

Staff Report

for the Special Meeting of the Board of Directors, September 6, 2018

TO: Board of Directors

FROM: Remleh Scherzinger, MBA, PE, General Manager
Jim Crowley PE, Consulting RWMP Program Manager
Gary King, PE PhD, Engineering Manager

DATE: August 28, 2018

SUBJECT: Raw Water Master Plan (FATR#1041) – Engineering and Facilitation Consulting Services

ENGINEERING

RECOMMENDATION:

Adopt Resolution 2018-20 - Raw Water Master Plan 2018 Update – Facilitation and Technical Services, approve Budget Amendment and authorize the General Manager to execute the necessary documents.

BACKGROUND:

The Raw Water Master Plan (RWMP) projects future supply and demand conditions and develops alternatives to meet the future needs of the District service area and its customers. The Board of Directors has directed staff to update the District's Raw Water Master Plan (RWMP). The last update was done in 2011 (Phase 2) and approved by the Board in 2013 with the exception of Chapter 8 of the study. The 2011 RWMP analysis was based on projected 2032 water demands, which did not include projected Federal Energy Regulatory Commission (FERC) license conditions, modeling of the watersheds to include climate change or a realistic approach to drought conditions. Since that time, there have also been significant changes in supply and demand understanding due to climate change, regulations, watershed issues, commitments as part of the FERC process, and customer needs. The RWMP Update program will provide a process that contemplates future supply and demand scenarios, develops alternative pathways for the District, and identifies the Board-selected pathway for the District to implement.

Unique to this update, the process will include a more extensive public input and participation component. A pathway Advisory Committee will be convened and will comprise of representatives of the diverse community identities within the District's service area. The Advisory Committee will review technical studies and develop multiple pathways to address the future supply and demand conditions. NID will provide technical analysis of each pathway and work with the Advisory Committee to refine and

finalize pathways for presentation to the Board. The Board will review the pathways in public workshops and ultimately select a pathway for NID to implement.

A facilitator role is key to managing the technical advisory process and other public outreach efforts. A request for proposal (RFP) was sent to 14 facilitation firms. Proposals were received from The Kolbe Company, Rainwater & Associates, and Kearns & West. A panel representing the Water, Engineering and Management Departments, and the program manager consultant reviewed the proposals. Each proposal presented a different approach to create, implement, and manage the public involvement component of the RWMP Update.

The Kolbe team was selected for their approach and team. The Kolbe approach utilizes a Technology of Participation (ToP) process that is designed for facilitating public groups through technical discussions. The process is inclusive and designed to find common understanding among varied viewpoints. The approach also provides a focused schedule and tasks to keep the process on schedule to meet NID's program requirements. Kolbe proposed a two-facilitator approach to capture the group input and at the same time keep the process moving towards each goal. The lead facilitator, Heidi Kolbe, is a leading expert in ToP processes and has extensive facilitation experience throughout many industries. The co-facilitator, Jay Madigan, is also a ToP practitioner and has extensive facilitating experience with water utilities nationally and internationally.

NID has been working with The Kolbe Company to finalize the contract scope for approval. It is staff's recommendation that the Board award a consulting contract with The Kolbe Company in the amount of \$811,100. This amount encompasses the full two-year scope of work.

To support the Advisory Committee and its recommendations, staff and our consultant will be generating technical memorandums that will be given and discussed with Advisory Committee. These technical memorandums will include a hydrologic analysis, a demand analysis, a supply analysis and any other alternative evaluations requested by the Advisory Committee to meet the projected supply needs of the community.

Staff is recommending HDR as a sole source contract due to their intimate knowledge of the District's systems and operations. HDR developed the historical unimpaired hydrology and HEC-ResSim operations model to support the FERC relicensing. HDR has been developing the Bear River unimpaired hydrology climate change projections utilizing California Water Commission (CWC) climate model products that were used to support the Water Storage Investment Program. HDR also has the expertise in various engineering disciplines to be able to take ideas from the Advisory Committee to develop and evaluate alternatives that could be used to meet project needs.

It is staff's recommendation that the Board adopt Resolution 2018-20.

BUDGETARY IMPACT:

The Raw Water Master Plan is currently budgeted for \$500,000, and we are increasing this budget to \$1,110,000.

Funding of the \$610,000 increase is coming from the following sources:

- Transfer of \$300,000 from the 10114-51324 Other Post Employment Benefit (OPEB) budget, leaving a balance of \$31,935 ➤ 2018 is fully funded
- Transfer of \$150,000 from the 10171-52507 Water Purchase budget, leaving a balance of \$150,000 ➤ Staff does not anticipate a water purchase this year
- Transfer of \$160,000 from the 10151-52915 Non-Programmatic Project budget, leaving a balance of \$9,471,192 ➤ Project cost will be distributed across current unspent 2018 funds

JC

ATTACHMENTS:

- Resolution 2018-20 - Raw Water Master Plan 2018 Update – Facilitation and Technical Services
- Budget Amendment Request
- Kolbe Company Scope of Work, Schedule and Budget
- HDR Scope of Work and Budget



RESOLUTION No. 2018-20

OF THE BOARD OF DIRECTORS OF THE NEVADA IRRIGATION DISTRICT

**RAW WATER MASTER PLAN 2018 UPDATE –
FACILITATION AND TECHNICAL SERVICES**

WHEREAS, the Nevada Irrigation District (the “District”) intends to update the current Raw Water Master Plan (RWMP) which was approved by the Board on March 13, 2013; and

WHEREAS, the Irrigation District is responsible for the Acquisition, Treatment and Delivery of water to portions of Nevada, Placer and Yuba Counties, and

WHEREAS, the District’s desires to develop long term (50yr) plan for the delivery of water to the District’s service area; and

WHEREAS, Raw water deliveries support raw water customers for agricultural and urban uses and provides water for treated water plants, which in turn support the treated water customers of the District; and

WHEREAS, Climate change continues to effect the District’s abilities to sustainably Capture, Store and Deliver water to our community, and

WHEREAS, since approval and development of the Raw Water Master Plan Phase 2 in 2013 numerous changes in the base assumptions have occurred, such as future FERC environmental water commitments, newer climate change inputs and expanding conservation regulations, these changes must be addressed with a full update to previous Phase 1 and Phase 2 plans.; and

WHEREAS, the public needs the opportunity to review the study, its approach and to participate in a collaborative process to address the future supply and demand needs of the District.

WHEREAS, the collaborative process must consider existing and new customers including the complete service area of the District.

NOW, THEREFORE, BE IT RESOLVED, the Board of Directors of the Nevada Irrigation District hereby awards consulting contracts with The Kolbe Team in the amount of \$811,100 for both facilitation and community outreach services, and awards a contract to HDR in the amount of \$290,377 for technical support of the Advisory Committee’s work.

BE IT FURTHER RESOLVED, that the District will proceed with revising the approved 2013 Raw Water Master Plan, and

BE IT FURTHER RESOLVED, the District will conduct a robust and all-inclusive community process as outlined in the power point by Kolbe to define the needs of our community and to develop a plan that will address our water wants and needs 50 years into the future using Kolbe Consultants for the work referred to as facilitation, and

BE IT FURTHER RESOLVED, as part of this work, the District will develop technical information to support to support the public process using HDR as its technical consultant, and

BE IT FURTHER RESOLVED, that this resolution approves a budget amendment in the amount of \$610,000 for these services, creating a total budgeted amount of \$1,110,000, and

BE IT FURTHER RESOLVED, that the resolution directs the General Manager to enact the development and implementation of the Advisory Committee (AC) as part of the RWMP Update and complete the program to provide an outline of possible solutions to the Board within 24 months. If not complete by 24 months or extended at the approval of the Board, Staff will provide a summary of AC pathways to date and for the Board's consideration.

BE IT FURTHER RESOLVED, as part of this work, the Facilitator as part of their work will provide a report to the Board every quarter describing activities and schedule for this work as part of the General Orders in a Board Meeting, and

BE IT FURTHER RESOLVED, that the resolution directs the General Manager to procure the above referenced professional assistance to update the Raw Water Master Plan.

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PASSED AND ADOPTED by the Board of Directors of the Nevada Irrigation District at a special meeting held on the 6th day of September, 2018, by the following vote:

AYES: Directors:
NOES: Directors:
ABSENT: Directors:
ABSTAINS: Directors:

President of the Board of Directors

Attest:

Secretary to the Board of Directors



**NEVADA IRRIGATION DISTRICT
BUDGET AMENDMENT REQUEST**

Request Number

Req. No BA 2018 - 93

Date: 9/6/2018
 To: Remleh Scherzinger, General Manager
 From: Gary King, Engineering Manager

Initial _____

Budget Transfer: Enter Operating/Capital Expenditure or Revenue line items.

Department	Object / Account	Increase/(Decrease)
10151 Engineering	52603 Consulting/Contractor Fees	\$ 610,000.00
10114 Administration	51324 OPEB Net ARC	\$ (300,000.00)
10171 Water Operations	52507 Water Purchase	\$ (150,000.00)
10151 Engineering	52915 Proj Bud: Non-Programmatic	\$ (160,000.00)

Budget Increase: Enter Operating/Capital Expenditure or Revenue line items.

Department	Object / Account	Increase/(Decrease)

Division Fund	Funding Account	Increase/(Decrease)

Explanation: Enter narrative explaining reason for amendment.

The current Raw Water Master Plan is budgeted for \$500,000 and we are increasing this budget to \$1,110,000. Funding of the \$610,000 increase is coming from the following sources:
 1) Transferring \$300,000 from the 10114-51324 OPEB budget leaving a balance of \$31,935
 2) Transferring \$150,000 from the 10171-52507 Water Purchase budget leaving a balance of \$150,000
 3) Transferring \$160,000 from the 10151-52915 Project budget leaving a balance of \$9,471,192

APPROVALS:

	<u>Date</u>	<u>Signature</u>	<u>AGM/FM Initials</u>	<u>Approved/Denied</u>
Level I:				
Level II:				
Level III:				

NID RWMP Update Facilitation and Public Outreach

Scope of Work – The Kolbe Company

1. Introduction

This scope of work supports the Raw Water Master Plan (RWMP) Update. It provides the District with a framework for engaging customers, stakeholders of all types, and representatives of the community in an equitable, innovative approach to making a commitment to the future of large-scale public resources.

Described here are the resources needed for maximum public engagement in an orderly process that is respectful of multiple perspectives. This process is designed to incorporate the community's ideas on possible alternatives for supporting the RWMP Update. We anticipate the process to yield multiple pathways detailing methods necessary to achieve a vision for future water use. Ultimately, once functional pathways are developed with the community, they will be presented to the District Board for its decision.

2. Project Goal

Recognizing the Board holds ultimate responsibility for decision-making, the Advisory Committee (AC) will present to the Board a spectrum of rational options (pathways) from which the Board may choose. NID will then be in a position to update the RWMP.

3. Objectives

- Achieve project milestones on time within a context of an agreed-upon schedule.
- Share technical data quickly, in standard, technically advanced formats managed to allow continuous access and updates to all parties.
- Enable project participants to focus on content development by making available professional facilitation support during each stage of the project.
- Increase public awareness, understanding, and urgency regarding the needs and threats to NID's water supply across all stakeholder segments.
- Gain broad public recognition of the project and that it be judged fair, open and a valid representation of the public's options.
- Develop a wide range of participating groups, to produce many pathways with viable alternatives for water usage.
- Facilitate pathways to formulate feasible-to-implement alternatives based on fiscal, structural, legal and regulatory, community values, and social considerations.

- Communicate clearly and regularly with the public and among project groups.

4. Project Approach

The Kolbe Team has developed a recommended approach for the project that leverages the Public Participation process through strategic facilitation and integrated communications, working in concert to meet the RWMP Update objectives. The strategies in this approach incorporate technical analysis, education, public outreach and participation, in a systematic, transparent method that is accountable to an ambitious yet achievable schedule.

Project Phases:

The project will be accomplished in four project phases over a two-year time frame. Below are overview descriptions of each phase. The task details are provided in the Scope of Work section of this document, and proposed timeline is presented in the attached charts.

Phase 1: Program Development

The Program Development phase will include planning the public engagement and communications approach, developing the advisory committee description and recruitment strategy, and facilitating the District's connection with key stakeholder groups. This phase will result in the District having a visible and credible public participation process and framework for considering and resolving the multiple issues and challenges of the RWMP Update. By the end of the phase, the public engagement and communications plan will be in place, the initial stakeholder contact meetings will be completed, and the advisory committee will be formed and chartered.

Phase 2: Problem Statement

The Problem Statement phase will include full scale implementation of the AC technical review meetings and public input process. This will include education on specific mandates, operations, responsibilities, historical context and background of the District that is necessary to be effective team members. The AC will learn about the District's water system, learn about the hydraulics and hydrology (H&H) model, demand and supply analysis technical information, and develop a problem statement that will define the challenge to resolve.

The public, engaged through diverse participants on the AC, will provide input on two questions:

1. What is the community's likely future water supply?
2. What is the community's likely future water demand?

Phase 3: Pathways Development

The Pathways phase will include facilitation services for the AC to create several pathways that will be forwarded to the Board of Directors for final consideration. The public, engaged through diverse participants on the AC, will provide input about their preferred future and ideas on approaches that are practical for the next 50 years. At the end of this phase, the AC will have developed several pathways that may be either single solution pathways or pathways where several solutions are bundled together to form a possible pathway. Each pathway will contain discussion about the purpose and values held by the community and the impacts to these issues for each alternative.

Phase 4: Selection of Pathways

The Selection phase will include a presentation to the Board about the pathways. There will be two workshops to provide the Board the opportunity for in depth discussion prior to their selection of their preferred pathway. This phase will also contain closure activities for the advisory committee, communication with the public and an evaluation of the process. The outcome of this phase will result in the selection of a single pathway by the Board and the information to complete the Raw Water Master Plan.

5. Scope of Work Assumptions

The scope of work is based on the following assumptions:

1. The Team has a two-year timeframe for complete execution of all phases.
2. The NID Board is the final-decision maker selecting a single pathway from a choice of many.
3. A Project Spokesperson will be the voice of the effort and primary source of communication for the public.
4. Public engagement and communications activities will happen throughout the life of the project and will be targeted to provide education and an opportunity to contribute.
5. The intention is to facilitate the AC to produce a short list of feasible pathways for Board consideration.
6. All quarterly progress reports will be presented to the Board of Directors.
7. If no viable pathways are produced by the Advisory Committee within 24 months, NID will take the necessary steps to complete the project.
8. There will be 24 advisory group meetings over the life of the project.
9. There will be 12 initial contact meetings to educate the community and solicit AC membership.
10. There will be 12 community meetings spread throughout the 3 remaining phases of the project.

6. Scope of Work

This section identifies the tasks and deliverables that meet the project objectives and support the process. During each phase of the project, the Scope will be revisited to clarify, document, and potentially change the tasks necessary to address changing priorities, direction, and unforeseen circumstances.

Phase 1 – Program Development

Task 1A: Prepare and present a Kick-Off, Discovery and Process Plan for Project

The project will be initiated with a discovery and planning process. This includes planning activities to develop a facilitation plan to conduct the discovery, as well as the kick-off meeting itself. The purpose of the project kickoff meeting is to introduce the team and help them understand the project background, what success will look like, and what needs to be done. Members will brainstorm and agree on how to work together effectively. It's a chance to level set and get the facilitation team, NID, and the technical team on the same page.

Task 1B: Preliminary AC Recommendations

After the kick-off meeting, the facilitation team will develop a set of recommendations and considerations for developing the AC. Several strategies will be analyzed and adopted on AC representation, recruitment, community selection of representatives, member orientation, and AC operations. We will facilitate the project team's development of expectations and rules of engagement for the AC in relation to project goals. The AC plan includes an option to cancel or significantly alter the process should the Board conclude the process is not achieving progress per the project objectives. At the end of the pre-planning process for the AC, the NID team will have:

- A recruitment and engagement approach that ensures AC membership is secured across interest groups and is comprised of individuals who have the available time, qualifying skills, and knowledge to fulfill the duties.
- An AC Charter recommendation that provides a proposed governance framework for rules of engagement and identifies corrective actions.
- A detailed AC implementation plan which includes roles/responsibilities, expectations for membership, success indicators, evaluation measures, key milestones, anticipated deliverables and the meeting schedule.
- A process correction action to use if the process is not achieving progress per the project objectives.
- A list of organizations, key stakeholders and agency partners whose input is needed for plan creation.
- A list of public information and outreach materials needed to support the initial AC recruitment and engagement process.

- A list identifying community resources that are necessary for successful implementation.

Task 1C: Public Engagement & Communications Approach

Once the plan for the AC is solidified, the team will explore approaches for launching and engaging the public in the project. The Facilitation Team will develop recommendations and present options for public meeting design, including format and logistics. The recommendation will also include a process for contacting stakeholder organizations, whether directly, or on behalf of NID. A list and plan will be developed according to the direction and needs established in the discovery and planning activities. It is anticipated that initial touchpoints with interest groups and the public will involve research on existing meeting opportunities to request attendance, as well as coordination of project-specific meetings. Based on the facilitated discussions around this topic, the team will have the foundation needed to develop and implement a detailed Public Engagement and Communications Plan.

Task 1D: Public Engagement and Communications Plan

The planning activities culminate in the development of the detailed Public Engagement and Communications Plan. The plan will serve as the project roadmap for how all the overarching objectives will be met over the course of the contract. As such, it will include:

- Target audiences and interest groups to be engaged
- Strategies for generating public awareness, interest and participation
- Community contact with clarification of the promise to the community in exchange for their participation
- Facilitation plans for community meetings outlining the type of input session and possible locations
- Plans for the AC, including communications tools to support interface with their respective interest groups
- Full-scope communications assets needed to support overall project communications goals across project groups and to ensure technical information is in easy to understand formats for all audiences
- A detailed timeline of engagement and communications activities

Task 1E: Community Initial Contact Meetings

The planned approach includes 12 initial meetings with community groups across the NID service area to inform the public of the project, invite their input into the plan, and select representatives for the AC. The team will recruit AC members by creating conversations where the community selects its own AC representatives. The team will outreach to a wide range of stakeholder groups to coordinate their participation or

hosting of public meetings. The team will develop facilitation plans for each meeting, plan logistics, conduct promotion activities, and execute the meeting facilitation. These meetings will be significant as a “first impression” touchpoint with the public and in the formation of the AC. Following each meeting, a set of detailed notes and communications will be produced and distributed according to the Communications Plan. The community meetings will result in the community’s selection of members to serve on the AC, as well as, heighten awareness about the project, receive some initial input, and provide participation opportunities.

Task 1F: AC Formation

The formation of the AC is expected to take two meetings after scheduling and coordination is complete. As with all meetings, facilitation plans will be prepared in advance to ensure a structured and objective-based approach. These meetings will provide AC participants an orientation to the project, their role, and expectation of the outcome of their effort. The meetings will be conducted in a workshop setting to allow AC members to ramp-up their understanding of the scope and rules of engagement in the project. The facilitation plan will cover fundamental project knowledge and the plan for shared project tools, data, project schedule, and milestones. The result of this task is a fully functioning AC that is prepared to work together respectfully to accomplish the mission.

Task 1G: Team Check-Ins

The complexity of the project calls for a well-coordinated and connected process among the team. A minimum of one meeting per week is expected for the team to manage the project effectively. These 45-minute project sessions will be conducted personally or virtually throughout the life of the project.

Task 1H: Board Progress Reports

Clear and consistent communications about the project are essential to the keeping of the promise of transparency, ensuring activities are aligned, and keeping the project on course with NID and the Board. The weekly team meetings establish the cadence of planning and communication for the project, which will be translated into a prepared report and presentation for the Board every quarter.

Task 1I: Spokesperson Support

This project approach includes a dedicated spokesperson so that the public, media, and stakeholders have a consistent and informed point of contact for all project information needs. Identification of this person and the detailed responsibilities of their role will be part of the Public Engagement and Communications Plan. In general, the spokesperson is positioned to be on-call and able to either directly respond to information needs, or facilitate a response from the most appropriate team member. The spokesperson may

also act as a general project representative in meetings and outreach activities. As such, the spokesperson will be distinct from the facilitator role as an advocate for the project's status.

Task 1J: Facilitation Training

One of the expectations of AC membership is communication with stakeholder groups both to provide information and to receive information. AC members will be trained in the facilitation process to communicate with the public in community meetings and with stakeholders. The training program for AC members will be 16-20 hours of classroom instruction which can be delivered in half or full day segments. Members will learn:

- The Technology of Participation Focused Conversation method which will be used for groups to discover solutions, analyze problems, and develop alternatives while allowing all viewpoints to be considered.
- Small and large group collaboration tools needed to facilitate problem solving sessions. Tools taught will be the Solutions Workshop, Strategy Formation, Root Cause Analysis, and Shared Practical Vision.
- The Technology of Participation Consensus Workshop method which will be used for creative brainstorming to gather ideas and data from the public and the AC about issues and pathway options.
- Priority setting tools that will be used to assess the degree of agreement with a given pathway and ascertain what is most important to the community.

Phase 2 – Problem Statement

Task 2A: Communications Plan Implementation

A significant amount of technical information needs to be communicated in AC meetings and in public meetings during the Problem Statement phase of the project. This will require an ongoing process of distilling the technical reports into clear and concise communications pieces and presentations according to the objectives and level of detail needed for each audience. As with any long and complicated process, there will also be a need for sustaining engagement and keeping the project top-of-mind among the public and stakeholders. The detailed strategies and tactics for all communications needed to support the successful execution of this phase will be included in the strategic Communications Plan described in Task 1D. This task implements the Communications Plan during Phase 2.

Task 2B: Technical Analysis TM Format

Prior to the AC technical meetings, it is essential for the technical teams (composed of NID staff and their technical advisors) and the facilitation team is to establish collaboration terms (aka terms of engagement) with the AC. The purpose of this task is

for the Facilitation Team to assist the just-forming Technical Team to make the TM's accessible/ understandable to the "end users" which are the AC and the public. The project team will develop the format of the Technical Memorandum Template and technical team's expected workflow when interacting with the AC. Task assumes two meetings with the NID technical team and up to three revisions of the TM template as it is developed.

Task 2C: Hydraulics & Hydrology AC Meeting

The Facilitation Team will work together with the Technical Team to prepare and present to the AC the Hydraulics & Hydrology (H&H) study and results. Facilitation will involve at least two AC meetings. The first meeting will present the findings, discuss and understand the technical evaluation, and identify and condense comments and/or requests for additional analysis. Facilitation team will meet with NID Technical Team to review the comments and requests from the AC in order for the NID Technical Team to develop additional information and/or alternatives. The second AC meeting will present the additional supporting technical information and/or updated analysis. The second meeting will be facilitated to achieve broad AC understanding of the H&H analysis, assumptions, and results.

Task 2D: Demand AC Meetings

The Facilitation Team will work together with the Technical Team to prepare and present to the AC the demand study and results. Facilitation will involve at least two AC meetings. The first meeting will present the findings, discuss and understand the technical evaluation, and identify and condense comments and/or requests for additional analysis. Facilitation team will meet with NID Technical Team to review the comments and requests from the AC in order for the NID Technical Team to develop additional information and/or alternatives. The second AC meeting will present the additional supporting technical information and/or updated analysis. The second meeting will be facilitated to achieve broad AC understanding of the demand analysis, assumptions, and results.

Task 2E: Supply AC Meetings

The Facilitation Team will work together with the Technical Team to prepare and present to the AC the supply study and results. Facilitation will involve at least two AC meetings. The first meeting will present the findings, discuss and understand the technical evaluation, and identify and condense comments and/or requests for additional analysis. Facilitation team will meet with NID Technical Team to review the comments and requests from the AC in order for the NID Technical Team to develop additional information and/or alternatives. The second AC meeting will present the additional supporting technical information and/or updated analysis. The second

meeting will be facilitated to achieve broad AC understanding of the supply analysis, assumptions, and results.

Task 2F: Problem Statement AC Meetings

Once the H&H, Supply, and Demand Analysis meetings are completed, the technical information will be available to frame the RWMP Update problem statement. The problem statement serves as the touchstone for developing alternative pathways in Phase 3. The Facilitation Team will facilitate the AC in creating either (a) a commonly held Problem Statement to which each AC “community” member agrees to propose their approach, or (b) forming a series of Problem Statements to be addressed by the AC community members. Task assumes two AC meetings required. The Problem Statement(s) will be documented in the meeting results and used in subsequent tasks for public outreach and Board updates.

Task 2G: Community Meetings

Four community meetings are anticipated during this phase of the project to present the technical information and hear the community perspective and input. The team will develop facilitation plans for each community meeting, plan logistics, conduct promotion activities, and execute the meeting facilitation. It is envisioned that AC members will be present at the community meetings to provide information and hear community input. We will oversee the entire meeting process but depend on trained AC members to discuss water issues with small groups of the public. These groups will be integrated so the public will have the opportunity to hear alternative perspectives and become more educated about the challenges facing the district. These meetings will be important to keep the community informed about the project and to obtain broad participation. We anticipate AC members playing a significant role in listening to the public and providing information. Following each meeting, a set of detailed notes, communications will be produced and distributed according to the communications plan. The community meetings will result in greater community awareness about the demand/supply water issues facing the district and generate information on important community values that affect the problem-solving discussions.

Task 2H: Team Check-Ins

The complexity of the project calls for a well-coordinated and connected process amongst the team. A minimum of one meeting per week is expected for the team to manage the project effectively. These 45-minute project sessions will be conducted personally or virtually throughout the life of the project.

Task 2I: Board Progress Reports

The AC meetings and the Community Input meetings provide clarity on the problem understanding from the community’s perspective. This input will be translated and

summarized into a prepared report and presentation for the Board quarterly, with two progress reports during this phase of the project.

Task 2J: Project Spokesperson Support

This project anticipates numerous opportunities for providing informative public briefings on newly developed data, agreements on projected expectations for H&H, Demand, and Supply Analysis, and the definition of the Problem Statement. The project spokesperson has the role of explaining project progress to the public, media and stakeholders, serving as a consistent and informed point of contact. The spokesperson will explain the RWMP Update's overall goals, current status, and next steps in routine announcements and communications.

Phase 3 – Pathways Development

Task 3A: Communications Plan Implementation

During the pathways development phase of the project the project teams and AC will be supported with ongoing communications and reports of activities. It is anticipated this phase will benefit from continued educational outreach on water issues and the “why” behind the project. This will help keep the intense work of developing the pathways in a big picture perspective of community needs not just now, but for the future. The strategy and scale needed for this ongoing education and outreach will be part of the Communications Plan. Ongoing communications support for community meetings, AC meetings, and Board progress reports will be conducted in this task.

Task 3B: Pathway Development AC Meetings

The project team will lead the AC in developing strategic, realistic, and practical pathways to address the problem identified in the earlier phase by using process tools such as innovative strategy development workshops to develop proposed pathways.

There will be 12 meetings in the pathway development process with at least one full day session each month. Pathway development is complex and there are a host of issues to be considered in developing each pathway. Each pathway will receive technical analysis and community impact information prior to adoption. Therefore, the timeline is longer in this phase than in the other phases of the project because time is required to complete this work between AC meetings. It is anticipated that the AC meeting processes will include facilitation to:

- With attention to the problem statement, select the key issues and analyze them to identify a host of possible strategies that might be incorporated into pathways.

- Create a common set of high-level goals that each pathway is intended to address.
- Develop a set of ideas, activities, and programs that the AC would like to employ and relate these to possible pathways.
- Evaluate community public meeting input and incorporate this input into the pathway development conversation.
- Organize all the possibilities from the AC and public processes into arenas that move toward one or more of the goals identified and start to define the universe of pathways to be developed.
- Employ creative problem-solving tools and exercises to find innovative solutions that may not be obvious and might be proposed to meet the goals.
- Discover arenas of inter-relationships and dependencies that map together to create possible pathways for bundled solutions.
- Decide which strategy arenas should be clustered together to form bundled pathway solutions. Decide which pathway offer single solutions to the problem.
- Develop a set of objective criteria to evaluate each pathway.
- Create a set of possible pathways with benefits and risks associated with each.
- Provide technical analysis for each pathway, translating technical information into AC user-friendly language, to enable the AC to finalize its discussions.
- Create a set of questions to evaluate the community support for each pathway.
- Decide which pathways will move forward to the Board for decision making.
- Develop important presentation points for each pathway.
- Document and refine each pathway.

By the end of the process, we anticipate a handful of possible pathways all of which will be proposed with some level of support and with confidence that the problem will be addressed. The result of this task is a report and presentation to the Board and the Community that clearly delineates each pathway with documentation of the potential risks and benefits of each.

Task 3C: Community Meetings

Four community meetings will be held during this phase to update the public on progress and to hear the community ideas and priorities for options to be incorporated into the AC pathways development discussion. Again, we anticipate AC members playing a significant role in listening to the public and providing information. AC members will be involved in gathering ideas for pathway development and for testing different pathway solutions. The project team will develop facilitation plans for each community meeting, plan logistics, conduct promotion activities, and execute the meeting facilitation. AC members will lead small group discussions and data gathering as needed. These meetings will be important to keep the community informed about the project

and to obtain input on possible solutions. Following each meeting, a set of detailed notes and communications will be produced and distributed according to the Communications Plan. The community meetings will result in ideas from the community on approaches that should be considered in pathway development.

Task 3D: Team Check-Ins

The project team plans to continue bi-weekly check-in meetings during this phase to keep the pathway development on track and moving forward.

Task 3E: Board Progress Reports

We anticipate at least four quarterly progress reports during this phase of the project to keep the Board updated on the kinds of pathway strategies that are under consideration by the AC. We will provide summaries of information provided in community meetings. We will provide a prepared report and presentation to the Board to provide an opportunity for the Board to assess progress toward the project objectives and determine continued support of existing process or selection of modification/termination of the process.

Task 3F: Project Spokesperson Support

This project will continue to need the spokesperson to provide informative public briefings on the pathway development process. The project spokesperson has the role of explaining project progress to the public, media and stakeholders, serving as a consistent and informed point of contact. The spokesperson will explain the RWMP Update's overall goals, current status, and next steps in routine announcements and communications.

Phase 4 – Pathway Selection

Task 4A: Communications Plan Implementation

It is imperative that the last phase of the project wraps-up with a strong effort toward engaging and recognizing the stakeholders and community members who have contributed to the process. At this point the project will be nearly two years in the making, and the final takeaways and assessment of how well it achieved its objectives will be assessed. Therefore, the communications focus at the conclusion will focus on recognition of contributions to the effort, the tremendous amount of work completed, and a celebration of the pathways that are produced for presentation to the Board. Ongoing communications support for community meetings, AC meetings, Board presentation, and contributions to the final report are included in this task.

Task 4B: Pathways Board Presentation AC Meeting

The project approach calls for the presentation of the pathways to the Board in partnership with the AC to enable the Board to hear the analysis behind each pathway and the risks and benefits of each. In addition, the work of the AC will be evaluated against the original charter to produce the lessons learned. This will be an opportunity for the Board to appropriately recognize and appreciate the AC members for their contributions to the Raw Water Master Plan.

Task 4C: Community Meetings

There are four community meetings scheduled for this phase to provide the public with the opportunity to see how their input and suggestions were incorporated by the AC into the pathways. It also creates an opportunity for NID to appropriately recognize and appreciate the AC members and community members who have contributed to the formation of the strategies. The result of these sessions will be a more informed public about NID's future direction and the reasoning behind the pathways developed and the pathway selected.

Task 4D: Board Discussion and Selection Board Workshop

The project team will design a process and facilitate the Board in its evaluation, deliberation, and selection of a pathway. Workshops will be led by the facilitation team, and will also rely on the NID Technical Team and the AC to contribute as necessary. The Facilitation Team will prepare a workshop plan for review and discussion with NID and other project team members for finalization. The Facilitation Team will lead the Board Workshop process with the goal of achieving Board pathway selection. The task budget assumes two workshops, but the Facilitation Team can be available for additional workshops to be determined with NID.

Task 4E: Team Check-Ins

The project team will continue to check-in weekly to ensure that the decision making and selection phase proceeds uninterrupted and to coordinate with NID and the AC as necessary.

Task 4F: Final Report

Develop a final report that contains a summary of the entire AC and community engagement process, lessons learned, the pathways with supporting documentation and technical analysis. A draft report will be submitted to NID for review and comment. Edits and comments will be discussed with NID and incorporated into the final report.

Task 4G: Project Spokesperson Support

In this advanced stage of the project, the project spokesperson helps facilitate the end-to-end context of the project. Through the project's communication channels, the pathways developed as part of the Public Participation process will be posted, along with explanation of the Board's role in final selection. This will require – at some level – explaining the changes required once long-term planning transforms to implementation. The work in comparing the different outcomes of each pathway will be complete. There will be great opportunity for explaining to the community the lessons learned through this process in stewardship of natural capital and resilience of NID's service area and customers.

Direct Expenses

Paid Media:

The public awareness and education objectives for the project will be supported through paid media channels. General education messages will connect the public with an understanding of why the RWMP Update is important and timely. Paid media will also support visibility and participation objectives for public meetings and include a clear call-to-action. For both promotion objectives, the most effective paid media vehicles will be determined as part of the Communications Plan and depend on the target audience and outcome desired. For example, broad public education messages could be placed on billboards or as a 30-second spot on local cable networks. More targeted advertising for meeting awareness and participation could use email blasts, social media, or direct mail. This scope assumes \$60,000 for paid media.

Production Costs:

The production budget covers the advertising and outreach assets needed to execute the Communications Plan. The approach to developing these assets is to create content that best connects the information across audiences. For example, video content is a compelling and easily consumable medium for communicating a public education message. Video can be used and shared across traditional and new media, as well as in public meetings. That is why a 30 or 60-second public education video is budgeted in this scope. Other items on the production list are advertisement design, infographics, and printed materials for outreach meetings and activities. This scope assumes \$20,000 for production costs.

Public Meetings:

Public meetings should be held at sites that are accessible to the public in various parts of the district. We have budgeted for space rental and refreshments for each of the 24 public meetings. These costs are included in the cost estimate for community meetings.

NID RWMP Update

Facilitation and Public Outreach Scope of Work

Project Schedule

TASK	2018				2019												2020										
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Phase 1: Program Development (5 months)																											
Task 1A: Kick-Off Meeting & Team Start-up																											
Task 1B: Preliminary AC Recommendations																											
Task 1C: Public Engagement and Communications																											
Task 1D: Public Engagement & Communications Plan																											
Task 1E: Community Initial Contact Meetings (12)																											
Task 1F: AC Formation – (2 AC meetings)																											
Task 1G: Team Check-ins (weekly)																											
Task 1H: Board Progress Reports (2)																											
Task 1I: Project Spokesperson Support																											
Task 1J: Facilitation Training																											
Phase 2: Problem Statement (6 months)																											
Task 2A: Communication Plan Implementation																											
Task 2B: Technical Analysis TM Format																											
Task 2C: H&H AC Meetings																											
Task 2D: Demand AC Meetings																											
Task 2E: Supply AC Meetings																											
Task 2F: Problem Statement AC Meetings																											
Task 2G: Community Meetings (4)																											
Task 2H: Team check-ins (bi-weekly) (10)																											
Task 2I: Board Progress Report (2)																											
Task 2J: Project Spokesperson Support																											
Phase 3: Pathways (11 months)																											
Task 3A: Communication Plan Implementation																											
Task 3B: Pathway Development TAC meetings (12)																											
Task 3C: Community Meetings (4)																											
Task 3D: Team check-ins (bi-weekly) (20)																											
Task 3E: Board Progress Report (4)																											
Task 3F: Project Spokesperson Support																											
Phase 4: Selection (2 months)																											
Task 4A: Communication Plan Implementation																											
Task 4B: Pathway Board Presentation TAC meeting																											
Task 4C: Community Meetings (3)																											
Task 4D: Board Discussion and Selection Board																											
Task 4E: Team check-ins (weekly) (4)																											
Task 4F: Final Report																											
Task 4G: Project Spokesperson Support																											

NID RWMP Update

Facilitation and Public Outreach Scope of Work

TASK	Team Member Hourly Rate, \$/hr				Team Member Hourly Rate, \$/hr		Total Cost, \$
	Heidi Kolbe 350 Hours	Jay Madigan 260 Hours	Nileen Verbeten 210 Hours	Admin 85 Hours	Katie Mothersell 175 Hours	Admin 85 Hours	
Phase 1: Program Development (5 months)							
Task 1A: Kick-Off Meeting & Team Start-up	20	20	8	30	20	10	20,780
Task 1B: Preliminary AC Recommendations	28	12	2	7	17		16,910
Task 1C: Public Engagement and Communications Approach	20	14	3	8	16		14,750
Task 1D: Public Engagement & Communications Plan	3	3	3	3	52		11,815
Task 1E: Community Initial Contact Meetings (12)	48	48	4	48	48		42,600
Task 1F: AC Formation – (2 AC meetings)	24	14		10	14		15,340
Task 1G: Team Check-ins (weekly) (30)	51	22.5	90	30	22.5		49,088
Task 1H: Board Progress Reports (2)	6	4		2	4		4,010
Task 1I: Project Spokesperson Support	2	17			28		10,020
Task 1J: Facilitation Training	32	8	30	20	8		22,680
Phase 1 Total	234	162.5	140	158	229.5	10	207,993
Phase 2: Problem Statement (6 months)							
Task 2A: Communication Plan Implementation	5	10			80	20	20,050
Task 2B: Technical Analysis TM Format (2)	32	18	4	10	18		20,720
Task 2C: H&H AC Meetings (2)	32	18	4	10	18		20,720
Task 2D: Demand AC Meetings (2)	32	18	4	10	18		20,720
Task 2E: Supply AC Meetings (2)	32	18	4	10	18		20,720
Task 2F: Problem Statement AC Meeting (1)	12	12		8	12		10,100
Task 2G: Community Meetings (4)	48	32	12	70	48		41,990
Task 2H: Team check-ins (bi-weekly) (10)	17	7.5	30	10	7.5		16,363
Task 2I: Board Progress Report (2)	6	4		2	4		4,010
Task 2J: Project Spokesperson Support	2	17			28		10,020
Phase 2 Total	218	154.5	58	130	251.5	20	185,413



Scope of Work for Nevada Irrigation District Raw Water Master Plan Update

Nevada Irrigation District (NID) is in need of an update for the District's Raw Water Master Plan (RWMP). The last update to the plan was in 2011. The 2011 RWMP analysis was based on projected 2032 water management practices at the time, which did not include projected Federal Energy Regulatory Commission (FERC) license conditions or climate change. To support the water supply decisions in current and future years, an updated plan is needed. The update will include a 50 year projection of demands and capital improvements using the newly required 5-year drought condition.

Task 1 – Technical Memorandum Template

HDR will prepare a template to be used in a consistent manner for each technical memorandum (TM) prepared as part of the RWMP Update. The format will be reviewed and discussed with NID, but will likely include the following elements:

1. Introduction
2. Objective
3. Existing Conditions
4. Historical Analysis
5. Factors Affecting the Analysis
6. Results
7. Sensitivity Analysis
8. Regulatory Impacts
9. Conclusions

After discussion with NID, HDR will prepare and outline of the TM format for NID review. Once the format is agreed upon, HDR will use this for all TMs in the update.

Deliverables:

- *Kickoff meeting agenda and minutes*
- *Draft TM template*
- *Final TM template*

Assumptions:

- *A kick-off meeting will be attended by three HDR staff, including the Project Manager and Project Engineer*
- *It is anticipated HDR will attend two meetings to review the TM template*
- *Three revisions of the TM template will be required*

Task 2 – Hydrologic Analysis

A hydrologic data set representative of projected climate change conditions in 50 years is necessary to develop the supply analysis as part of Task 3. This task develops and documents hydrologic data to support the RWMP update.

A substantial amount of hydrologic data already exists that can be utilized for this task. Historical unimpaired hydrology was previously developed in 2011 for the Middle Yuba, South Yuba, and Bear rivers as part of FERC relicensing of NID's Yuba-Bear Hydroelectric project. The period of record of this data set is water years 1976 through 2008. In 2017, a method was developed to adjust the unimpaired hydrology data set for 2030 and 2070 climate change projections using model products by the California Water Commission (CWC) in support of the Water Storage Investment Program. The CWC model products continue to be the most relevant publicly available data set to support climate change studies in California. The 2070 projections included three scenarios: 1) median 2070 climate change conditions, 2) Drier/Extreme Warming (DEW) 2070 climate change conditions, and 3) Wetter/Moderate Warming (WMW) 2070 climate change conditions. The resulting projected 2070 unimpaired hydrology data sets align with the 50-year projection being analyzed in the RWMP update.

The CWC model products include water years 2009 through 2011, which are outside of NID's existing hydrologic period of record. 2009 and 2010 were classified as below normal water years and 2011 was classified as a wet water year. While it is unlikely that any of these three years would be included as one of the drought years used in Task 3, NID's hydrologic period of record could be extended through water year 2011.

NID has water rights in other watersheds that are not included in the existing unimpaired hydrology datasets, such as Deer Creek. Additional unimpaired hydrology will be developed as needed to assess the volume of watershed runoff available to NID to meet projected demands.

A HEC-ResSim reservoir operations model was previously developed in support of the Yuba-Bear/Drum-Spaulding Project relicensings (YB/DS operations model). Unimpaired hydrology is a fundamental input of the YB/DS operations model, which was used to assess the impacts of water delivery and generation for NID's amended final license application. This tool will be used to assess various alternatives analyzed under Task 5. The extent of the YB/DS operations model will be expanded, as needed, to include other watersheds that are not included in the existing unimpaired hydrology datasets.

A TM will document the methodology used to develop the historical unimpaired hydrology and how it was modified to represent climate change conditions in 2070 for the median, DEW, and MWM data sets. The TM will also document revisions to the YB/DS operations model.

Deliverables:

- *Draft Hydrologic Analysis TM*
- *Final Hydrologic Analysis TM*

Assumptions:

- *NID will identify which additional watersheds need unimpaired hydrology developed to quantify watershed runoff for Task 3*
- *Two revisions from Technical Advisory Committee (TAC) comments/review will be required*

Task 3 – Demand Analysis

This task includes preparing projections for current and future water use within the service areas for NID. The projections will encompass a 50-year planning period. HDR will use data provided by NID for historical water use in agricultural and municipal water customers. Future growth will also be projected based on the general plan, historical growth patterns, and build-out potential.

Several growth scenarios will be prepared for comparison and will include a range of per capita water use to provide the expected range of future demand in the system. Factors which complicate this analysis include:

- Historical variability of demands due to the 2008 recession and 5-year drought through 2015
- Uncertainties associated with climate change and the impact on water use
- Variability of growth patterns and land use changes over the 50-year planning period
- Government mandated water conservations measures

To address these uncertainties, HDR will provide multiple demand scenarios which capture the expected range and provide a sensitivity comparison for the various assumptions used in each scenario. The scenarios will be presented in table and graphical formats to convey the results in a clear manner.

Demand assumptions, such as climate change impacts, will be based on the best available data and estimates from documented sources.

Deliverables:

- *Draft Demand TM*
- *Final Demand TM*

Assumptions:

- *Two meetings with NID to review demand assumptions*
- *NID will provide historical water use data by customer class*
- *NID will provide assumptions for future expansion of the water service areas*
- *Two revisions from TAC comments/review will be required*

Task 4 – Supply Analysis

This task includes preparing projections for current and future water supply within NID's raw water system. In February 2018, HDR prepared a memorandum summarizing updated assumptions for water supply projections. The work in this task will build upon that analysis use within the service areas for NID. Projections will encompass a 50-year planning period. The updated supply analysis will include at a minimum the following variables:

- Available watershed runoff based on existing water rights
- Environmental flow requirements
- Carryover storage targets
- Updated contract purchases from PG&E
- Recycled water
- Drought Contingency Plan
- Climate change considerations

The analysis will be based on a 5-year drought scenario and project the water surplus/shortfall over the planning horizon, based on the demands projected in Task 3. The five hydrologic years will be selected as the five driest years from the hydrologic period of record developed in Task 2, ordered from wettest to driest. Annual supply deficit projections will be presented in the form of ranges depending on assumptions used for each scenario.

Supply assumptions, such as climate change impacts, will be based on the best available data and estimates from documented sources.

Deliverables:

- *Draft Supply TM*
- *Final Supply TM*

Assumptions:

- *NID will provide HDR with updated PG&E contract purchase information/assumptions*
- *NID will provide HDR with system operations data/information upon request*
- *Two revisions from TAC comments/review will be required*

Task 5 – Alternatives Evaluation

This task includes evaluating water supply alternatives within NID's water system to meet NID's projected supply needs identified by the supply analysis in Task 4. Alternatives to be evaluated will be identified during the TAC/stakeholder process, and are anticipated to include options such as conservation, canal lining, water reuse and storage. For this evaluation, HDR will assess the supply impacts for each alternative with respect to NID's existing supply portfolio and demand forecasts using the YB/DS operations model. The

alternative evaluation will include development of ‘sensitivity charts’ to illustrate results of the assessment and analysis, including cost/benefit per unit improvement. The alternatives evaluation will be documented in a draft and final TM for each alternative evaluated.

Deliverables:

- *Draft and Final Alternatives TM for each alternative evaluated on an as-needed basis*

Assumptions:

- *Different water supply alternatives require a range of analysis and effort. At this time, the specific alternatives for evaluation are not identified, but generally understood. This scope of work includes the evaluation of water supply alternatives on an as-needed basis. The accompanying fee estimate assumes a finite level of effort, rather than a discrete set of deliverables. If the Task 5 budget is expended during alternatives evaluation, an amendment will be required. As the Water Supply Plan Update progresses and more information relative to supply alternatives develops, this scope of work and fee estimate can be revised to add specific subtasks, deliverables and fee associated with those subtasks and deliverables.*

Project Team – Organizational Chart

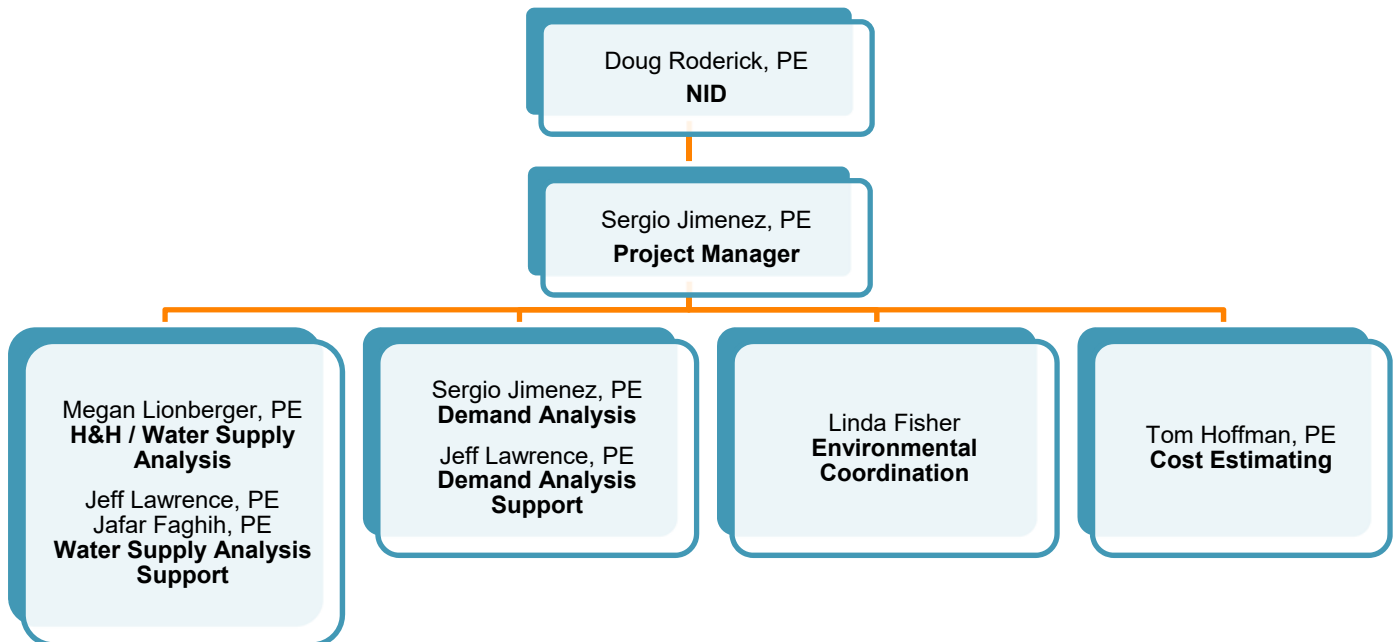


Table 1 - Estimated Work Effort and Cost

Nevada Irrigation District

Raw Water Master Plan Update

Task	Task Description	Project Manager Sergio	Senior Engineer Jeff	Enviro Planner Linda	Water Engineer Megan	Senior Engineer Jafar	GIS Analyst Giovanni	Staff Engineer Tom	Admin/ Clerical	Total HDR Labor Hours	Total HDR Labor (\$)	Total HDR Expenses (\$)	Total Cost (\$)
	Rates	\$ 318.94	\$ 265.63	\$ 192.38	\$ 195.15	\$ 195.15	\$ 129.02	\$ 133.06	\$ 131.86				
Task 1 - Technical Memorandum Template													
1.1	Technical Memorandum Template	24	16	8	40			4	8	100	\$22,837	\$ 685	\$ 23,522
	Subtotal Task 1	24	16	8	40	0	0	4	8	100	\$ 22,837	\$ 685	\$ 23,522
Task 2 - Hydrologic Analysis													
2.1	Hydrologic Analysis	20			40		12		8	80	\$16,788	\$ 504	\$ 17,292
2.2	Deer Creek System Model Development				64		4			68	\$13,006	\$ 390	\$ 13,396
2.3	Documentation	20	16	16	140		12		8	212	\$43,632	\$ 1,309	\$ 44,940
2.4	TAC Review and Comments	8	4	4	56		4		4	80	\$16,356	\$ 491	\$ 16,846
	Subtotal Task 2	48	20	20	300	0	32	0	20	440	\$ 89,781	\$ 2,693	\$ 92,475
Task 3 - Demand Analysis													
3.1	Demand Analysis	40	24	16	40			40	16	176	\$37,449	\$ 1,123	\$ 38,573
3.2	TAC Review and Comments	20	22	2	8	20	4		4	80	\$19,115	\$ 573	\$ 19,689
	Subtotal Task 3	60	46	18	48	20	4	40	20	256	\$56,564	\$ 1,697	\$ 58,261
Task 4 - Supply Analysis													
4.1	Supply Analysis	40	16	16	60	60	8		16	216	\$46,646	\$ 1,399	\$ 48,046
4.2	TAC Review and Comments	8	20	6	18	20	4		4	80	\$17,478	\$ 524	\$ 18,002
	Subtotal Task 4	48	36	22	78	80	12	0	20	296	\$64,124	\$ 1,924	\$ 66,048
Task 5 - Alternative Evaluation													
5.1	Alternatives Development and Evaluation	32	28	16	60	60	8	10	16	230	\$48,613	\$ 1,458	\$ 50,071
	Subtotal Task 5	32	28	16	60	60	8	10	16	230	\$48,613	\$ 1,458	\$ 50,071
COLUMN TOTALS		212	146	84	526	160	56	54	84	1,322	\$ 281,919	\$ 8,458	\$ 290,377