beaumont Avenue, Beaumont, California. Director Dickson led the Pledge of Allegiance to the flag. A quorum was present.
2. **Statement Regarding Teleconferencing:** General Counsel Jeff Ferré made the following statement: "This Board meeting is conducted pursuant to California Government Code Section 54953, in that one member of the Board will be participating in this Board meeting by speaker phone. In accordance with the Brown Act, the teleconference location has been identified in the notice and agenda for this meeting. I will now ask the Board Secretary to conduct roll call, after which I will confirm certain matters for the record".
3. **Roll Call:**

<u>Roll Call:</u>	Present	Absent
Director Stephenson	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Director Ball	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Director Morris	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Director Melleby	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Director Duncan	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Director Dickson	<input checked="" type="checkbox"/>	<input type="checkbox"/>
President Jeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4. **Procedures for Holding Meeting at the Teleconference Location:** General Counsel Ferré confirmed with Director Morris that he in fact was able to hear the proceedings; that he had a copy of the February 2, 2015 Board Meeting Agenda; that the agenda was posted at his location, and that the location was accessible to the public. Director Morris responded in the affirmative to all such questions. General Counsel Ferré asked the attending board members if they were able to hear Director Morris. The board members responded that they could indeed hear him. General Counsel Ferré turned the meeting over to President Jeter.
5. **Adoption and Adjustment of the Agenda:** President Jeter asked if there were any adjustments to the agenda. There being none the agenda was adopted as presented.
6. **Public Comment:** President Jeter asked the members of the public for comments. No members of the public requested to speak at this time.
7. **Consent Calendar:**
 - A. Approval of the Minutes of the Regular Board Meeting, January 20, 2015
 - B. Approval of the Minutes of the Finance and Budget Workshop, January 26, 2015
 - C. Approval of the Finance and Budget Workshop Report, January 26, 2015

Director Dickson moved, seconded by Director Duncan, to approve the consent calendar as presented.

President Jeter requested a roll call.

<u>Roll Call:</u>	<i>Aye</i>	<i>Noes</i>	<i>Absent</i>	<i>Abstain</i>
Director Stephenson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Ball	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Morris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Melleby	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Duncan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Dickson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
President Jeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motion carried 7-0.

5. Reports:

A. General Manager's Report:

(1) **Operations Report:** General Manager Davis reported on the following: **(a) SWP Water Deliveries:** Deliveries of the SWP water is shut down until the later part of March, this is due to EBX construction. Staff provided confirmation to the Beaumont Cherry Valley Recreation and Parks Department that the Agency will in fact provide water for the fishing derby, which will take place in late April. If the SWP

water allocation remains at 15% there may not be any other water deliveries this year.

(2) General Agency Updates: **(a) Snowpack:** General Manager Davis stated that the scarce precipitation in January for northern California, and warmer than average temperatures have resulted in a meager snowpack. In San Francisco, no rain fell in January 2015, declaring this the first January without rainfall since records began in 1850. **(b) State Water Resources Control Board (SWRCB):** The SWRCB advised water right holders that if conditions do not significantly improve in the coming months, it will once again notify water right holders in critically dry watersheds of the requirement to limit or stop diversions under their water right based on their priority. **(c) Southern California Water Committee (SCWC):** General Manager Davis reported on the SCWC quarterly luncheon that he attended on January 23rd that was held at the Pepsi Bottling Plant, in Riverside. A discussion panel on the drought and a tour of the bottling plant were included. **(d) Legislative Analyst Office (LAO):** General Manager Davis has had an opportunity to read the LAO Delta report. He will review the report with the Board at the next Board meeting.

B. General Counsel Report: General Counsel Ferré reported to the Board on the following topics: **(1) FPPC Conflict of Interest (COI) Code:** General Counsel Ferré reported on a few changes that the FPPC has made to the COI code for this year. He explained the modification that was made on acceptance of gifts, changing the cap from \$440 to \$460. He also explained the FPPC's interpretation of what a business interest means for the purpose of the COI. He suggested that the Board consult with legal counsel in terms of the application of the regulations, as they change from time-to-time.

C. Directors Reports: **(1) Director Melleby** gave a report on the SGPRWA Technical Committee meeting and the SGPRWA Board meeting that were held on January 28th. She stated that a presentation and video was provided by Duane Burke (City of Banning) on the Whitewater flume. **(2) Director Duncan** announced Barbara Wood's appointment as a Director for the Banning Chamber of Commerce. **(3) Director Dickson** requested that staff invite Duane Burke (City of Banning) to an upcoming board meeting and provide the same presentation on the Whitewater flume that was given to the SGPRWA. General Manager Davis stated that this request will be listed on Topics for Future Agendas.

6. New Business: (Discussion and Possible Action)

A. Appointment of Committees: General Manager Davis stated that President Jeter has appointed board members to specific committees, as indicated in the Agenda on page 10; there is no further action required.

B. Third Joint Facilities Agreement with San Bernardino Valley Municipal Water District: A staff report and a copy of the Third Joint Facilities Agreement between SBVMWD and SGPWA, were included in the agenda packet. General Manager Davis stated that this item was reviewed in draft six months ago and a number of minor changes to the agreement have since occurred. General Manager Davis provided background information and history of the Agency's relationship with SBVMWD. He explained that the East Branch Extension is comprised of a number of facilities, beginning at Devil Canyon (San Bernardino) down to Orchard Street (Cherry Valley). A report was given on which pipelines SBVMWD and the Agency had built

together and how much capacity in each the Agency owned. He explained the amount of capacity that the Agency was going to sell back to SBVMWD once EBX II was completed. However, during the planning of EBX 2, the Agency's Board decided that it did not want to sell back capacity because it would be needed at ultimate buildout. The primary purpose of this Third Joint Facilities Agreement is to eliminate the buyback provision and to ensure that the Agency has 64 cfs of capacity in the EBX in the future. General Manager Davis reviewed the Recitals and the Agreement with the Board. After discussion, Director Melleby made a motion, seconded by Director Dickson, that the Board approve the Third Joint Facilities Agreement between the Agency and SBVMWD, authorizing the General Manager to sign the agreement and make non-substantive changes, if needed.

President Jeter requested a roll call vote.

<u>Roll Call:</u>	<u>Aye</u>	<u>Noes</u>	<u>Absent</u>	<u>Abstain</u>
Director Stephenson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Ball	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Morris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Melleby	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Duncan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Dickson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
President Jeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motion carried 7-0.

C. Discussion on Possible Joint Board Meeting or Workshop regarding Prospective Water Purchase: General Manager Davis stated during a past board meeting this item was requested to be place on a future board meeting agenda. The purpose for the discussion is to determine what type of meeting with the retailers the board wishes to pursue. After discussion, Director Dickson made a motion, seconded by Director Ball, directing General Manager Davis to poll water retailers on their participation in a water supply planning workshop or an ad hoc committee on Water Supply Planning. General Manager Davis is to report back to the Board with the results at the March 2nd Board meeting.

President Jeter requested a roll call.

<u>Roll Call:</u>	<u>Aye</u>	<u>Noes</u>	<u>Absent</u>	<u>Abstain</u>
Director Stephenson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Ball	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Morris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Melleby	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Duncan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Dickson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
President Jeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motion carried 7-0.

D. Flume Update: (1) General Manager Davis reported on a conference call that took place between FERC's dispute resolution staff and the participating entities. The end result is that a technical meeting, which includes the U.S. Forest Service Regional Hydropower Assistance Team, will need to take place to address technical issues. (2) General Manager Davis stated that he had hoped to have a tunnel study proposal for consideration at today's meeting, but was not able to get the proposal done in time. He stated that he will bring this item to the Board at the next board meeting.

E. Reconsideration of Cancellation of February 17, 2015, Board Meeting: General Manager Davis stated that due to scheduling changes he is no longer traveling to Sacramento on February 17th. He asked the Board if they would like to reconsider holding the February 17th Board meeting. After discussion, Director Dickson made a motion, seconded by Director Melleby, to reinstate the February 17, 2015, Board meeting.

President Jeter requested a roll call:

<u>Roll Call:</u>	Aye	Noes	Absent	Abstain
Director Stephenson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Ball	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Morris	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Melleby	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Duncan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Director Dickson	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
President Jeter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motion carried 6-1.

7. Topics for Future Agendas: General Manager Davis stated that he has two items for future agendas. **1)** Request Duane Burke (City of Banning) to provide the same presentation that he provided to the SGPRWA on the Whitewater flume. **2)** Staff is to provide responses from the retail agencies on the pole taken regarding a formation of an Ad-Hoc Committee on Water Supply Planning.

8. Announcements: *President Jeter reviewed the following announcements:*

- A. Engineering Workshop, February 9, 2015 at 1:30 p.m.
- B. Office Closed February 16, 2015 in observance of Presidents' Day
- C. Board of Directors Meeting, February 17, 2015 at 1:30 p.m.
- D. Finance and Budget Workshop, February 23, 2015 at 1:30 p.m.

9. Adjournment: *President Jeter adjourned the meeting at 3:05 p.m.*

DRAFT – SUBJECT TO BOARD APPROVAL

Jeffrey W. Davis, Secretary of the Board

ONE

SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue, Beaumont, CA 92223
Minutes of the
Board of Directors Engineering Workshop
February 9, 2015

Directors Present: John Jeter, President
Blair Ball, Director
Bill Dickson, Vice President
Ron Duncan, Director
Mary Ann Melleby, Director
Ray Morris, Director (via teleconference)
Leonard Stephenson, Director

Staff Present: Jeff Davis, General Manager
Jeff Ferre, General Counsel
Cheryle Rasmussen, Executive Assistant

1. Call to Order, Flag Salute and Roll Call. The Engineering workshop of the San Gorgonio Pass Water Agency Board of Directors was called to order by President John Jeter at 1:30 p.m., February 9, 2015 in the Agency Board room at 1210 Beaumont Avenue, Beaumont, California. Director Dickson led the Pledge of Allegiance to the flag. After a roll call, it was determine that a quorum was present. General Counsel Jeff Ferre confirmed that Director Morris could hear the proceedings, had a copy of the agenda, and that a copy of the agenda was publicly posted at his location. He asked that Board members speak into their microphones so that Director Morris could hear clearly. President Jeter turned the meeting over to Vice President Dickson, Chair of the Engineering Committee.

2. Public Comment. No members of the public wished to address the Board at this time.

3. Summary of Yucaipa Basin Studies. General Manager Davis reviewed a brief Power Point with the Board summarizing recent work performed on the Yucaipa area groundwater basins by a consortium of water districts, including the Agency. He noted that, through the first two phases of the work, the Agency has committed \$74,000, and that as a result the combined safe yield of the seven sub-basins has been estimated at approximately 9000 acre-feet per year, and that there appear to be a number of possible locations for future groundwater recharge. Future phases will determine if this is the case. The end result of these studies, which will likely continue for a few more years, is expected to be a basin management plan for the seven sub-basins in the Yucaipa/Calimesa area.

4. **Summary of California Water Plan Update.** A Power Point, along with a few pages of an e-newsletter regarding the 2013 California Water Plan Update, was included in the agenda package. General Manager Davis reviewed the Power Point with the Board, summarizing the 2013 update of the California Water Plan, which is required by law to be updated every five years. He noted that there is a strong nexus with the Governor's Water Action Plan, and that there are a number of recurring themes in the Water Plan Update, including integrated regional planning, habitat restoration, and governance structures.

5. **Summary of California's Legislative Analyst's Office (LAO) Report on the Delta.** A copy of the LAO report was included in the agenda package. General Manager Davis presented a brief Power Point that summarized the key elements of the report, which was developed for the purpose of suggesting to the Legislature that it may want to consider additional legislation if it wishes its previous Delta-related legislation to be effective. The report included a good summary of some of the key Delta problems that must be dealt with by the State, as well as a history of legislative efforts to deal with the problems in the Delta.

6. **Announcements:**

- A. Office closed **Monday**, February 16, 2015 in observance of President's Day.
- B. Regular Board Meeting, Tuesday, February 17, 2015 at 1:30 p.m.
- C. Finance and Budget Workshop, February 23, 2015 at 1:30 p.m.
- D. San Geronio Pass Regional Water Alliance – Technical Committee Meeting February 25, 2015 at 4:30 p.m. – Banning City Hall Conference Room
- E. San Geronio Pass Regional Water Alliance Meeting February 25, 2015 at 6:00 p.m. – Banning City Council Chambers

7. **Adjournment:** Chairman Dickson adjourned the meeting at 2:40 p.m.

DRAFT – SUBJECT TO BOARD APPROVAL

Jeffrey W. Davis, Secretary to the Board

MEMORANDUM

TO: Board of Directors

FROM: General Manager

RE: Contracting With Brierley Associates to Perform a Tunnel Study on Whitewater Flume

DATE: February 17, 2015

Summary:

For some time, staff has been talking about a needed tunnel study that would identify alternatives and cost estimates for repairs to the Whitewater Flume that would eliminate the losses in Burnt Canyon and minimize influence of the US Forest Service. The purpose of this proposed Board action is to consider a proposal to perform this work.

Background:

Staff has on multiple occasions briefed the Board on the Whitewater Flume, its importance as a regional water resource, and ongoing activities undertaken by the three Participating Entities—the Agency, the City of Banning, and Banning Heights Mutual Water Company.

The water delivered by the flume to the City and to Banning Heights is the most valuable water in the region due to its high quality and high elevation. Replacement of the water in kind would be beyond the ability of the region to afford it. That is the subject of another ongoing study.

Under direction from the Board, staff has become involved in flume-related issues over the past year, after a number of years of minimal or no involvement. With the Agency's increased activity level, the situation currently appears to be on a path that will lead to success.

Detailed Report:

There are good reasons for studying tunneling options for the existing flume system. It appears that reconstruction of the flume in the existing right of way would not be successful—it would most likely fail

again in the future due to landslides. The temporary solution to this problem is the turning out of water into Burnt Canyon.

This temporary solution has two major problems, both of which would likely be resolved with a tunnel option. First, a great deal of water is lost in Burnt Canyon as the water flows down the creek. This resulted in Banning Heights Mutual Water Company receiving no water from the flume system for several months this past year. Second, the temporary permitted pipeline at the bottom of Burnt Canyon has been ordered removed by the Forest Service. That removal order was stayed for one year but that one year is up in September. As long as this temporary facility is in place, Banning and Banning Heights are under threat from the Forest Service of removing that pipeline, which delivers the water to Banning Heights.

If a successful tunnel or pipeline option could be found that is financially feasible (the study will look at both tunnel and pipeline options), the facility could be reconstructed so as not to lose any water in Burnt Canyon, and the threat of a loss of a permit from the Forest Service would be eliminated.

Because of this, Agency staff contacted Brierley Associates, a national consulting firm specializing in tunnels and other geological and geotechnical engineering issues. Staff from Brierley held a meeting with Agency staff and consultants and has made one field visit to the flume in order to formulate a proposal for the work. The proposal is included in the Board agenda package.

The results of the study would be included as an appendix to the EIR relating to the flume removal, and would be used to identify mitigation for the proposed work.

It is hoped and expected that Edison would pay for the reconstruction, including putting a portion of the facility in a tunnel or pipeline. The details of that aspect of the program will be dealt with in the future.

Fiscal Impact:

This study is not in the Agency's budget for this year. The City and Banning Heights have verbally approved reimbursing the Agency for

2/3 of the cost of the study; a cost-sharing agreement is on the agenda for later in this Board meeting. Staff is working on a budget revision that would accommodate the required studies and environmental work related to flume repair and will present that budget revision to the Board at the Finance and Budget workshop next week. This additional work will not significantly impact the budget.

Relationship to Strategic Plan:

This work demonstrates leadership on a regional water resource issue, which is consistent with the Agency's strategic plan.

Recommendation:

Staff recommends that the Board approve Brierley's proposal and authorize the General Manager to contract with Brierley for an amount not to exceed \$90,000. It is anticipated that 2/3 of this cost will be reimbursed by the City of Banning and the Banning Heights Mutual Water Company.

February 11, 2015
File No.: 214092-970

Attention: Mr. Jeff Davis
San Geronio Pass Water Agency
1210 Beaumont Ave.
Beaumont, CA 92223

Subject: Geologic Assessment and Flume Alternatives Analysis
"Flume Tunnel Study" Project
North of Banning, CA

Dear Mr. Davis:

Introduction

Brierley Associates Corporation (Brierley) is pleased to provide this proposal to San Geronio Pass Water Agency (SGPWA) for engineering services for proposed repairs and/or improvements to part of the "Whitewater Flume" that comprises the raw water delivery system for the Banning Heights Mutual Water Company, the City of Banning, and SGPWA (the [project] "Participating Entities"). We propose to provide services to accomplish the objectives laid out in your "Scope of Work for Tunnel Study" document dated November 2014, with modifications per discussions we have had during several recent meetings, and draft Brierley comments and revisions to your scope document provided this week and captured herein.

We propose to collaborate with your existing civil engineering consultant, Albert A. Webb Associates (Webb), working with Mr. Sam Gershon, to accomplish the work. Working with Webb will 1) provide good SGPWA and project liaison due to Webb's existing familiarity with the work and proximity to SGPWA's offices; 2) provide Brierley with a local partner needed to evaluate civil aspects of non-tunnel alternatives; and 3) provide convenient access to Webb's existing civil drawings and topographic work that will be beneficial to this work. As discussed with you, we can implement Webb's proposed scope and budget in an informally "phased" approach by meeting early with you to identify the most desirable non-tunnel alternatives for further scrutiny, then being prepared to abandon them early if fatal flaws are identified. For example, an upgraded flume facility on the existing right-of-way might be clearly not desirable should our geologic reconnaissance identify too high a percentage of the flume being subject to landslide damage. We already think the likelihood of this conclusion is reasonably high.

Our goal is to work with Webb to deliver this work, generally consisting of a more detailed engineering geologic assessment of the site, an updated assessment of previously evaluated non-tunnel flume repair and upgrade options, and development of an alternatives analysis including new tunnel and trenchless technology options, within approximately four months from being given full notice-to-proceed with required field work.

We have structured this proposal to demonstrate our understanding of the project and our initial understanding of basic geological site conditions, and to describe our project approach and scope of work in terms of the scope items outlined in your Scope of Work request. We have included relevant fee estimate, schedule and personnel information, and propose to conduct the

work in accordance with Brierley's Standard Terms and Conditions and Fee Schedule, which are discussed further below and attached in their entirety.

Project Understanding

As we understand the proposed work, an existing water gravity conveyance system currently diverts water from the Whitewater River in the San Bernardino National Forest to the Participating Entities. This facility has been in operation for over a century and is currently under Federal Energy Regulatory Commission (FERC) license, as it once generated hydroelectric power.

In the late 1990's, a portion of the system failed. Specifically, a portion of the flume system (a few hundred yards) slid off the side of a mountain where the surficial geology is unstable. In order to continue serving water without the lengthy outage that would be required to fully repair and replace the failed portion, a temporary fix was implemented in which the water conveyed by the flume system is turned out of the flume just upstream of the failed portion into Burnt Canyon and flows via gravity down Burnt Canyon to a temporary diversion facility at the mouth of the canyon. From this point the water is conveyed by gravity via a temporary above-ground pipeline to an existing unused powerhouse, where it is added back to the original flume system for delivery. The portion of the system bypassed by the temporary system thus has been unused since that time, and is in serious disrepair. The temporary conveyance system loses a significant portion of the flow in Burnt Canyon during the dry season and thus is non-optimal from a long-term water supply standpoint.

Southern California Edison is currently seeking a surrender permit for the facility from FERC, as it no longer wishes to generate power. As part of this surrender application, repairs and upgrades will be made to the existing facilities for continued use as a water supply (conveyance) facility. These repairs and upgrades are currently being defined by Edison and the Participating Entities, with which it has a transfer agreement. The Participating Entities are exploring alternative upgrades and repairs that would keep the entire facility within the original FERC right of way, thus obviating the need for the temporary facilities constructed in the late 1990's.

The temporary facilities mentioned above are not located within this right of way and are under the jurisdiction of the US Forest Service, not FERC. In order to repair the existing facility and to keep it within the original FERC right of way, it may be necessary to build one or more tunnels/trenchless installations in this remote mountainous area. Conventional tunneling with pipe in tunnel, or trenchless installations such as microtunneling or horizontal directional drilling (HDD) may all be feasible options.

An analysis is required to compare repair of the original facilities within the original FERC right of way (with no tunnels) with one or more tunnel options that may be more feasible and/or desirable from a construction and long-term operations standpoint. It is likely that one option that includes pumping (over Gunsight Pass) will be considered. A pump option may be a way to stay within the original right of way or along Raywood Flats Road with less tunneling. The Participating Entities wish to analyze these options and present them to Edison in order to decide which option is the most technically and financially feasible, if any.

Background Geology

The study area where the proposed flume rehabilitation and/or new tunnel are being considered is situated within the San Gorgonio Pass region of the San Bernardino Mountains. The San Bernardino Mountains are part of the Transverse Ranges geomorphic province. The Transverse Ranges are a range of mountains formed by the tectonic movement between the North American and Pacific tectonic plates along the San Andreas fault, among other faults.

These actively growing mountains are shaped by several primary fault blocks – the Big Bear block, which forms the large, partly dissected, mountain plateau that characterizes the northern portions of the range; and the more complex and fractured, and more strongly dissected, San Gorgonio, Wilson Creek and Yucaipa Ridge blocks, which form the rugged and heavily dissected southern parts of the mountains. The mountains are bounded on their steep north side by a series of south-dipping thrust faults commonly referred to as the north-frontal fault system. The interior of the range is traversed by the east-trending north-dipping Santa Ana reverse fault that separates the mountain geomorphology into two main terrains. The highest summits of the San Bernardino Mountains occur in this terrain, including San Gorgonio Peak (11,485 ft).

Because of the large, steep (active) rise of the mountains above the surrounding terrain, and the shaking hazard resulting from multiple active faults, the San Bernardino Mountains are subject to frequent landslides and erosion which has carved out numerous river gorges. One such landslide has damaged the existing flume, as well as damaged a temporary replacement pipe. The following photographs, taken during a recent site reconnaissance trip, show the nature and extent of a landslide located a few hundred feet southwest (downstream) of the current temporary diversion structure into Burnt Canyon. These photographs show the remains of the concrete flume as well as the damaged temporary pipe. The landslide is estimated to be on the order of approximately 200 feet wide at the location of flume and the landslide extends from nearly the top of the mountain all the way to the adjacent valley below. The foliation of the rock mass at this location is dipping to the northwest, or downslope in relation to the mountain side, which creates the potential for continued instability.

The project site lies adjacent to and between several active faults including the San Andreas fault, Mission Creek fault, and Mill Creek fault. The Mission Creek fault, a strand of the San Andreas fault, is situated very close to the eastern portion of the project in the Raywood Flat area. The main San Andreas fault lies approximately 2 to 3 miles southwest of the Forebay Tank No. 1 location. The bedrock geology along the existing flume alignment has been mapped as mylonite and gneiss. The Geologic Map of the San Bernardino Quadrangle, California, 1:250,000 (Bortugno and Spittler, 1986, rev 1988) shows the geology within the project location to consist of mylonite of undetermined age related to the regional Vincent Thrust fault. The Geologic Map of the San Gorgonio Mountain Quadrangle, San Bernardino and Riverside Counties, California (Dibblee, 1964) shows the geology within the project location to consist of Precambrian mylonitic gneiss.