COLORADO
Colorado Water Conservation Board
Department of Natural Resources
1313 Sherman Street, Room 718
Denver, CO 80203

Yampa/White/Green – White River Algae Research Project
POGG1 2019-2747

March 11, 2019

White River Conservation District
Attn: Neil Brennan, President
P.O. Box 837
Meeker, CO 81641

Dear Grantee:

We are pleased to inform you that the Colorado Department of Natural Resources, Colorado Water Conservation Board (CWCB) has approved a portion of your request for funding pursuant to the WSRF Grant Program ("Program"). This letter authorizes you to proceed with the White River Algae Research Project ("Project") in accordance with the terms of this Grant Award Letter.

Attached to this letter are the terms and conditions of your Grant. Please review these terms and conditions, as they are requirements of this Grant to which you, White River Conservation District, agree by accepting the Grant Funds.

The WSRF Criteria & Guidelines can be located on our website for additional information. If you have any questions or concerns regarding the project, please contact Craig Godbout, Project Manager at 303-866-3441 or at Craig.Godbout@state.co.us. Please send the 6-month progress reports and invoices directly to the Project Manager and cc me at Dori.vigil@state.co.us.

Thank you.

Sincerely,

//s//

**Doriann Vigil**
**Program Assistant II**
O 303-866-3441 ext. 3250
1313 Sherman Street, Rm. 719, Denver, CO 80203
Dori.vigil@state.co.us / cwcb.state.co.com

# STATE OF COLORADO

Department of Natural Resources

**ORDER**

**Number:** POGG1,PDAA,201900002747

**Date:** 3/11/19

**Description:**

PDAA 2500 WSRF White River Algae Research

**Effective Date:** 03/11/19

**Expiration Date:** 12/31/21

*****IMPORTANT*****

The order number and line number must appear on all invoices, packing slips, cartons, and correspondence.

**BILL TO**

COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203

**BUYER**

**Buyer:**

**Email:**

**VENDOR**

WHITE RIVER CONSERVATION DISTRICT
PO BOX 837
MEEKER, CO 81641-0837

**Contact:** .

**Phone:** .

**SHIP TO**

COLORADO WATER BOARD CONSERVATION
1313 SHERMAN STREET, ROOM 718
DENVER, CO 80203

**SHIPPING INSTRUCTIONS**

**Delivery/Install Date:** -

**FOB:** FOB Dest, Freight Allowed

**VENDOR INSTRUCTIONS**

**EXTENDED DESCRIPTION**

| Line Item | Commodity/Item Code | UOM | QTY | Unit Cost | Total Cost | MSDS Req. |
|---|---|---|---|---|---|---|
| 1 | G1000 | | 0 | 0.00 | $41,000.00 | ☐ |

Description: PDAA 2500 WSRF White River Conserv_White River Algae Study

Service From: 03/11/19 Service To: 12/31/21

**TERMS AND CONDITIONS**

https://www.colorado.gov/pacific/osc/small-dollar-grant-award-terms-conditions

**DOCUMENT TOTAL = $41,000.00**

| Colorado Water Conservation Board | |
|---|---|
| **Water Supply Reserve Fund** | |
| **Exhibit A - Statement of Work** | |
| **Date:** | |
| **Water Activity Name:** | White River Algae Study |
| **Grant Recipient:** | White River Soil Conservation District |
| **Funding Source:** | WSRF |

**Water Activity Overview:** (Please provide brief description of the proposed water activity (no more than 200 words). Include a description of the overall water activity and specifically what the WSRF funding will be used for.

A group of 14 entities, mostly local governments, have formed the Technical Advisory Group (TAG) to develop and monitor the White River Algae Study Project's Scope of Work (SOW) to improve the understanding of why the excessive amount of benthic algae is occurring in the White River over the past 4 – 5 years. The study will be implemented by USGS. A better understanding based on science is expected to lead to the conception of mitigation strategies for decreasing benthic algae in the White River.

There is a definite sense of urgency to determine the driving forces of the excessive algae. Therefore, this study has begun in 2018. USGS has identified and began data collection in 20 semi-random sites in the White River above Meeker. This grant request is for work to be done in the federal FY 2019 - 2021. WSRF funding will be utilized entirely for the study to develop a better understanding of physical and chemical properties controlling algal growth in the main stem of the White River. Details are below.

Evaluation of data collected in 2018 and 2019 will determine if it will be necessary to conduct a third year (FY 2020) of study. The full SOW is included below and includes work done in 2018, planned work for 2019 & 2020, and analysis and publication of the findings in the year following the final year of study.

**Objectives:** (List the objectives of the project)

The objective of the study is to document and understand benthic algal occurrence, characteristics, and controls at multiple locations within the White River are of interest. Specific objectives include:

1. Conduct data mining and historical synthesis of information relevant to the timing and occurrence of nuisance algal blooms in the White River Basin (to be completed in 2018);
2. Develop a better understanding of physical and chemical properties controlling algal growth in the main stem of the white River. (data collection continues into 2019 & potentially 2020 with analysis and reports developed in 2021)

| Tasks |
|---|
| Provide a detailed description of each task using the following format: |
| **Task 1 - (Data Mining and Historical Synthesis) To be completed in FY 2018** |
| Description of Task: |
| USGS will do a literature search for algal topics and determine from the search what information is relevant to the White River. Evaluation of findings from other local studies will be completed and synthesized into a single document that is relevant to the conditions in the White River. These reports and other historical information (from local interviews and surveys) will be used to guide further investigations in the White River. |
| Method/Procedure: |
| Literature review will be completed in 2018 and therefore not covered under this grant. However, the information gathered in this task will be documented and used to guide the remainder of this study. |
| Grantee Deliverable: (Describe the deliverable the grantee expects from this task) |
| This report will be delivered to the WRCD, TAG, and publicly available. It will be utilized to inform any necessary adjustments to the current SOW. |
| CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) |
| WRCD will provide a copy of the report to CWCB and BRT as well as a presentation if desirable. |

| Tasks |
|---|
| Provide a detailed description of each task using the following format: |
| **Task 2 - (Continuous Monitoring)** |
| Description of Task: |
| **Dissolved Oxygen and Temperature at 20 sites.** |
| Method/Procedure: |
| An intensive, continuous monitoring (at 15-min intervals) of selected water-quality parameters will be completed in 2018 to address data gaps in the diurnal changes in water temperature and dissolved oxygen along the White River. This effort will monitor and record complete diurnal cycles at 20 sites (about 7 days per site) during a three-week period in July. The water-quality monitors will characterize conditions at each location and will be indicative of the range of conditions throughout the reach during peak algal growth. Monitors will be deployed at each of the 20 sites and is slated for 2018. Measurement of diel variations in dissolved oxygen and water temperature will determine ranges of conditions aquatic communities are exposed to as well as calculate stream metabolism using the single-site method (Hondzo, 2013). These calculations can help support findings from site-specific algal biomass measurements and identification of sites as heterotrophic or autotrophic providing additional metrics to assess stream health and function. |
| Grantee Deliverable: (Describe the deliverable the grantee expects from this task) |
| This portion of the Study will be conducted and reviewed in 2018. USGS will present the findings to the TAG in late 2018. The information will be used to inform the 2019 SOW. |
| CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) |
| A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information. |

| Tasks |
|---|
| Provide a detailed description of each task using the following format: |
| **Task 3 - (Pebble Count)** |
| Description of Task: |
| Bed-material measurements will be made by the USGS using standard methods to determine particle-size characteristics of the channel and, if present, of the alluvial bars at up to 60 cross sections in the White River (three cross sections at each of the 20 sites). |
| Method/Procedure: |
| Wolman "pebble counts" will be made in a linear traverse of the channel cross section where the channel is wadable in late summer or early fall 2018. In unwadable sections, pebble counts of the streambed will be made in a random manner at one-footstep intervals in shallower areas. Sediment-size characteristics will be calculated from the bed-material measurements and used to determine the critical shear stress for sediment entrainment utilizing methods successfully demonstrated by Elliott and Hammack (1999, 2000). |
| Grantee Deliverable: (Describe the deliverable the grantee expects from this task) |
| This portion of the Study will be conducted and reviewed in 2018. USGS will present the findings to the TAG in late 2018. The information will be used to inform the 2019 SOW. |
| CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) |
| A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information. |

| Tasks |
|---|
| Provide a detailed description of each task using the following format: |
| **Task 4 - (Scouring Flows)** |
| Description of Task: |
| An important consideration regarding the proliferation of algae in certain reaches of the White River is peak streamflow and duration. Peak streamflow magnitude can play a crucial role in scouring benthic algae from streambeds thus decreasing or resetting total algal biomass on an annual basis (Cullis, 2011). However, streamflow peak and duration are not the only factors governing the amount of scour that occurs in a given water year. Specific channel characteristics also play a role in benthic algal control but are less apt to change from year to year. Characteristics such as bed-sediment particle size and channel form can place large controls on algal growth. Particle size of the streambed can dictate the suitability of algal attachment points and, if large enough, can armor the channel and minimize scour even during wet years. Channel form is the sinuosity, area, width and depth of the channel at a given point. These characteristics can control light penetration, stream velocity, and sediment deposition rates. Cross-section surveying and particle-size analysis in conjunction with incipient motion analysis is needed to address data gaps and promote understanding of the role of streamflow in algal proliferation. This analysis will also assist in the prediction of where algae will be most prolific (Petts, |

1997).

Method/Procedure:

The USGS proposes to assess channel condition, form, and scouring forces present at selected sites and use that information to assess the potential for channel scour present under varying streamflow conditions. Thresholds for critical flows needed to scour algae will be provided. These thresholds can be used annually by land managers to forecast conditions and verify the effect that scouring flows had on the system if critical-flow thresholds are exceeded. This task will be performed in 2018, 2019, and 2020 (if necessary) to provide ample data for comparison and on years with various run-off volume.

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

This portion of the Study will be conducted and reviewed in 2018 and repeated over the following two years. USGS will present the findings to the TAG at the end of each year. The information will be used to inform the following year's SOW.

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task)

A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information.

## Tasks

Provide a detailed description of each task using the following format:

**Task 5 - (Scouring Flow Analysis)**

Description of Task:

Sediment transport, or movement, in streams occurs when the forces acting on the particle exceed the resistive forces. Transport of bed material (the particles that are representative of the range of particle sizes commonly occurring along the streambed) is approximated through comparisons of boundary shear stress (a tangential stress created by flowing water acting on sediment particles resting on the streambed or other inundated alluvial surfaces) and particle size and shape. Entrainment potential for sediment on a specific geomorphic surface is estimated by relating flood generated boundary shear stress and the critical shear stress of the sediment particles.

Method/Procedure:

Bed material characteristics obtained from onsite measurements at 20 locations in the study reach will be compared to the observed high-flow conditions during snowmelt runoff, during 2018-2020. Additional measures of acoustic energy (sound) utilizing hydrophones will be used to assess the presents or absence of moving particles during field visits during high-flow each year (Marineau and others, 2015) and will be compared to separate estimate of critical shear stress made from particle-size information (shear velocity, from Simoes, 2014) and cross-section surveys (boundary shear stress, Elliott and Capesius, 2009). These three methods will provide a comparison of observed conditions (2018-2020) and particle characteristics in each reach and will inform estimates of streamflow needed to scour algae in each reach.

Bed-material measurements will be made by the USGS using standard methods to determine particle-size characteristics of the channel and, if present, of the alluvial bars (Wolman, 1954) at up to 60 cross sections in the White River (three cross sections at each of the 20 sites). Wolman "pebble counts" will be made in a linear traverse of the channel cross section where the channel is wadeable in late summer or early fall 2018. In unwadeable sections, pebble counts of the streambed will be made in a random manner at one-footstep intervals in shallower areas. Sediment-size characteristics will be

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| calculated from the bed-material measurements and used to determine the critical shear stress for sediment entrainment utilizing methods successfully demonstrated by Elliott and Hammack (1999, 2000). |
| Grantee Deliverable: (Describe the deliverable the grantee expects from this task) |
| This data will be collected and incorporated into the multivariate-regression analysis. The raw data and report will be provided to the WRCD and the public. |
| CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) |
| A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information. |

| **Tasks** |
|---|
| Provide a detailed description of each task using the following format: |
| **Task 6 - (Isotope Sampling)** |
| Description of Task: |
| In nature, elements occur with differing numbers of neutrons, resulting in slightly different masses for any given atom. These differences in mass occur at ranges that are defined as isotopes and are recorded for each element in conjunction with their abundance on earth. Some isotopes occur in arrangements that are unstable, and undergo radioactive decay; other isotopes are stable and persist in the environment indefinitely. Isotopic enrichment of heavier or lighter stable isotopes occurs at different locations in the world, and/or as a result of local geochemical or biological processes. As such, the relative abundance of measured stable isotopes from a water sample can act as a 'signature' to compare against when investigating different potential sources. |
| Method/Procedure: |
| To better understand the potential for isotopic testing to determine sources of nutrients in the White River, the USGS proposes to analyze isotopic-signatures of oxygen and nitrogen from nitrate. Samples will be collected in reaches of the North and South Fork White River as well as the mainstem channel. Sample locations will target land use activities such as forest, agriculture, aquaculture, and wastewater treatment. Where appropriate, stable isotope signatures will be obtained from the literature and compared to those observed from the mainstem of the White River. Samples will be submitted to the USGS National Water Quality Laboratory to determine nutrient concentrations and the USGS Reston Isotopes Laboratory for isotopic analysis. All results will be available to the public through National Water Information System web interface (http://dx.doi.org/10.5066/F7P55KJN). |
| Grantee Deliverable: (Describe the deliverable the grantee expects from this task) |
| |
| CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) |
| A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information. |

| **Tasks** |
|---|
| Provide a detailed description of each task using the following format: |

**Task 7 - (Pre-, Peak-, Post- Algae and Water Quality Sampling Events)**

Description of Task:

Water-quality samples (primarily nutrients) will be analyzed under varying conditions (pre-algal growth, peak-algal growth, and post-algal growth) as part of this study. Determination of these periods will be based on local observations and flow conditions (U.S. Geological Survey, 2018).

Method/Procedure:

- Pre-algal growth analysis (sampling post snowmelt runoff, prior to the onset of algal growth in mid spring) will evaluate selected water-quality concentrations in the White River at the designated 20 sites. This sampling will help determine the concentration levels present in the White River prior to uptake by algal species as a means to better understand nutrient variability. The data will be used in a statistical analysis (described below) as a variable to determine if there is a correlation between nutrient levels prior to the onset of algal growth during peak periods. The data can also be used to identify where the highest nutrient concentrations are located for the purpose of understanding possible source locations for subsequent sampling later in the summer and fall.
- Peak-algal growth analysis will coincide with peak algal biomass in July or early August depending on conditions observed during the summer. The sampling will also take place at the same 20 pre-designated sites sampled prior to the onset of algal growth (pre-algal). Nutrient concentrations and streamflow data will be collected along with major ions. Major ions will help in the understanding of the role hardness and other ions may play in controlling algal growth as well as providing some possible conservative tracers that may help in the understanding sources as well as the proportion of nutrient uptake by algae. These data will be used in the statistical analysis to determine if there is a correlation between peak algal biomass and concentration/load data. Also, loads and concentrations will be qualitatively compared to concentration data collected prior to the onset of algal growth in the spring (pre-algal) to further improve the understanding of where nutrient sources are located.
- Post-algal growth analysis will consist of a low-flow, steady-state sampling effort at the same 20 sites. The post-algal growth sampling will be done during the fall when nutrients in the water column behave more conservatively and streamflow variability is minimized. This will help in the comparison of nutrient load at each site because algae uptake of nutrients at this time is expected to be minimal relative to periods of peak growth. If variability in streamflow (a condition of changing river stage or streamflow rate) is not minimized as much as possible, it is difficult to compare and interpret sources of a given constituent in a large river system. However, when streamflow variability is minimized, a large component of the variability in the loading data is removed, providing a clearer picture of where sources may be emanating from (Kimball, 2004). This analysis primarily is focused on assessing sources of nutrients but will be evaluated in the statistical analysis.

Results from the analyses of streamflow, field parameters, and concentrations and loads of various constituents (including nutrients and total dissolved solids) will be presented spatially and temporally as maps and plots in the final report. Additionally, the analysis will look at correlations between various water-quality constituents and algal biomass for use in the statistical analysis. The information provided will help land managers and stakeholders gain a better perspective regarding possible temporal and spatial links between water-quality and algal productivity. These links could ultimately help with mitigation strategies designed to control nuisance algal blooms.

Grantee Deliverable: (Describe the deliverable the grantee expects from this task)

CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the

| |
|---|
| completion of this task) |
| A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information. |

| Tasks |
|---|
| Provide a detailed description of each task using the following format: |
| **Task 8 - (Analysis and Publications)** |
| Description of Task: |
| An analysis of factors contributing to nuisance-levels of benthic algae in the White River will utilize multivariate-regression techniques. In this analysis, the data collection (described previously) provides a dataset designed to assess the role and importance of several potential contributing or mitigating conditions (explanatory variables: field parameters, water-column chemical properties, channel condition, channel form, and scouring forces) in controlling the range of observed conditions in algal abundance (dependent variable: chlorophyll a or ash-free dry mass). |
| Method/Procedure: |
| STATISTICAL ANALYSIS<br><br>Simultaneous testing for a statistical relation between different conditions within the stream provides a means to quantify the relative importance of these factors and to what extent these factors predict/explain the variability observed in the algae. Once a statistically significant relation is determined, estimates of the effect of changes to these explanatory conditions can be made. These estimates can be used to identify strategies to mitigate nuisance-level algal growth.<br><br>The analysis can provide context within a conceptual model for resource managers to identify best management practices (BMP's) that reduce algal growth. This approach simultaneously assesses differing covariates, providing a quantitative comparison of the importance of each in explaining algae abundance; while also evaluating how independent the effects are between covariates. In this manner, the importance of factors and processes represented by these explanatory variables can be collectively weighed to identify causes and inform decision making. As a result, interested stakeholders can identify feasible counter measures and/or best practices to reduce algae abundance. |
| Grantee Deliverable: (Describe the deliverable the grantee expects from this task) |
| To keep the stakeholders apprised of progress as results from each of the various components of the study are completed, the USGS will provide a presentation of the interim-progress and approved preliminary data to the group, at least annually. Upon completion of the study in the final year (2021), the USGS will publish a technical document containing the methods and interpretive findings as a peer-reviewed Scientific Investigations Report (SIR). This publication will serve as the primary product of this investigation. In the same timeframe, an abbreviated version of the findings will also be published as a USGS Fact Sheet. In the Fact Sheet, a 4-6 page document, the main findings of the report will be presented for a general audience. The combination of products will provide an effective means to disseminate and share the results of the investigation with different technical groups and the general public. |
| CWCB Deliverable: (Describe the deliverable the grantee will provide CWCB documenting the completion of this task) |
| A copy of the annual report and/or Power Point presentation with preliminary data will be provided to the CWCB. CWCB will be provided a copy of the final report and fact sheet including the statistical analysis information. |

Last Update: January 9, 2018

## Budget and Schedule

**Exhibit B - Budget and Schedule:** This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format. A separate excel formatted Budget is required for engineering costs to include rate and unit costs.

## Reporting Requirements

**Progress Reports:** The grantee shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues. The CWCB may withhold reimbursement until satisfactory progress reports have been submitted.

**Final Report:** At completion of the project, the grantee shall provide the CWCB a Final Report on the grantee's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

## Payments

Payment will be made based on actual expenditures, must include invoices for all work completed and must be on grantee's letterhead. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the water activity and purchase order or contract will be closed without any further payment. Any entity that fails to complete a satisfactory Final Report and submit to CWCB within 90 days of the expiration of a purchase order or contract may be denied consideration for future funding of any type from CWCB.

## Performance Requirements

Performance measures for this contract shall include the following:
(a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum in-kind contributions (if applicable) per the budget in Exhibit B. Per Grant Guidelines, the CWCB will pay out the last 10% of the budget when the final deliverable is completed to the satisfaction of CWCB staff. Once the final deliverable has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
(b) Accountability: Per the Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per the Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.
(c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.
(d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.

Last Update: 10/17/17

COLORADO
Colorado Water Conservation Board
Department of Natural Resources

## Colorado Water Conservation Board

**Water Supply Reserve Fund**
**EXHIBIT B - BUDGET AND SCHEDULE**

**Date: Oct 31, 2018**

**Water Activity Name: White River Algae Study**

**Grantee Name: White River Conservation District**

| Task No.[1] | Description | Start Date[2] | End Date | Matching Funds (cash & in-kind)[3] | WSRF Funds (Basin & Statewide combined)[3] | Total |
|---|---|---|---|---|---|---|
| 1 | Historical analysis | Mar-19 | 12/31/2018 | $ 17,644 | $ - | $17,644 |
| 2 | Continuous monitoring (DO, temp) (20 si | Mar-19 | 12/31/2018 | $ 40,190 | $ - | $40,190 |
| 3 | Pebble counts | Mar-19 | 12/31/2018 | $ 24,651 | $ - | $24,651 |
| 4 | Scouring Flows Data Collection | Mar-19 | 12/31/2020 | $ 81,039 | $ - | $81,039 |
| 5 | Scouring Flows Analysis | Mar-19 | 12/31/2020 | $ 18,260 | $ - | $18,260 |
| 6 | Isotope sampling | Mar-19 | 12/31/2020 | $ 19,917 | $ - | $19,917 |
| 7 | Pre-, Peak-, Post-Algae and Water Quality Sampling | Mar-19 | 12/31/2021 | $ 204,785 | $84,000 | $288,785 |
| 8 | Analysis and publications | 1/1/2020 | 12/31/2021 | $ 70,104 | $15,000 | $85,104 |
| | | | | | | $0 |
| | | | | | | $0 |
| | | | | | | $0 |
| | | | **Total** | $476,590 | $99,000 | $575,590 |

| | | |
|---|---|---|
| **Task 7** | 1st Year Fudning - Grantee can only provide match funding for 1st year. | **$41,000** |
| **Remaining Balance to be contracted** | | $58,000 |

**(1)** The single task that include costs for Grant Administration must provide a labor breakdown (see Indirect Costs tab below) where the total WSRF Grant contribution towards that task does not exceed 15% of the total WSRF Grant amount.

**(3)** Round values up to the nearest hundred dollars.

• Reimbursement eligibility commences upon the grantee's receipt of a Notice to Proceed (NTP)

• NTP will not be accepted as a start date. Project activities may commence as soon as the grantee enters contract and receives formal signed State Agreement.

The CWCB will pay the last 10% of the entire water activity budget when the Final Report is completed to the satisfaction of the CWCB staff project manager. Once the Final Report has been accepted, the final payment has been issued, the water activity and purchase order (PO) or contract will be closed without any futher payment. Any entity that fails to complete a satisfactory Final Report and submit to the CWCB with 90 days of the expiration of the PO or contract may be denied consideration for future funding of any type from the CWCB.

• Additonally, the applicant shall provide a progress report every 6 months, beginning from the date of contract execution