WaterSMART Applied Science Grants for Fiscal Year 2023

Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making

Submitted By:
Columbia Basin Conservation District
Project Manager: Kristina Ribellia – Executive Director
1107 S. Juniper Drive, Moses Lake, WA 98837
kristina-ribellia@columbiabasincd.org
509-765-9618

In Cooperation With:
Lincoln County Conservation District
Elsa Bowen – District Manager
1310 Morgan St, Davenport, WA 99122
ebowen@wadistrict.net 509-725-4181 x117
and
Franklin Conservation District
Mark Nielsen – District Manager
1724 E. Superior St, Pasco, WA 99301
mark-nielson@franklincd.org 509-366-1678

Submitted on Behalf Of: Columbia Basin Groundwater Cooperative

Submitted To:
WaterSMART Applied Science Grants for Fiscal Year 2023
CFDA Number: 15.557 – Applied Science Grants
Funding Opportunity Announcement Number:
R23AS00446

WaterSMART Applied Science Grants
Department of the Interior
Bureau of Reclamation
Applied Science Grants Contact Information: Nathan Moeller
nmoeller@usbr.gov

Applied Science Grant Application
Date: October 17, 2023
Applicant: Grant County Conservation District DBA Columbia Basin Conservation District
City and State: Moses Lake, WA
County: Grant County (with applicability to Franklin, Lincoln, Adams, and Grant Counties)

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EXECUTIVE SUMMARY

Date: October 17, 2023
Applicant: Grant County Conservation District DBA Columbia Basin Conservation District
Moses Lake, Grant County, Washington
Applicant UEI Number: CC3FE7CNZSF7
Project Summary:

Groundwater resources within the mid-Columbia Basin – consisting of Franklin, Lincoln, Adams, and Grant Counties (project area) – are crucial to a large number of groundwater-dependent municipalities, irrigators, and other stakeholders and, in some areas, are in significant decline. Important historical data regarding the project area aquifers, groundwater levels, water quality, water use, and other considerations exist but are not readily available for most stakeholders. Most significantly, data collected by the Columbia Basin Groundwater Management Area (CBGWMA) in the project area – including information related to the Columbia Basin Irrigation Project – between 1998 and 2014 has become almost inaccessible since the end of the CBGWMA in 2014. Before this information is lost, and consistent with the project area groundwater-dependent stakeholders' need to aggressively pursue water solutions that concurrently meet water needs for families, industry, and farms (out-of-stream) – as well as ecosystems and fish (instream) – the Grant County Conservation District DBA Columbia Basin Conservation District (CBCD), in collaboration with Franklin and Lincoln County Conservation Districts (FCD and LCCD, respectively), is requesting financial assistance to develop and maintain a Columbia Basin groundwater resource website for the benefit of all entities and individuals in the region. The website will be called, "*The Columbia Basin Groundwater Cooperative – A web resource managed by your local conservation districts for the benefit of all.*" Its primary objective is to compile and make accessible to our stakeholders existing information not otherwise easily accessible, including CBGWMA data and information as well as more recent groundwater monitoring efforts by the Columbia Basin Sustainable Water Coalition (CBSWC), individual municipalities, Washington State University, and others. The proposed project, a data project as defined in Notice of Funding Opportunity (NOFO) R23AS00446 Section C.4.2, includes the following tasks: (1) Quality Assurance Project Plan Preparation; (2) Website Design and Development; (3) GWMA Data Compilation, Synthesis, and Management; and (4) Interactive Web Map Design, Development and Management.

Project Duration

The CBCD anticipates that the project – including data and information management and format conversion, website development, and interactive web map development – can be completed within approximately 12 months. Assuming a start date of February 1, 2024, the project is expected to be completed by January 31, 2025.

Located on Federal Facility

The project area – including Franklin, Lincoln, Adams, and Grant Counties (FLAG Counties) overlaps with the U.S. Bureau of Reclamation (the Bureau) Columbia Basin Project (CBP). All water resources – including groundwater resources – within the project area are affected by the development and operation of the CBP, including large-scale groundwater pumping for irrigation in the central and eastern portion of the project area that was intended to be a temporary stopgap until full CBP completion, which has not yet occurred.

1.0 TECHNICAL PROJECT DESCRIPTION

This section describes the CBCD's eligibility as an applicant, the goals and objectives of the proposed project, and a detailed technical project description.

1.1 Applicant Categories

CBCD, as a conservation district authorized in the State of Washington under RCW 89.08 with the responsibility to promote water and other natural resource conservation, is considered a Category A applicant.

1.2 Goals and Objectives of Project

The ultimate goal of this project is to develop and maintain a Columbia Basin Groundwater Cooperative website to host all information regarding groundwater in the project area that can be regularly updated and maintained as a resource for all stakeholders in the region. The work for which funding is being requested in this application, referred to as Phase 1, will start this effort with the CBGWMA information. Future work, which is referred to herein as Phase 2 (for which funding is not being requested in this application), will later expand to include more recent and current groundwater data and links with applicable local, state, and federal resources. For the work described herein, CBCD will be compiling the existing CBGWMA data and information into a stakeholder accessible website. This will be a collaborative effort, utilizing the most recent data, maps, and reports from all relevant agencies to ensure that all information is accessible and correct for anyone interested.

Columbia Basin, Franklin, and Lincoln County conservation districts (CBCD, FCD, LCCD, respectively) want to continue to build on the existing partnership between the districts to provide additional resources to communities in the project area. A centralized website which provides historical CBGWMA data and more recent updates on the state of the groundwater resources in the Columbia Basin will address some of the challenges described below and allow entities and organizations in the region to utilize data to better inform water resource management and conservation practices and policies. This website will host data, maps, and information including the most up to date as well as past information regarding groundwater in the region and links to other websites including CBWSC, Odessa Groundwater Replacement Program, the Washington State Department of Ecology's (Ecology's) Office of the Columbia River (OCR), CBP irrigation districts, and more. Phase 1 of this project will focus on website development and cataloging and displaying previous CBGWMA data so that it can be available to and used by producers, interested parties, water purveyors, and municipalities. Currently, this crucial historical data exists primarily on two external computer hard drives and is largely inaccessible to most stakeholders. One of the main objectives of this project is to make that historical data and information accessible again to keep it from being lost to history. A future Phase 2 of the project, to be completed with separate funding, will include compiling more recent data such as monitoring results from CBSWC and other entities (e.g., Ecology, Washington State University, conservation districts, and individual municipalities) and other updated maps and reports.

1.3 Project Description

Project tasks listed below are described in the following pages.

1) Quality Assurance Project Plan
2) Website Design and Development
3) GWMA Data Compilation, Synthesis, and Management
4) Interactive Web Map Design, Development and Management

Included in the scope and budget for each task is an allowance for project management and website maintenance. The reason for including project management time is to ensure the project stays on schedule through coordination of partners as well as website maintenance for quality assurance. Project management responsibilities will include, but are not limited to, maintenance of the project records; submittal of requests for reimbursement and corresponding backup documentation, progress reports and recipient closeout report; compliance with applicable procurement, contracting, and interlocal agreement requirements; and conducting, coordinating, and scheduling project activities and assuring quality control. Website maintenance will include content updates, data support, and addressing any issues that may negatively impact the user experience. Project management and website maintenance are expected to occur throughout the duration of the funded project.

1.3.1 Task 1: Quality Assurance Project Plan

The goal of this task is to provide a documented approach for the completion of the project, including an outline of the steps to be taken to complete each task's deliverables and to coordinate how those deliverables will be combined for the final project outcome. The initial task of the project will be the development of a Quality Assurance Project Plan (QAPP) to document the approach to be taken for the completion of each task's deliverables. The QAPP will be the roadmap to guide each of the project partners - including the conservation districts, their consultants, Ecology, and the Bureau - in a coordinated way to ensure that the individual task deliverables and overall project outcomes achieve the anticipated goals of the project. Elements of the QAPP will include a description of the project and its objectives, a workflow and sequencing plan for each of the tasks, and a quality assurance/quality control (QA/QC) plan for each individual task and the overall project. It is anticipated that the QAPP will be prepared in general accordance with Ecology's *Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies* (Publication No. 04-03-030). The QAPP will be provided to Ecology and the Bureau for review and comment before finalizing.

1.3.2 Task 2: Website Design and Development

One of the first priorities of the project is to establish a web presence through the creation of a website for the Columbia Basin Groundwater Cooperative. This includes the design and development of a visually appealing and accessible website with a home page plus additional pages as needed for data, reports, maps, and links related to groundwater resources in the Basin. Another large part of the website design process will include establishing a Columbia Basin Groundwater Cooperative logo and branding. The website development will require a

setup of a hosting account, domain name, and installation of the website. The website will be designed in a manner so that it can easily and frequently be updated as new information is available. CBCD has experience with website design and development through other websites we host such as Columbia Basin Conservation District, Moses Lake Watershed Council, the Odessa Groundwater Replacement Program, and the Columbia Basin Sustainable Water Coalition.

1.3.3 Task 3: CBGWMA Data Compilation, Synthesis, and Management

The goal of Task 3 is to compile and make available historical Columbia Basin groundwater reports and visualizations (including maps) and their supporting materials including spreadsheet data files (well construction, well geology, pumping data, water levels), interpreted well logs (including XRF data), water quality data files (including groundwater dating information), and spreadsheet models. This will also include the CBGWMA groundwater model files to the extent that is possible.

Previous CBGWMA materials include work plans, reports, data files, models, maps, presentations, and interview notes compiled over a number of years. Currently, the CBGWMA files mostly reside on one or two external hard drives and are not widely available. The work described for this task envisions compiling and organizing most of this material in order to make the most relevant and updated files available for the Columbia Basin Groundwater Cooperative website. The general workflow will be to work chronologically through the accumulated files by first getting the final edition of a particular report in order, which includes tracking down the supporting data files for that report. Since many of the reports, in particular the map reports, were revised several times, this effort will go through the various iterations of the reports to reach the final edition and the final compiled supporting files. This is a detective story, tracking down and verifying that we have the final reports and the final supporting data files.

Throughout this compilation effort we will need to exercise due diligence via a QA/QC process, in accordance with the QAPP developed in Task 1, to do the following:

- Make sure that duplications are identified and eliminated, as necessary.
- Compile the most recent editions of specific files, including well log, water level, and water quality reports.
- Edit reports for grammar and presentation without altering the technical content as this provides a context for what CBGWMA investigators saw and interpreted at the time of the work. The one exception to this will be the well log interpretations. Since the end of the CBGWMA effort (circa 2014), additional wells have been drilled, new geologic data collected, and interpretations made. Where we are aware of these datapoints, we will update relevant files.

We will also, as appropriate, provide an updated/annotated note or abstract that places the reports into their context at the time they were written, what may have changed since those reports were prepared, and possibly offer suggestions for future use.

1.3.4 Task 4: Interactive Web Map Design, Development and Management

This task will include the development of an interactive GIS-based web map application which will make the most relevant geospatial data collected during Task 3 usable to project area stakeholders. The web map is envisioned as a mapping application that will be connected to the Columbia Basin Groundwater Cooperative website once it is developed. The web map will be an interactive visual representation of select files from the CBGWMA database and more recent data. A web map application is a powerful tool for displaying geospatial data and can be successfully navigated by anyone with an internet connection without the need for GIS skills or a special license.

The web map will add value to the historical CBGWMA data by making it more accessible and user-friendly. For example, the CBGWMA maps – including structure contour maps of the aquifer system (e.g., top elevation and thickness contour maps for the unconsolidated sand and gravel overburden, Wanapum Basalt, and Grande Ronde Basalt) and groundwater level elevations – can be georeferenced and loaded into the web map so that a stakeholder can navigate to a specific location and, with simple toggling on of different map layers, get a solid understanding of the hydrogeologic and groundwater conditions beneath that location. Water level hydrographs from discrete locations (e.g., monitored wells) can also be loaded into the web map for easy visualization. There will be many options with the web map once it is developed.

2.0 PROJECT LOCATION

The project area includes Franklin, Lincoln, Adams, and Grant Counties (FLAG Counties) of eastern Washington. The project area encompasses – but is larger than – the federal Columbia Basin Irrigation Project. A PDF map of the project area in relation to the FLAG Counties is included as Figure 1.

The project area includes portions or all of hydrologic units (HUCs) and water resource inventory areas (WRIAs):

- HUC 17020014/WRIA 42: Grand Coulee watershed
- HUC 17020013/WRIA 43: Upper Crab-Wilson watershed
- HUC 17020015/WRIA 41: Lower Crab watershed
- HUC 17020016/WRIA 36: Esquatzel Coulee watershed
- HUC 17060108/WRIA 34: Palouse watershed.

A PDF map of the project area in relation to relevant HUCs/WRIAs is included as Figure 2.

3.0 DATA MANAGEMENT PRACTICES

The interactive web map proposed as part of this project will be developed following industry-standard formats using Esri ArcGIS Online software and standards. In addition, the project data management practices will follow an approved QAPP, as described in Section 2 (Task 1).

4.0 EVALUATION CRITERIA

This section describes how the proposed project relates to the water management issues and priorities identified in the NOFO, including how the project would benefit water supply reliability and delivery, conservation and drought resiliency, and overall watershed benefits.

4.1 Water Management Challenge

This section describes how the project will address significant and long-standing water management challenges within the project area.

4.1.1 Water Supply Reliability and Delivery

Longtime residents of the Columbia Basin (project area) farming communities in the FLAG counties understand deeply that water is precious, requiring thoughtfully addressing it reliability and its delivery. They're in the heart of eastern Washington's rich agricultural region that feeds not only our state, but the world, with wheat, potatoes, peas, and many other staple crops. For generations, much of their water has come from deep underground aquifers in a geologically complex and isolated natural system that is no longer capable of sufficiently replenishing itself. In some parts of the project area (i.e., the Odessa Subarea), Ecology issued what were supposed to be temporary (i.e., short-term) groundwater permits for groundwater withdrawals for large-scale irrigated agriculture until the completion of the Bureau of Reclamation's (Bureaus') Columbia Basin Project (CBP). The CBP, over 60 years after it was started, has still not been completed and those temporary groundwater permits are still in use, which has been a major contributor to the regional groundwater level declines. Additionally, municipalities within the project area rely almost exclusively on groundwater. Municipal wells in the region are predominantly pumping deep groundwater that has taken thousands of years to travel from recharge areas into the deep basalt aquifers of the region. A 2012 CBGWMA report confirmed the disastrous prognosis — the water is running out.

Having better access to relevant groundwater and aquifer data – both water quantity and water quality data – is crucial to understanding the reliability of the project area groundwater supply and the potential need for additional water supplies and delivery mechanisms. Unfortunately, much significant historical relevant data collected previously by the CBGWMA is nearly lost to history, archived on one or two external hard drives only. This project will make that historical data – which is still largely accurate and provides valuable historical context to better understand current conditions – accessible to all project area groundwater stakeholders and policymakers.

4.1.2 Conservation and Drought Resiliency

In recent years, conservation districts in the region have been working with cooperating agencies (e.g., Ecology, the Bureau, East Columbia Basin Irrigation District, etc.) to address the declining aquifer through the Odessa Groundwater Replacement Program as well as working with individuals and other local and state entities to encourage the conservation of water resources. One of the biggest challenges to preserving groundwater and livelihoods in the region has been educating the broader public to build support and increase understanding of what is at stake. Through a partnership between the Department of Commerce, Columbia Basin Conservation District, Lincoln County Conservation District, and Franklin County Conservation District, the CBSWC has been created to provide resources for water purveyors on how to best address the declining water availability in the region. By working with both producers and municipalities, a need for accessible and available groundwater data has been identified. Essentially, without a centralized location for groundwater resource data and information, effective management of the resource is difficult.

This project seeks to create that centralized groundwater data resource – via the Columbia Basin Groundwater Cooperative website and associated interactive web map application – will provide an easily accessible platform for policymakers, knowledgeable stakeholders, and the general public to better understand the groundwater conditions in the project area so that better decisions regarding drought management and water supply reliability can be pursued and supported.

4.1.3 Watershed Health

The project area covers a large amount of ground and includes numerous hydrologic and hydrogeologic watersheds. Those watersheds support myriad benefits, from irrigated agriculture to municipalities to recreational activities to ecological oases. All of those benefits depend on reliable water – both surface water and groundwater, which are inextricably linked and in hydraulic connection. Maintaining those water supplies to support the overall watershed health begins with understanding the technical data and information regarding groundwater conditions in the project area. This project seeks to make that technical data and information accessible – both logistically and conceptually – to all project area stakeholders.

4.2 Project Benefits

This section describes the anticipated benefits of the project, if funded.

4.2.1 Project Need Identified

As noted above, we have seen groundwater levels declining for a number of decades in the project area. Groundwater resources – both in terms of water quality and water quantity – in the four-County area of Adams, Franklin, Lincoln, and Grant Counties of eastern Washington are important to the approximately 227,361 residents and other stakeholders who live and work there. In February 1998, Ecology approved the formation of the CBGWMA to be active in that four-county area. The initial emphasis of the CBGWMA was on the identification and reduction of nitrate concentrations in groundwater. Subsequent work performed by the

CBGWMA (and others, including Ecology and the U.S. Geological Survey) evaluated water quantity issues in the same area by studying and modeling the hydrogeologic setting and tracking groundwater levels over time. From that work, it has become evident that groundwater resources in the four-county area are declining – in some cases at an alarming rate. These resources are used for agricultural, industrial, and municipal purposes and as such are a vital element of the region's economy and habitability.

The CBGWMA was a grass-roots effort to better understand the presence, availability, and utilization of groundwater resources throughout the four counties which together cover over 8,300 square miles. This understanding has already helped improve resource management and positioned support for future water resource planning, including the pursuit of water supply options. However, the CBGWMA disbanded around 2014. Since that time, most of the data and information collected by the CBGWMA – which was previously hosted on a comprehensive CBGWMA website – has become unavailable for general use for water resource management. No single entity has filled the void that the CBGWMA left behind.

In the meantime, groundwater levels continue to decline. That decline has led to a negative impact on almost all local water wells – including those for municipal and other public/private water purveyors – that draw on the deep basalt aquifers, which are the primary underground water-bearing formations in the region. It is critically important that water purveyors have a reliable water source. The primary solution to declining water levels that most purveyors first consider is lowering their well pumps, if possible, deepening their existing wells, or drilling new wells. Deepening or drilling new wells, sometimes to 1,000 ft deep or more, is too expensive for most and is not a sustainable solution since there is a bottom limit to the basalt aquifers and groundwater from deeper zones is lower in quality, both in mineral content (dissolved solids) and temperature. For example, the Town of Lind is watching their water level drop by five feet per year and has lowered the pump in their well twice to keep up with the decline. The Town recently experienced well failure (i.e., the well went dry after short periods of pumping) leaving them unable to extinguish the recent wildfire that damaged the town without support of other communities and agencies. The Town has since invested significant capital in drilling a new deep well and is currently going through testing and permitting to bring it online. Even after all that effort, the groundwater that Lind draws from their deep well is high in dissolved solids (unpleasant taste) and is 95 degrees Fahrenheit (warm to the touch).

4.2.2 Applying the Results

The Columbia Basin Groundwater Cooperative website developed in this project will host all information regarding groundwater in the region that can be regularly updated and maintained as a resource for all stakeholders in the region. This effort will start with the CBGWMA information, later expanding to include links with applicable local, state, and federal resources. For the work described herein, CBCD will be compiling the existing data and information into a stakeholder accessible website. This will be a collaborative effort, utilizing the most recent data, maps, and reports from all relevant agencies to ensure that all information is accessible and correct for anyone interested. The centralized website which will provide historical CBGWMA

data and more recent updates on the state of the groundwater resources in the Columbia Basin will address some of the challenges described above and allow entities and organizations in the region to utilize data to better inform water resource management and conservation practices and policies.

4.2.3 Project Benefits

Specific project benefits include the following:

- The project QAPP will provide a common understanding between the project partners - including the conservation districts, consultants, Ecology, and USBR - of the sequence of work and QA/QC protocols to employ in completing all project tasks.
- The project will create a website where data, reports, maps, and links will be embedded into the site for use by anyone, regardless of their technological knowledge.
- Combining the previous CBGWMA information and more recent regional groundwater data available through a resource library on the Columbia Basin Groundwater Cooperative website, means the information is accessible, quarriable, and usable by Basin stakeholders.
- The expected outcome will be the ability of any Basin stakeholder to have easy access to, and customizable visualization of, select CBGWMA geospatial data and other technical and jurisdictional information relevant to the Basin.
- More accessible data will allow for more efficient technical analysis of site-specific and regional questions. Examples of recent uses of the historical CBGWMA data to assess modern questions include: (a) used historical CBGWMA results to support Odessa Groundwater Replacement Program with bladder pod question (a unique plant species within the project area); (b) helped Washington State University's effort to identify where in the aquifer system that the wells they are monitoring get water; and (c) recently used the old results at Moses Lake, Lind, and Odessa to develop well rehabilitation plans and identify long-term water level decline trends. This was all done by hand (by an individual with access to the historical CBGWMA files) by looking at the old CBGWMA files. The proposed website will streamline all of that and make it more accessible to more practitioners into the future.

4.3 Project Implementation

This section describes CBCD's plan to implement the project, if selected for funding.

4.3.1 Approach Justification

The approach will be to identify the most relevant existing information, review that information and perform quality control protocols to ensure the highest quality data possible is retained, reformat the data (as necessary) to conform with modern data formats and platforms, and create a space (i.e., website and interactive web map) in which to provide the data and information in an accessible and user-friendly format. This approach is used commonly by

professionals in the water resource and environmental industry to successfully resurrect archived data for current use.

4.3.2 Schedule, Milestones, Dates, and Costs

The following table summarizes the anticipated project schedule, organized by the tasks described in Section 1.

Table 1. Project Schedule, Milestones, and Deliverables

Project Management	Deliverables	Due Date
	Progress Reports	Semi-Annual (July 2024 and February 2025)
	Recipient Closeout Report	2/28/2025
Task 1	**Deliverables**	**Due Date**
1.1	Draft Quality Assurance Project Plan	4/1/2023
1.2	Final Quality Assurance Project Plan	7/1/2023
Task 2	**Deliverables**	**Due Date**
2.1	Create Columbia Basin Groundwater Cooperative logo and branding.	5/1/2024
2.2	Website blueprint	6/1/2024
2.3	Active, fully usable Columbia Basin Groundwater Cooperative website	12/31/2025
Task 3	**Deliverables**	**Due Date**
3.1	Review and compile initial CBGWMA nitrate reports and files.	7/15/2024
3.2	Review and compile revised mapping reports that constitute 2007 through 2009 CBGWMA efforts which are commonly referred to as CBGWMA Phase 1.	8/1/2024

3.3	Review and compile series of 2011 CBGWMA reports and associated data files.	8/16/2024
3.4	Document and data compilation for the East Low Canal Groundwater Recharge Project and the Municipal Groundwater Resource assessment Project.	9/1/2024
3.5	Review and compile Othello and Moses Lake 2013 Reports.	11/1/2024
3.6	Review and compile presentations and supporting files for the final CBGWMA efforts in 2013/2014.	41/15/2025
Task 4	**Deliverables**	**Due Date**
4.1	Create and develop general information and general layers for Columbia Basin Web Map.	5/15/2024
4.2	Create and develop groundwater monitoring wells and georeferenced maps and shapefile point data from CBGWMA and other studies for display on the Columbia Basin Web Map.	7/1/2024
4.3	Convert CBGWMA grid files for groundwater pumping, crop use distribution, and evapotranspiration and precipitation for display on the Columbia Basin Web Map.	9/15/2024
4.4	Review and compile groundwater reports and PowerPoint presentations (with a polygon showing the relevant project area and an attribute table with a 1-2 sentence summary of the report/presentation topic and a link to a PDF of the report/presentation)	1/15/2025

The estimated project costs, organized by task, are summarized in the tables below. As noted above, project management and website maintenance costs are imbedded within the cost of each task.

Table 2. Project Costs by Task

Columbia Basin Groundwater Cooperative Website		Task Total
Task 1: Quality Assurance Project Plan		$35,500
Task 2: Website Design and Development		$26,300
Task 3: CBGWMA Data Compilation, Synthesis, and Management		$64,500

Task 4: Interactive Web Map Design, Development, and Management		$54,150
10% Overhead		$18,045
	Total	**$198,495**

4.3.3 Products, Roles, Staffing

CBCD will take the lead on coordination and completion of the project. CBCD will administer the grant funds, coordinate staffing resources between CBCD, Franklin, and Lincoln County Conservation Districts, and manage the necessary consultant contracting.

4.4 Dissemination of Results

The project website will host data, maps, and information including the most up to date as well as past information regarding groundwater in the region, and links to other websites including CBWSC, Odessa Watershed Program (funded by OCR) and OCR. Phase 1 of this project will focus on website development and cataloging previous CBGWMA data so that it can be available to and used by producers, interested parties, water purveyors, and municipalities. A future Phase 2 of the project will include compiling more recent data such as monitoring results from CBSWC and other entities (e.g., Ecology, Washington State University, conservation districts, and individual municipalities) and other updated maps and reports.

4.5 Presidential and Department Priorities

The project will contribute to several of the Department (i.e., the Bureau) priorities, especially climate change resiliency and the support of disadvantaged and underserved communities.

4.5.1 Climate change resiliency

Resiliency to any challenge begins with information and data gathering and dissemination – proper information is required to confront the challenge. Climate change is generally anticipated to result in warmer temperatures and dryer conditions and is also expected to change the timing of surface water peak flows, resulting in higher winter-time runoff and lower summer-time runoff. Such changes are expected to result in even greater reliance on groundwater resources and, therefore, pumping. More groundwater pumping will strain the project area's groundwater resources even greater than they currently are. Having direct and clearly presented information on the project area's groundwater resources – and showing the precarious nature of those resources in an easily understood format for the project area stakeholders – will become a key component of creating climate change resiliency through public education. The website and interactive web map proposed for this project will be a central tool in stakeholder engagement and information sharing and will therefore increase resiliency to future climate change.

4.5.2 Disadvantaged and Underserved Communities

Most of the communities and water systems in the project area affected by declining groundwater levels are small rural communities. These communities generally lack the funds and technical expertise to mitigate – or even fully quantify and understand – the extent of the declining groundwater level problem. Part of the objective of the CBSWC, which is supported by CBCD, is to provide a forum for information and resource sharing for these communities. It's a 'strength-in-numbers' type of approach. This project will further that objective by providing these communities with easily accessible groundwater resource information that they can use to leverage local support for regional coordination to address the problem. Understanding the nature of the aquifer and groundwater conditions – for example, through the development and use of the website and interactive web map proposed as part of the project – is the first step in providing useful resources to the small rural communities within the project area.

5.0 PROJECT BUDGET

The project budget, organized by applicant, partnering conservation districts, and contracted assistance, is summarized in the table below.

Table 3. Project Budget by Entity

Task	CBCD	FCD	LCCD	Contractor	Total
1. QAPP	$8,834.00	$3,333.00	$3,333.00	$20,000.00	$35,500.00
2. Web Design	$26,300.00				$26,300.00
3. Data Comp	$5,500	$6,000.00	$1,000.00	$52,000.00	$64,500.00
4. Web Map	$22,180.00			$31,970.00	$54,150.00
(10% Overhead)	$18,045.00				$18,045.00
Total	**$80,859.00**	**$9,333.00**	**$4,333.00**	**$103,970.00**	**$198,495.00**

The sources of funding for the project, as described above, include non-federal entities – Ecology OCR, WDOH, and CBCD – and USBR funding through the WaterSMART Applied Science program. The funding sources identified for the project are summarized in Table 4 below.

Table 4. Funding Sources

Funding Sources	Amount
Non-Federal Entities	
1. Washington State Department of Ecology's Office of Columbia River	$53,371.00
2. Washington State Department of Health	$20,800.00
3. Columbia Basin Conservation District *	$26,000.00
Non-Federal Subtotal	$100,171.00
REQUESTED USBR WATERSMART APPLIED SCIENCE GRANT FUNDING	**$98,324.00**

*In-kind contributions

The matching funds that CBCD has identified total $100,171.00, or 50.4% of the total estimated project costs. Therefore, the total funds being requested in this Applied Science grant application are $98,324.

6.0 ENVIRONMENTAL AND CULTURAL RESOURCE CONSIDERATIONS & ORGANIZATIONAL STATEMENTS

6.1.1 Environmental and Cultural Resources Compliance and Permitting

The project includes no ground-disturbing activities or improvements to water delivery systems. Rather, the project involves the compilation and display of existing data and information on an interactive website and web map application. As such, the project is not anticipated to negatively affect cultural, historical, or environmental (air, water, plant, or animal habitat) resources or low-income or minority populations in the project area. This project will not impact access or use of Indian sacred sites or result in other impacts on tribal land. This project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.

6.1.2 Required Permits or Approvals

The proposed project does not require any permits or approvals for completion.

6.1.3 Overlap or Duplication of Effort Statement

The proposed project does not overlap with any other active or anticipated proposals or projects.

6.1.4 Conflict of Interest Disclosure Statement

CBCD is not aware of any actual or potential conflicts of interest related to the proposed project or acceptance of Federal financial assistance for the project. CBCD and our employees will continue to take appropriate steps to avoid conflicts of interest, including identifying, reporting, and mitigating potential or actual conflicts of interest.

CBCD does not participate in lobbying activities.

6.1.5 Uniform Audit Reporting Statement

CBCD was not required to submit a Single Audit report for the most recently closed fiscal year. Please see the attached state audit report.

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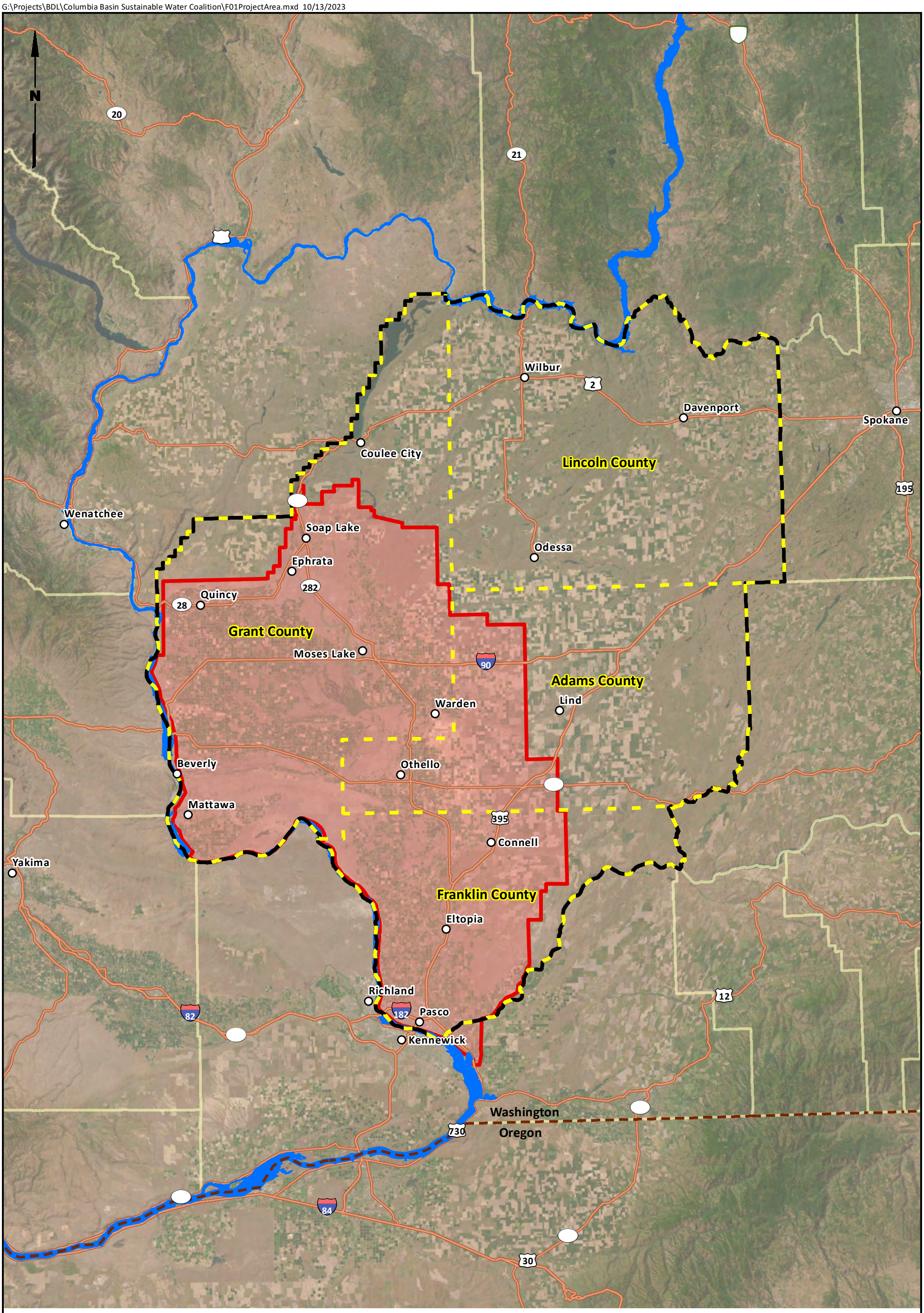


Legend

- Project Area
- Project Area Counties
- Other Counties
- Columbia River
- Columbia Basin Project Boundary

0 15 30

Miles

Note

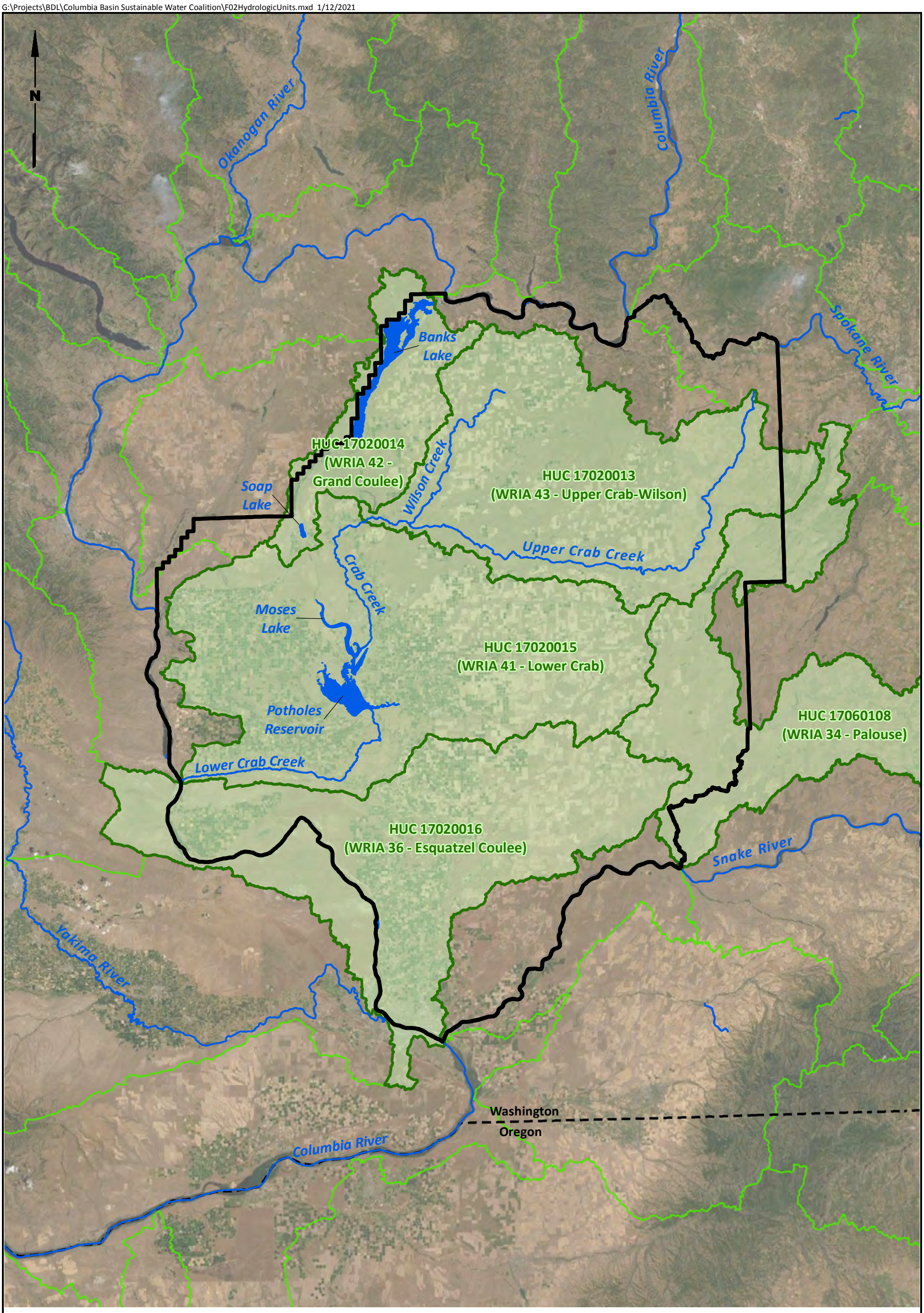
1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: WADNR; Esri World Imagery.

LANDAU ASSOCIATES

Columbia Basin Sustainable Water Coalition Eastern Washington	**Project Area**	Figure 1

G:\Projects\BDL\Columbia Basin Sustainable Water Coalition\F02HydrologicUnits.mxd 1/12/2021



Legend

- Project Area
- Hydrologic Units of Interest (with HUC and WRIA IDs)
- Other Hydrologic Units
- Lakes
- Rivers/Creeks

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: WADNR; Esri World Imagery.

0 15 30

Miles

LANDAU ASSOCIATES

Columbia Basin Sustainable Water Coalition Eastern Washington

Hydrologic Units

Figure 2

Columbia Basin
CONSERVATION DISTRICT

COLUMBIA BASIN CONSERVATION DISTRICT
GRANT COUNTY, WASHINGTON
RESOLUTION NO. 12132023-01

WHEREAS, the Board of Supervisors of the Columbia Basin Conservation ("District") operates under the laws of the State of Washington applicable to conservation districts.

WHEREAS the District is governed by a five-member board, as set out in RCW Chapter 89.08 and WAC Section 135-110.

It is RESOLVED that the District Board of Supervisors have reviewed and support the District's 2023 Applied Science Grant application and that if awarded, the District will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

The official with legal authority to enter into an agreement for this grant agreement is the District's Chairman, currently Dave Stadelman, or another board member acting as Chair.

Adopted at a regular board meeting of the District Board of Supervisors on October 10, 2023.

Dave Stadelman – Chairman

Glenn Burkholder – Member

Dan Roseburg – Auditor

Richard Leitz – Vice Chair

John Preston – Member

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Office of Columbia River
1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

SENT VIA EMAIL ONLY

October 16, 2023

Bureau of Reclamation
Columbia-Pacific Regional Office
Attn: Nathan Moeller
1150 N Curtis Road
Boise, ID 83706

Re: Letter of Funding Commitment for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

I am writing to document Washington State Department of Ecology Office of Columbia River's (OCR) support of the Columbia Basin Conservation District's Applied Science Grant Proposal to the US Bureau of Reclamation titled "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making". The Office of Columbia River works to meet current and future water needs in the Columbia River Basin through sustainable water supply solutions that support communities, farms, and the environment.

OCR is committing $53,371 of cost share to help develop this important online groundwater database. Most aquifers in the Columbia River Basin are declining, which limits options to meet growing demands[1]. Therefore, groundwater data collection and a data repository are critical to track these declining aquifer trends. This web application will be a very useful planning tool in our efforts to sustainably manage and develop water supplies in the Basin.

We value the opportunity to cost share and the continued collaboration with the Columbia Basin Conservation District on this project. OCR is extremely interested in making this groundwater web app a success, as it will be a useful tool in making informed decisions regarding critical groundwater management issues we are facing in partnership with eastern Washington communities. If you have any questions, please contact me by email at Melissa.Downes@ecy.wa.gov.

[1] Hall, S.A., Adam, J.C., et. all 2022. 2021 Washington State Legislative Report. Columbia River Basin Long-Term Water Supply and Demand Forecast. Publication No. 21-12-006. Washington Department of Ecology, Olympia, WA. 284 pp.

Sincerely,

Melissa Downes, LHG
Financial and Project Section Manager
Office of Columbia River

ecc: Kristina Ribellia kristina-ribellia@columbiabasincd.org

MD:ce(231018)

October 13, 2023

Bureau of Reclamation
Columbia-Pacific Regional Office
1150 N. Curtis Road
Boise, Idaho 83706
Attn: Nathan Moeller (CPN-7309)

Re: Letter of Funding Commitment for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of the Columbia Basin Conservation District (CBCD), please accept this letter of funding commitment for our "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal. CBCD is committing $26,000 of in-kind contributions for project management and website maintenance.

As a co-administrator and board member for the Columbia Basin Sustainable Water Coalition and key partner working to implement the Odessa Groundwater Replacement Program, we are intimately familiar with the critical water management issues our region is facing. We have heard first-hand from local stakeholders, including irrigators, municipal purveyors, county officials, and state agencies that a tool like the proposed web application is needed to help them make better-informed decisions regarding our rapidly declining groundwater supplies – and we are fully committed to developing and maintaining this important tool.

Thank you for your time and consideration. If you have any questions, please don't hesitate to contact me at (509) 765-9618 or at kristina-ribellia@columbiabasincd.org.

Sincerely,

Kristina Ribellia, Executive Director
Columbia Basin Conservation District

STATE OF WASHINGTON
DEPARTMENT OF COMMERCE
1011 Plum Street SE • PO Box 42525 • Olympia, Washington 98504-2525 • 360-725-4000
www.commerce.wa.gov

October 11, 2023

Dear ureau of Reclamation Application Review ommittee:

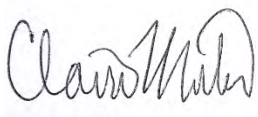
On behalf of the Washington State Department of ommerce, please accept this letter of support for the olumbia asin onservation District's Applied Science Grant proposal entitled, " olumbia asin Groundwater ooperative Interactive Web Application."

The " olumbia asin Groundwater ooperative Interactive Web Application" will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the olumbia asin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

The data that the web application will aggregate is becoming increasingly important for water purveyors and their partners to make informed decisions regarding the critical water management issues they are facing. For example, local leaders will be able to use the information from the web application to communicate the nature and severity of groundwater level decline in their area to current and potential users, as well as decision makers. The web application will give communities access to data that has been collected by various efforts, but which has not been publically available in one location or easily understandable for all interested parties.

We strongly support the development and maintenance of the " olumbia asin Groundwater ooperative Interactive Web Application". I can be reached at 509-505-3046 or claire.miller@commerce.wa.gov.

Sincerely,



laire Miller
Program Manager, Small ommunities Initiative
Washington State Department of ommerce

WASHINGTON STATE POTATO COMMISSION
108 INTERLAKE ROAD, MOSES LAKE, WA 98837
PH: 509 765-8845 FAX: 509 765-4853 WWW.POTATOES.COM

October 16, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of the Washington State Potato Commission, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

We see immense value in making our local groundwater monitoring data publicly available through an easy-to-use web application so that local producers and industry partners can make better-informed decisions regarding the critical groundwater supply challenges our region is facing.

Thank you for your time and consideration.

Sincerely,

Matt Harris
Director of Governmental Affairs
Washington State Potato Commission

EAST COLUMBIA BASIN IRRIGATION DISTRICT
55 North 8th OTHELLO, WA 99344 (509) 488-9671
P.O. Box E info@ecbid.org

Date October 11, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

RE: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of the East Columbia Basin Irrigation District, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

As the lead implementor and operator of the Odessa Groundwater Replacement Program (OGWRP), we see immense value in making our local groundwater monitoring data publicly available through an easy-to-use web application. The Odessa Groundwater Replacement Program Watershed Plan will need access to well data that this tool would provide. As the sponsor of the watershed plan, ECBID recognizes the benefits that this application will provide for the monitoring of groundwater replacement activities.

Thank you for your time and consideration. If you have any questions, please contact me at csimpson@ecbid.org.

Sincerely,

Craig Simpson, PE
Secretary-Manager

CS:je

cc: Board of Directors
Jon Erickson

WASHINGTON STATE UNIVERSITY

Department of
Civil and Environmental Engineering
VOILAND COLLEGE OF ENGINEERING AND ARCHITECTURE

October 10, 2023

Bureau of Reclamation
Columbia-Pacific Regional Office
1150 N. Curtis Road
Boise, Idaho 83706
Attn: Nathan Moeller (CPN-7309)

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

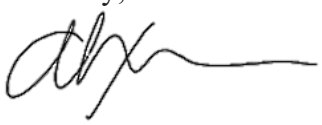
On behalf of the Washington State University (WSU) Department of Civil and Environmental Engineering, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

As a professor researching groundwater dynamics and sustainability, this data is becoming increasingly important for us to make informed decisions regarding the critical water management issues we are facing. For example, the web application will help us to identify groundwater trends and vulnerabilities specific to different aquifer layers, ultimately to account for groundwater heterogeneity in informing management plans.

Thank you for your time and consideration. If you require more information about the WSU Department of Civil and Environmental Engineering, please contact me via sasha.richey@wsu.edu /509-335-1691.

Sincerely,



Alexandra Richey McLarty
Assistant Professor

PO Box 642910, Pullman, WA 99164-2910
509-335-2576 | Fax: 509-335-7632 | www.ce.wsu.edu

CBSWC
columbia basin sustainable water coalition

October 9, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of the Columbia Basin Sustainable Water Coalition, please accept this letter of support for the Columbia Basin Conservation District's (CBCD) "Columbia Basin Groundwater Cooperative Interactive Web Application" Applied Science Grant Proposal.

The concept for CBCD's proposed web application was born out of one of our recent stakeholder meetings, where local water purveyors and water resources managers identified the need for better access to the data that has been and continues to be collected. Our aquifers are declining at a rapid, unsustainable rate and our local water purveyors and water resource managers need to be able to make better-informed decisions regarding this critical water management issue.

Thank you for your time and consideration. If you require more information about the Columbia Basin Sustainable Water Coalition, please visit our new website at www.cbswc.org or email me at ebowen@lincolncd.com.

Sincerely,

Elsa Bowen

Elsa Bowen, Chair
Columbia Basin Sustainable Water Coalition

Moses Lake
Watershed Council

October 10, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of the Moses Lake Watershed Council, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

As a locally-led council of diverse stakeholders working to address water quality concerns in the Moses Lake Watershed, access to this data is important for us to make informed decisions regarding the projects we pursue. Additionally, the web application has the potential to serve as an important repository for the data that we and our partners collect for the benefit of all.

Thank you for your time and consideration. If you require more information about the Moses Lake Watershed Council, please email me at harold-crose@columbiabasincd.org or visit our website at www.moseslakewatershed.org.

Sincerely,

Harold Crose, Chair
Moses Lake Watershed Council

GRANT COUNTY
DEVELOPMENT SERVICES
P.O. BOX 37 - 264 WEST DIVISION AVENUE
EPHRATA, WA 98823
(509) 754-2011 EXT 3001

October 16, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of Grant County Development Services, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

This water resource database will help Grant County make better-informed planning-related decisions through the use of information that is otherwise unavailable.

Thank you for your time and consideration. If you have any questions, please contact me using my phone number or email as indicated below.

Sincerely,

Christopher Young
Development Services Director
Grant County Development Services
509-754-2011 Ext. 3019
cyoung@grantcountywa.gov

The City of Othello

500 East Main Street OTHELLO, WASHINGTON 99344 Telephone (509) 488-5686
Fax (509) 488-0102

October 11, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of the City of Othello, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

As a municipal purveyor that currently obtains all its supply from groundwater wells, this data is becoming increasingly important for us to make informed decisions regarding the critical water management issues we are facing. The web application will make the historical water level and geological data that has been collected more accessible to the public.

Thank you for your time and consideration. If you require more information about the City of Othello, please contact me via the above phone number or email at slogan@othellowa.gov.

Sincerely,

Shawn Logan
Mayor/City Administrator

October 10, 2023
Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of The City of Moses Lake, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

As a municipal water purveyor, this data is becoming increasingly important for us to make informed decisions regarding the critical water management issues we are facing.

Thank you for your time and consideration. If you require more information about the City of Moses Lake, please contact us via www.cityofml.com.

Sincerely,

Kevin Fuhr
Interim City Manager

Lincoln County
Conservation District

October 9, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of Lincoln County Conservation District, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

Our district's mission to protect concern and enhance natural resources. This data is becoming increasingly important for us to make informed decisions regarding the critical water management issues we are facing. For example, the web application will help us clearly show and define areas with declining aquifer issues. The website is a great educational and outreach tool for local landowner owners to access.

Thank you for your time and consideration. If you require more information about the Lincoln County Conservation District, please contact us via email at ebowen@lincolncd.com or phone at 509-209-1911.

Sincerely,

Elsa Bowen

Elsa Bowen, District Manager
Lincoln County Conservation District

Franklin Conservation District
1724 East Superior Street
Pasco, WA 99301
Ph. (509) 416-0440

October 12, 2023

Department of the Interior
Bureau of Reclamation
Water Resources and Planning Office
WaterSMART - Applied Science Grant
Application Review Committee

Re: Letter of Support for the "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal

Dear Bureau of Reclamation Application Review Committee:

On behalf of Franklin Conservation District, please accept this letter of support for the Columbia Basin Conservation District's "Columbia Basin Groundwater Cooperative Interactive Web Application for Improved Decision Making" Applied Science Grant Proposal.

The Columbia Basin Groundwater Cooperative Interactive Web Application will make important local water resource data not only publicly available but also easily accessible and digestible. The web application will be a clearinghouse for data collected over the last two decades through the Columbia Basin Groundwater Management Area initiative and will include ongoing groundwater monitoring data that is collected through a variety of stakeholders.

As a Natural Resource Manager, this data is becoming increasingly important for us to make informed decisions regarding the critical water management issues we are facing. For example, the web application will help us better inform the citizens of our county about water quality and quantity issues which can potentially impact their health and livelihoods.

Thank you for your time and consideration. If you require more information about the Franklin Conservation District, please contact us via mark-nielson@franklincd.org

Sincerely,

Mark Nielson

Mark Nielson
District Manager