

**TRANSALTA WATER BANK:
WATER MARKETING STRATEGY**

TransAlta Centralia Generation

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1 Technical Proposal and Evaluation Criteria

1.1 Executive summary

Date: April 7, 2021

Applicant: TransAlta Centralia Generation¹²

City, County, State: Chehalis, Lewis County, Washington

This proposed grant-funded project seeks to better understand an emerging water market within the Chehalis River basin and to develop a water supply and marketing strategy for the biggest water bank to date in Washington state (28,000 acre-feet annually). The goal of this marketing strategy to develop a mechanism to mitigate the potential impact that new water supply could have on the watershed, by providing a source of previously used water to offset those new impacts. .

The Chehalis basin faces increased demands from population growth and agriculture use, which have resulted in decreased stream flows in the summer and early fall. The growing imbalance between supply and demand not only impacts municipal and agricultural users, but also impacts ongoing environmental efforts. The Chehalis basin supports a rich aquatic habitat and is one of the few major river basins in Washington without any federally listed endangered salmon. The need to secure future environmental flows is critical to supporting ongoing enhancement efforts.

TransAlta, holds some of the largest water rights issued in the Chehalis Basin, as they transition away from coal-powered energy production they are planning to protect and preserve their rights to the Skookumchuck river and plan to put around 28,000 acre-feet per year into the State's Trust Water program for the purposes of creating a water bank. This action will develop a water market, seeded with TransAlta's water rights, to support future water supply needs in the basin. The project will identify potential users for the TransAlta Water Bank, assess the best mechanisms to complete banking transactions, and develop a better understanding of where water within the basin can be mitigated by the Water Bank.

Estimated Time to Complete: 2 years

Federal Funding Amount: Funding Group I

Proposed BOR funding: \$60,000; Proposed TransAlta matching funds: \$60,000

Estimated Completion Date: Fall 2023

¹ Based on pre-application discussions with BOR staff (Avra Morgan) in March 2021, BOR confirmed that TransAlta is eligible for BOR's WaterSMART grant applicant status as a 'power delivery authority.'

² Per application requirements, TransAlta will obtain and maintain a Unique Entity Identifier and System for Award Management registration through the BOR within 30 days of application submittal.

1.2 Background data

The Chehalis Basin is one of the larger river basins in the state of Washington. The Chehalis Basin is bound on the west by the Pacific Ocean, on the east by the Deschutes River Basin, on the north by the Olympic Mountains, and on the south by the Willapa Hills and Cowlitz River Basin. Elevations vary from sea level at Grays Harbor, to 5,054 foot Capitol Peak in the Olympic National Forest. The Chehalis Basin encompasses 2,520 square miles and drains 2,660 square miles.

Annual precipitation in the Lower and Upper Chehalis Watersheds ranges from 40 inches in the lowland valleys to over 100 inches in the Cascade, Olympic, and Willapa foothills. Most of the precipitation arrives during the winter months, when water demands are the lowest. Only a fraction becomes available for human and economic uses. During the summer, the snowpack is gone, there is little rain, and naturally low streamflows are dependent on groundwater inflow. At the same time, water demands for human uses, including irrigation, are at the yearly maximum. This means that groundwater and surface water are least available when water demands are the highest.

The Chehalis watershed is one of the most intensely farmed basins in western Washington; however, many farmers do not have access to a reliable source of legal water. Water for new users is significantly limited, especially given that river levels need to be maintained to ensure adequate water quality and fish migration. Increased demands from population growth, naturally low summer and early fall streamflow levels, and impacts from climate change add to the challenge of finding new water supplies.

Surface water in the Chehalis River is regulated by instream flows (WAC 173-522/23). Applicants for new water right permits need to provide mitigation to offset the consumptive use impacts on the surface water in the watershed. Larger water users (such municipal systems) in particular, are often tasked with needing to address mitigation on multiple streams that are located far away from their requested diversion points.

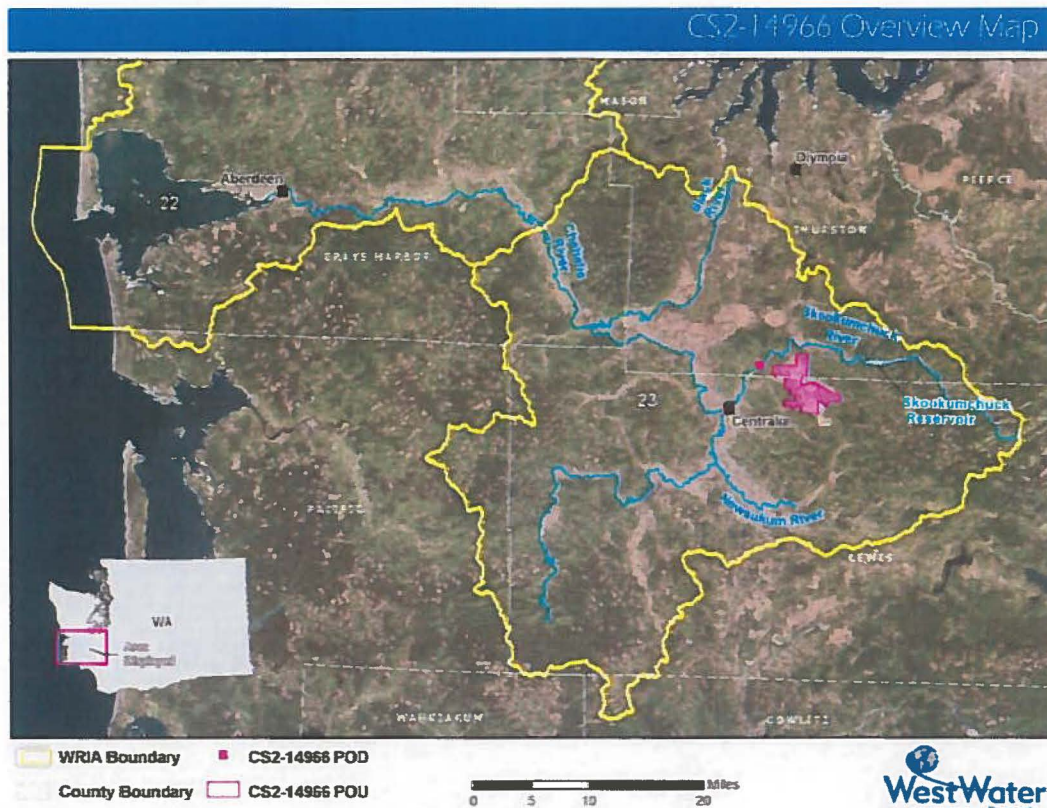
The TransAlta coal-fired power generating facility located near Centralia, Washington holds surface water rights which allows for the year-round diversion of 51.6 cubic feet per second (cfs) and 28,033 acre-ft/year (afy) from the Skookumchuck River. The water right is currently used to support energy and operations; however, the TransAlta is transitioning away from coal-based power production and as a result their water needs are declining exponentially. The first wave of reduced production went into effect at the end of 2020, with another huge decline expected in 2025, as all coal-based production is scheduled to cease..

On June 8, 2020, TransAlta filed an application with the Department of Ecology (Ecology) to change the purpose of use and the place of use of surface water right to instream flow and mitigation. The intent of this filing was to change the place and

purpose of use of the water right to establish the TransAlta Water Bank, seeded with the water conserved from the decommissioning efforts. The TransAlta water bank will be the largest in the state and has the potential to make interruptible water rights more reliable and provide water for new projects within the Chehalis watershed.

1.3 Project Location

The TransAlta Water Bank operates within the Chehalis Watershed, Water Resource Inventory Area (WRIA) 23 from a point on the Skookumchuck River, downstream on the Chehalis River to Grays Harbor. The Project latitude is 46.77694444 N and longitude is 112.91027778W (See Figure below).



1.4 Project Description

The proposed project focuses on the Chehalis River watershed in southwestern Washington. As the TransAlta plant transitions away from coal-based power production, its water requirements will be greatly reduced. TransAlta worked with Ecology to create a new water bank to provide future water needs within the Chehalis River watershed.

TransAlta seeks to better understand the emerging water market within the Chehalis watershed and to develop a water supply and marketing strategy through a proposed

28,000 acre-feet/year water bank to provide mitigation for water users to meet future water needs. This application is seeking funds under Funding Group I and will culminate in a water market strategy document that will detail TransAlta's water market structure including implementation, operation, and expansion.

Element 1. Outreach and Partnership Building

At the outset of this project, TransAlta will work to develop an outreach and communication plan to ensure input for basin stakeholders and potential water market customers. TransAlta will conduct outreach meetings with stakeholders in the basin including cities of Centralia, Elma, Montesano, Thurston and Lewis Counties, The Confederated Tribes of the Chehalis Reservation, the Quinault Indian Nation, and the Thurston, Lewis and Grays Harbor Conservation Districts which are focuses on assisting agricultural efforts in the watershed. Additionally, TransAlta will engage with potential customers through educational brochures, workshops, and surveys on how surplus water from the Water Bank could be used.

There are several communities that are located downstream that are well positioned to acquire water from the TransAlta Water Bank. These include the Cities of Centralia, Elma and Montesano, Thurston County's Grand Mound Water System and the smaller community of Oakville. TransAlta also plans to reach out to the holders of interruptible water – those subject to regulation, to determine their interest in being able to access water on a more reliable basis.

The overall goal of the communication strategy is three-fold: 1. To provide context and background on water banking and the potential issues regarding water supply in the Chehalis watershed; 2. Gain broad support from stakeholders in the basin; and 3. To obtain information that will help shape the TransAlta Water Marketing Strategy, including:

- Concerns, interests, and preferences of customers, water users in the Chehalis watershed, and basin stakeholders,
- Perceived market barriers
- Demand and types of potential new uses
- Willingness-to-pay

Element 2. Scoping and Planning Activities

To develop the water market strategy, TransAlta will work closely with stakeholders to develop the scope of the water marketing strategy and identify data gaps. To meet the project objectives discussed above, TransAlta will:

- Research the different bank structures currently operating in Washington State and other western states to determine options and adopt a preferred structure.
- Investigate water market governance, administration and institutional requirements for implementing and managing a water bank.

- Conduct water use audits and water user surveys to determine demand, and quantify demand in consumptive use.
- Verify water market supply. TransAlta has already conducted a water rights review that included analyzing consumptive use and validity of water rights.
- Evaluate Chehalis River Basin water value and pricing and conduct surveys with potential customers to determine willingness-to-pay.
- Determine administrative requirements for developing a water market, including water right transfers and new permitting requirements.
- Determine costs of developing and implementing a water bank, including water right permitting costs for transferring water rights and obtaining water budget neutral permits for new uses.
- Document the economic, social, community, and environmental impacts of potential market.
- Evaluate and determine what infrastructure upgrades may be required to provide service several communities that are located downstream that are well positioned to acquire water from the TransAlta Water Bank. These include the Cities of Centralia, Elma and Montesano, Thurston County’s Grand Mound Water System and the smaller community of Oakville. TransAlta will investigate how to provide service to this area and options for managing existing infrastructure to carry additional water to this area.

Element 3. Developing a Water Market Strategy

Elements 1 and 2 will be used to develop the water market strategy (Element 3). The Water Marketing Strategy will include an implementation plan that selects a preferred water market structure and business rules, and provides guidelines on water bank/water market operation and administration, and long-term financial sustainability. More specifically, the water marketing strategy will include:

- The administrative structure and institutional components of the water market.
- How to track transactions, enter into agreements, and transfer water.
- Identify water market participants and their role in the water market.
- Water market prices and costs.
- Water rights to be used and permitting requirements for bank operation.
- Metrics to evaluate water marketing success, including monitoring water budget neutrality and impacts on surface and groundwater.

1.5 Evaluation Criteria

The evaluation criteria portion of your application should thoroughly address each criterion and subcriterion in the order presented to assist in the complete and accurate evaluation of your proposal.

Criterion A – Water Marketing Benefits (up to 40 points)

Despite being the second largest watershed in Washington State, water availability in the Chehalis basin is severely limited due to physical and legal constraints. A lack of water availability basin-wide has resulted in significant long-term declines in surface water flows in the Chehalis River and its tributaries. Long-term decreases in the surface water flows have had major economic and environmental implications across the basin. Consequently, groundwater sources in the basin are understood to have a strong hydraulic connection to surface water, adding to the complexity of the water imbalance across the basin. Moreover, this requires new water right permits to provide mitigation to offset the consumptive use impacts.

The physical water balance in the Basin is severely affected by a combination of increasing demand and limited recharge. Despite relatively high average annual rainfall (46-50 inches in low-lying Centralia and Chehalis areas and up to 80 inches average across the entire basin), surface water recharge is nearly exclusively derived from groundwater flows and ³precipitation. There are no significant areas of snow pack in upper watersheds, of the Chehalis Basin, and all streams in the basin depend almost entirely on groundwater storage of winter rainfall to maintain flows during the summer months.

Many people rely on the Chehalis River, its tributaries, and groundwater to supply their drinking water needs, as well as provide water for agriculture, fish hatcheries, and industry. These are the largest “out-of-stream” water uses. “Instream” water uses, such as fish and wildlife needs within the river also rely on Chehalis Basin water.

Most out-of-stream water uses require a water right, but new permits have been nearly impossible to get for about the last 20 years, especially within the upper Chehalis Basin. The reason is that the Department of Ecology has found that there may not be enough water in the Chehalis Basin at certain times of the year to approve new water rights without impairing instream water needs. Increasing demands for water over time, from ongoing population growth, agriculture, and other consumptive uses as well as associated land use practices, have resulted in lower streamflows and declining groundwater levels in some areas. These decreases have impacted important resources for fisheries and general stream health. The impacts of climate change in WRIs 22 and 23 are also yet to be fully realized. However, it is apparent that water availability is limited throughout the Chehalis Watershed.

Surface water in the Chehalis River is regulated by instream flows (WAC 173-522/23). The instream flow rule closes a number of streams in the basin to further appropriation for consumptive use. Applicants for new water right permits need to provide mitigation to offset the consumptive use impacts on the surface water in the watershed. Additionally, the rule established base flows in the Skookumchuck and

³ Source: United States Average Annual Precipitation, 1981- 2010, published in 2012 by PRISM Climate Group, Oregon State University

Chehalis Rivers. future water users are subject to the base flows and potential curtailment.

All water sectors including agricultural, municipal, residential, industrial and environmental are impacted by the physical and legal water availability constraints within the Chehalis Basin. While the constraints will have varying impacts across the water use sectors, the agricultural and municipal sectors are the largest water users and face the most imminent shortfalls. The TransAlta Water rights are a unique commodity because most other large water banks originate from water rights that were issued for irrigation, making them seasonal. Unlike many other water banks the TransAlta Water rights are year-round--making them ideal for offsetting the needs of municipalities.

The Chehalis basin remains one of the most intensely farmed basins in Washington and the agricultural sector is a major economic benefit to the local economy with production resulting in nearly \$650 million⁴. Commercial dairy, livestock and crop farming operations are located mainly in the low-lying valleys adjacent to the Chehalis River and its major tributaries and rely heavily on surface water supplies. Municipal water users account for a large majority of the groundwater use. The anticipated demand for groundwater use for municipal purposes is expected to increase significantly in the growing urban areas of Centralia, Elma, Montesano, and parts of Thurston County.

How and to what extent will the water market strategy activities, once implemented, address the shortfall? Will the water market/water marketing strategy activities benefit multiple sectors?

The TranAlta Water bank will be the largest in Washington State and developing the market will benefit multiple water sectors. The projects goals will include:

- 1) Increase the overall water supply
- 2) Improve water reliability and serve as a protection against drought
- 3) Provide protection for environmental flows

Water users and landowners will be able to utilize the Water Bank as a useful tool to improve their water reliability by selling and trading surpluses to other water users in the basin. This allows water supplies to be sustainable and stretch much further than if a source substitution market is not developed. The water marketing strategy will also focus on additional outreach needs to address timing and optimal flow targets in the basin. TransAlta envisions working with groups like Trout Unlimited, Washington Water Trust and even the Department of Ecology itself to better understand and administer dedicated environmental flows.

⁴ <https://chehalisbasinpartnership.org/land-use/s>

Explain how and to what extent the proposed water marketing activities will improve the water supply reliability in the area?

Reducing the likelihood of conflicts over water:

Benefiting multiple stakeholders; mutually beneficial water supply trades

Increasing resiliency to drought:

The water bank is seeded by TransAlta senior water right, which has been proven to be a reliable water supply. TransAlta manages Skookumchuck Reservoir which acts to regulate flows. Water right holders with interruptible water rights can acquire water from this water bank and avoid regulation.

Sustaining agricultural communities:

The agricultural sector is a major economic benefit to the local economy. A dedicated supply of irrigation water will greatly increase the options for area, including the transition to more lucrative crop types.

Demonstrating a water marketing approach that is innovative and which may be applied by other:

TransAlta will be the first functional water bank in southwestern Washington. TransAlta plans to work cooperatively with the Department of Ecology to develop a suit of tools that can make this process more efficient for both TransAlta and future banks.

Providing instream flows for species, recreation or water quality objectives:

Many aquatic species rely on the Skookumchuck River watershed for multiple life stages. Anadromous fish stocks include spring- and fall-run Chinook, Coho, winter steelhead and cutthroat trout (Grays Harbor County Lead Entity Habitat Work Group, 2011). Summer low flows in the Skookumchuck River near Bucoda (near the TransAlta diversion) typically drop below 40 cfs each year and in drought years have dropped significantly lower. Low streamflow is known to be a limiting factor for salmon. Increasing instream flows during critical low-flow periods would increase the quantity of available habitat for all life stages of aquatic species found within the project area.

Criterion B – Level of Stakeholder Support and Involvement (up to 30 points)

Interest in the TransAlta Water Bank is high (see Section 3 – Letters of Support). Water banking is a relatively new concept in southwest Washington and we anticipate that the number of stakeholders who have committed to be involved in the planning process will expand as TransAlta begins its outreach efforts. There are however three major interest groups that have already emerged – these include an extensive watershed planning effort that is supported by the Department of Ecology and the local planning entity, the City of Centralia, and finally a budding request to partner with local conservation districts.

Watershed Planning and Agency Support—the Chehalis River watershed is home to the Chehalis Basin Partnership (CBP), a well-established planning group with a membership that includes representatives from multiple counties, cities, and special user organization such as conservation districts and citizen representatives. In January 2018, the Washington State Legislature passed a new law (ESB 6091) and funded \$300 Million in streamflow restoration to assess streamflow impacts from future permit-exempt well use and to identify projects and actions to offset those impacts. As part of this new law, the CBP proposed a plan (which was vetted by Ecology to offset impacts from future development) and relies almost entirely on the willingness of TransAlta’s water rights to provide water from its water bank to meet these offset needs.

In 2021, Ecology demonstrated additional support of the TransAlta water bank at a conceptual level, when they authorized grant funding (2021 Streamflow Restoration funding) to the Chehalis Partnership’s project sponsor the Quinault Indian Nation to facilitate the acquisition of water. Ecology has shown its support for the water bank by approving the planning group’s mitigation approach AND again in its willingness to provide competitive grant funding to the planning group to actually secure the offsets identified in the plan.

City of Centralia Support. The City of Centralia is also looking to the TransAlta water bank to provide water to meet the community’s future growth and has entered into a purchase and sale agreement with TransAlta. The City seeks 6 million gallon as day from the bank to meet its own mitigation needs. The BOR grant funding would help the City in a number of ways including refining the suitability map to assist in locating sites for new wells, and streamlining the overall water right permitting process by developing an agreed upon process with Ecology.

Regional Conservation District Support. Outreach to irrigated agriculture is an additional sector that TransAlta plans to further develop. The amount of water that is available to future users in any given month correlates well with summer irrigation demands and in preliminary discussions with the local county-based Conservation Districts, they have expressed an interest in piloting small, location-specific water banks. Conservation Districts work directly with local farmers and could become key partners for facilitating irrigation-based transactions. A letter of support from the Thurston and State of Washington Conservation Districts are included in the package (Section 3).

There is no known opposition to this project at this point. While there are diverse perspectives on water management in the Chehalis Basin, we see this project as a proactive solution to an impending water management difficulty. Working with a diverse set of stakeholders should ensure a water banking strategy that is broadly supported.

To begin engaging with stakeholders TransAlta will initially set up meetings with basin representatives of state agencies with an interest in water management in the

Chehalis River Basin, specifically the Department of Ecology, Department of Fish and Wildlife, Quinault Indian Nation, Chehalis Tribal Government, and other irrigation/farming based interests within the basin.

Additionally, we will develop educational material for the stakeholders to explain the project and solicit participation in workshops. We hope these workshops will be informative to the public, and bring diverse ideas and opinions to the planning effort that will help inform the development of the water marketing strategy.

Criterion C – Ability to Meet Program Requirements (up to 20 points)

The three elements of the water marketing strategy will be addressed within the allotted two years by implementing the following schedules, which includes tasks, milestones, and dates. These three tasks are further sub-divided below:

Element	Description	Start Date - End Date
0	Develop project workplan , including tasks and subtasks, work schedule, plan for data gap resolution, and roles/responsibilities	September 2021 - November 2021
1	Develop communication and outreach plan and materials	November 2021 – December 2021
1	Stakeholder Meetings including meeting with state agencies, the Quinault Nation, and Chehalis Tribe of Indians, Lewis, Thurston, and Grays Harbor Counties, and local conservation districts	January 2022 – June 2022
1	Stakeholder Workshops providing information and soliciting feedback from water users in the Chehalis Watershed	June 2022- August 2022
1	Ongoing outreach with basin stakeholders, presenting to interested parties in the basin, and continued meetings and workshops as determined in the communication and outreach plan	January 2022- August 2022
2	Research Supply and Demand using existing data, water user surveys and developing GIS-map bases tools to assess demand.	February 2022- May 2022
2	Determine water market structure options within Washington State by reviewing existing literature and discussing different models with the Department of Ecology.	February 2022- May 2022
2	Evaluate water rights issues or legal requirements , including legal mechanisms for transferring water within the relevant area, and legal constraints on existing water rights	February 2022 – May 2022

2	Determine agreements and contracts needed to operate a water bank and ensure that the water is water budget neutral, including trust water right agreement and requirements to ensure water is protected.	February 2022- May 2022
2	Analyze actual and potential rules and requirements that will govern the implementation of the water market	February 2022- May 2022
2	Evaluate water market administration options, cost, and transaction costs of water marketing	September 2022- December 2022
2	Conduct financial analysis to determine cost of implementing a water market (existing data), participant willingness-to-pay (survey data), and water value (existing data)	September 2022- December 2022
2	Evaluate surface water/groundwater movement in the area to identify areas that are can be mitigated by the water bank for purposes of determining a neutral water budget, and developing a refined “suitability map”	September 2022- December 2022
3	Formulate business rules such as eligibility, trading protocols, rules and requirements, governance, and administrative processes	January 2023- March 2023
3	Develop monitoring plan for the market including database or system for tracking market activity	April 2023- June 2023
3	Prepare technical report summarizing the TransAlta Water Marketing Strategy based on the work completed under the 3 elements	June 2023- August 2023

Staff

Cody Duncan, Business Developer at TransAlta. Cody has been key to navigating TransAlta’s water use and understanding his company’s goals and objections. Cody will remain actively involved in establishment and management of the new water bank.

Jill Van Hulle, Senior Associate Water Right Specialist. Aspect Consulting. Jill has been working on water right permitting and planning for the past 25 years, including the last 15+ years in the Chehalis Basin. Her work has included administering two water banks in the upper Yakima River Basin, permitting for water bank development and transactions. Jill earned a BS in Environmental Science, from the Evergreen State College, Washington.

Isabellah von Trapp, Project Hydrogeologist, Aspect Consulting. Isabellah has 5+ years in hydrogeologic evaluations of groundwater, water right transactions and transfers, and water system planning. Isabellah has worked with a variety of water

right stakeholders on innovative project development and water supply solutions, including regulators and senior water right holders.

Dan Haller, Principle Engineer, Aspect Consulting. Dan Haller has 20+ years of experience in water system planning, water banking, water right transactions, and facilitation of workgroups. Dan is currently leading permitting efforts for numerous water banking efforts throughout Washington, including in Kittitas County. Dan has worked in the Black Rock Area on water right transactions and stakeholder relationships over the last 20 years. Dan has a MS in Environmental Engineering from Washington State University.

1.6 Project Budget

The total cost of this proposal is approximately \$120,000. Of this total cost, TransAlta is prepared to provide \$10,000 of in-kind contribution in the form of salaries, wages, and fringe benefits of staff working on outreach, scope of work, and project management. Additionally, TransAlta will provide \$50,000 in cash contributions from their reserves towards other costs associated with preparing the TransAlta Area Water Market Strategy.

Summary of Non-Federal and federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. TransAlta Centralia Generation	\$60,000
<i>Non-Federal Subtotal</i>	\$60,000
<i>Other Federal Subtotal</i>	N/A
Requested Reclamation Funding	\$60,000
TOTAL	\$120,000

1.6.1 Budget Proposal

The Budget Proposal table below details the budget of this proposal, including inhouse work and work provided by contractors.

Budget Proposal

Budget Item Description	\$/Unit	Quantity	Quantity Type	Total Cost
Salaries and Wages (TransAlta)				
Cody Duncan, Business Developer	\$51.16	125	hours	\$6,395.00
Fringe Benefits				
Cody Duncan	\$9.09	125	hours	\$1,136.25
Travel				
Mileage	\$0.55	500	Miles	\$272.50 ⁵
Supplies and Materials				
Outreach Materials Printing	\$0.05	2000	copy	\$100
Postage	\$0.49	2000	stamps	\$980
Equipment				
None	-	-	-	-
Contractual				
Aspect Consulting Principle Engineer	\$272	138	Hours	\$38,000
Aspect Consulting Associate Hydrogeologist	\$238	240	Hours	\$57,000
Aspect Consulting Project Scientist	\$155	50	Hours	8,000
Other				
none	-	-	-	-
Total Direct Costs				\$112,000
Indirect Costs				
Indirect Costs	8%	Percentage	\$base	\$8,000
Total Estimated Project Costs				\$120,000

1.6.2 Budget Narrative

1.6.2.1 Salaries and Wages

The salaries and wages provided in the Budget Proposal an in-kind contribution of TransAlta staff time. TransAlta's representative, Cody Duncan, will provide

⁵ Given anticipated COVID restrictions, this estimate may be less if online meetings take the place of in-person meetings

approximately 125 hours of his time towards this project. This work will include 80 hours of project coordination, grant management, preparing deliverables, and working with the board on selecting a preferred alternative and market business rules, and 45 hours of outreach and stakeholder meetings.

Additional project management work is covered under indirect costs.

1.6.2.2 Fringe Benefits

Cody's fringe benefits provided by TransAlta is approximately \$9.09/hr. This is a fixed rate for billing purposes.

1.6.2.3 Travel

Assuming COVID protocols are in place, we anticipate up to 500 miles of travel for attending stakeholder meetings and coordination meetings. This will include several trips between Centralia, WA, Olympia, WA, and other communities within the watershed to meet with stakeholders, and state and federal agencies. However, this estimate may be less if online meetings take the place of in-person meetings.

We do not anticipate any costs will be incurred for airfare, rental car, meals, lodging, or per diem.

1.6.2.4 Equipment

We do not anticipate any equipment needs during the development of the TransAlta Water Market Strategy.

1.6.2.5 Materials and Supplies

We anticipate spending approximately \$1,080 on printing and mailing outreach materials. This would include approximately 2000 mailings that will include a brief summary of the proposal and information about workshops.

1.6.2.6 Contractual

TransAlta will also hire Aspect Consulting, LLC (Aspect) to assist with outreach, scope, development of the water market strategy, and preparing the technical report.

Dan Haller is a Principal Water Resources Engineer for Aspect, and is expected to spend 138 hours on this project. Dan's billing rate is \$272/hour.

Jill Van Hulle is a Sr. Water Rights Specialist for Aspect, and is expected to spend 240 hours on this project. Tyson's billing rate is \$238/hr.

Isabellah von Trapp is a Project Hydrogeologist for Aspect, and is expected to spend 50 hours on this project. Isabellah's bill rate is \$155/hr.

Proposed Tasks

Element 1. Outreach and Partnership Building

Aspect will work with TransAlta on developing outreach activities and materials for this project. Tasks will include preparing outreach materials, setting up and attending stakeholder meetings, presenting to the Water Transfer Working Group,

and hosting a workshop for TransAlta customers and water users in the Chehalis Basin.

Key Staff w/hours: Jill Van Hulle – 60 hours; Dan Haller– 60 hours; Isabellah von Trapp – 20 hours

Element 2. Scoping and Planning Activities: Aspect will work with TransAlta on developing a project workplan; researching supply and demand; determining water market structure options, evaluating water right issues or legal requirements; determining agreements and contracts required for bank operation; analyzing actual and potential rules and requirements that will govern the implementation of the water market; evaluating water market administration and transaction costs; conducting a financial analysis; evaluate infrastructure needs, and evaluating surface and groundwater movement.

Key Staff w/hours: Jill van Hulle – 100 hours; Dan Haller – 40 hours;– 192 hours; Isabellah von Trapp – 10 hours

Element 3. Developing a Water Market Strategy. Aspect will work with TransAlta to select a preferred alternative for water market structure and business rules; develop a financial plan for how the market will be funded and financed over time; Develop a monitoring plan; and prepare the final technical report.

Key Staff w/hours: Jill van Hulle – 80 hours; Dan Haller – 38 hours; Isabellah von Trapp – 20 hours

1.6.2.7 Other Expenses

We do not anticipate other expenses for the development of the TransAlta Water Market Strategy.

1.6.2.8 Indirect Costs

TransAlta does not have a federally approved indirect cost rate agreement and is proposing a de minimis rate of 8 percent of total direct costs.

1.6.2.9 Total Costs

The total estimated costs for this project are \$120,000.

2 Existing Analysis Contributing to the Water Marketing Strategy (if applicable)

We will be using several sources that have analyzed water markets in Washington State, many of these are specific to the Chehalis River Basin, but will provide a useful framework. We plan to build on the conceptual information and data provided in these reports to develop a comprehensive strategy for the TransAlta bank.

Chehalis Watershed (WRIA 22/23) Response To 2018 Streamflow Restoration Law Addendum To The Chehalis Watershed Management Plan Approved by Chehalis Basin Partnership on November 17, 2020 Prepared for: Chehalis Basin Partnership With assistance from Ecology Grant No. GHCoPS-00021 Prepared by: Northwest Hydraulic Consultants Inc. Seattle, WA November 19, 2020 (https://chehalisbasinpartnership.org/wp-content/uploads/2021/01/ChehalisAddendumFinal_Approved_111720.pdf)

Chehalis Basin Partnership, 2009. Detailed Implementation Plan, 61 p. <https://chehalisbasinpartnership.org/wp-content/uploads/2019/01/Detailed-Implementation-Plan-June2009.pdf>

Chehalis Basin Partnership, 2004. Chehalis Basin Watershed Management Plan, <https://chehalisbasinpartnership.org/watershed-management-plan-documents/>

Smith, Carol and M. Wenger. 2001. Salmon and steelhead habitat limiting factors: Chehalis Basin and nearby drainages water resource inventory areas 22 and 23. Washington State Conservation Commission, Lacey, WA.

State of Washington Office of Financial Management, 2018. County Growth Management Population Projections by Age and Sex: 2010-2040.

Thurston Regional Planning Council, 2020. Population & Employment Forecasting, <https://www.trpc.org/236/Population-Employment-Forecasting>.

Chehalis Watershed (WRIA 22/23) Response to 2018 Streamflow Restoration Law 70 Addendum to the Chehalis Watershed Management Plan

Washington State Department of Ecology, 2019. Final Guidance for Determine Net Ecological Benefit, GUID-2094 Water Resource Program Guidance, July 31, 2019, Publication 19-11-079, 131 p.

Washington State Department of Ecology, 2008 Report to the Legislature: Water Banking in Washington State, November 2009. Available at: <https://fortress.wa.gov/ecy/publications/documents/0911024.pdf>

Valuation of the TransAlta Centralia Generation LLC Water Right, Prepared for TransAlta Centralia Generation LLC, 913 Big Hanaford Road, Centralia, WA 98531, By WestWater Research, 805 W. Idaho Street, Suite 310, Boise, Idaho, June 18, 2019

3 Letters of Support

Letters of Support for this project are included as Attachment A.

These Letters of Support include:

- Sarah Moorhead, Executive Director, Thurston Conservation District
- John Culp, Water Resources Program Manager, WA State Conservation Commission
- Stephen Bramwell, Washington State University Thurston County Extension Program

4 Official Resolution

An Official Resolution from TransAlta is included as Attachment B.

ATTACHMENT A

Letters of Support



STATE OF WASHINGTON

CONSERVATION COMMISSION

PO Box 47721 • Olympia, Washington 98504-7721 • (360) 407-6200 • FAX (360) 407-6215

March 31, 2021

Avra Morgan - Bureau of Reclamation
Attn: Water Marketing Strategy NOFO
P.O. Box 25007, MS 84-27133
Denver, CO 80225

Re: Support TransAlta Water Bank: WaterSMART Grant for Chehalis Watershed

Dear Ms. Morgan;

I am writing in support of TransAlta's application to secure a USBR WaterSMART grant for water marketing. We understand that TransAlta is actively working with the Washington Department of Ecology to place approximately 28,000 acre-feet per year into the State's Trust Water program for the purposes of enhancing instream flows and providing mitigation offsets for other water supply projects.


The State Conservation Commission is supportive of TransAlta's efforts because we are interested in supporting agriculture in the Chehalis River Watershed. TransAlta is closing its coal-fired power generating facility located near Centralia, Washington in Lewis County and looking to share its excess water rights (28,000+ acre-feet/annually) with regional water users. The source of supply for the power plant is the Skookumchuck River, which is a major tributary to the upper Chehalis River

The Chehalis watershed is one of the most intensely farmed basins in western Washington, however many farmers do not have access to a reliable source of legal water. There is limited water available for new uses in the Chehalis watershed, especially given that river levels need to be maintained to ensure adequate water quality and fish migration. Increased demands from population growth, naturally low summer and early fall streamflow levels, and impacts from climate change add to the challenge of finding new water supplies. The TransAlta water bank has the potential to make interruptible water rights more reliable and provide water for new projects.

The concept of providing water for instream flows and new future users is widely supported, TransAlta has additional work to do to figure out the best route of making the water usable to other in the watershed. We support the USBR giving TransAlta a Water Marketing Grant which will help them accomplish their goal to deliver critical water supplies to irrigators in the Chehalis Basin.

In the face of growing water demand, we believe that the TransAlta Water Bank project is an excellent candidate for USBR grant funding. Funding it is consistent with our goals of making innovative and cost-effective water solutions a reality in the Chehalis Basin. This is a unique opportunity to bring water supply to users who need it.

Sincerely,



Jon Culp
WSCC Water Resources Program Manager

CC: Ron Shultz, Policy Director, WSCC
Josh Guintoli, Regional Manager, WSCC
Sarah Moorehead, Executive Director, Thurston Conservation District

**Thurston Conservation District
2918 Ferguson St SW Suite A
Tumwater, Wa 98512-6187
360-754-3588**

March 18, 2021

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Attn: Water Marketing Strategy NOFO
P.O. Box 25007, MS 84-27133
Denver, CO 80225

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Our organization is supportive of TransAlta's efforts because we are interested in supporting agriculture in the Chehalis River Watershed. TransAlta is closing its coal-fired power generating facility located near Centralia, Washington in Lewis County and looking to share its excess water rights (28,000+ acre-feet/annually) with regional water users. The source of supply for the power plant is the Skookumchuck River, which is a major tributary to the upper Chehalis River

The Chehalis watershed is one of the most intensely farmed basins in western Washington, however many farmers do not have access to a reliable source of legal water. There is limited water available for new uses in the Chehalis watershed, especially given that river levels need to be maintained to ensure adequate water quality and fish migration. Increased demands from population growth, naturally low summer and early fall streamflow levels, and impacts from climate change add to the challenge of finding new water supplies. The TransAlta water bank has the potential to make interruptible water rights more reliable and provide water for new projects.

The concept of providing water for instream flows and new future users is widely supported, TransAlta has additional work to do to figure out the best route of making the water usable to other in the watershed. We support the USBR giving TransAlta a Water Marketing Grant which will help them accomplish their goal to deliver critical water supplies to irrigators in the Chehalis Basin.

In the face of growing water demand, we believe that the TransAlta Water Bank project is an excellent candidate for USBR grant funding. Funding it is consistent with our goals of making

innovative and cost-effective water solutions a reality in the Chehalis Basin. This is a unique opportunity to bring water supply to users who need it.

Sincerely,



Sarah Moorehead
Executive Director
Thurston Conservation District





March 31st, 2021

Avra Morgan - Bureau of Reclamation
Attn: Water Marketing Strategy NOFO
P.O. Box 25007, MS 84-27133
Denver, CO 80225

Re: Support TransAlta Water Bank: WaterSMART Grant for Chehalis Watershed

Dear Ms. Morgan;

I am writing in support of TransAlta's application to secure a USBR WaterSMART grant for water marketing. I understand that TransAlta is actively working with the Washington Department of Ecology to place approximately 28,000 acre-feet per year into the State's Trust Water program for the purposes of enhancing instream flows and providing mitigation offsets for other water supply projects.

The WSU Extension program in the Thurston and Lewis County area is very supportive of TransAlta's efforts because access to water rights and efficient water use systems are critical to agricultural viability in the Chehalis River Watershed and surrounding areas. TransAlta is closing its coal-fired power generating facility located near Centralia, Washington in Lewis County and looking to share its excess water rights (28,000+ acre-feet/annually) with regional water users. The source of supply for the power plant is the Skookumchuck River, which is a major tributary to the upper Chehalis River.

The Chehalis watershed is one of the last largely undeveloped watersheds in western Washington, and represents a great opportunity to pair agricultural activities that maintain open space with habitat and natural resource conservation work. For agriculture to be a source of livelihood and open space land use, access to reliable and legal water rights is essential, and this is lacking. In a recent agriculture needs assessment conducted by WSU Extension and Thurston Conservation District, farmers were outspoken about the need for banking and trading options for water rights, expansion of flexible water right transfers, and increased technical assistance with certain water access programs.

The concept of providing water for instream flows and new future users is widely supported, TransAlta has additional work to do to figure out the best route of making the water usable to other in the watershed. We support the USBR giving TransAlta a Water Marketing Grant which will help them accomplish their goal to deliver critical water supplies to irrigators in the Chehalis Basin. This water access will be critical to ensuring agriculture is a viable source of rural livelihood into the future, and thereby provide support for these critical partners who steward much of our open, working, and wild lands in the region.

In the face of growing water demand, we believe that the TransAlta Water Bank project is an excellent candidate for USBR grant funding. Funding it is consistent with our goals of making innovative and cost-effective water solutions a reality in the Chehalis Basin. This is a unique opportunity to bring water supply to users who need it.

Sincerely, *Stephen J. Bramwell* 3/31/21

Stephen Bramwell
WSU Thurston County Extension Direction
Agriculture Faculty
3054 Carpenter Rd SE
Lacey, WA 98503
360-790-9308
bramwell@wsu.edu

ATTACHMENT B

TransAlta Official

Resolution

TRANSALTA CENTRALIA GENERATION LLC
(the "Company")
Resolution of the Sole Member

A RESOLUTION AUTHORIZING AND APPROVING A COOPERATIVE AGREEMENT WITH THE BUREAU OF RECLAMATION WATERSMART GRANT PROVIDING SUPPLEMENTAL FINANCING FOR INVESTIGATING WATER MARKET PROGRAMS.

WHEREAS, the project will investigate options and opportunities for implementing a water marketing program; and

WHEREAS, the Members of the Management Committee for the Company will realize options for transferring water rights to other entities and/or individuals; and

NOW THEREFORE, BE IT RESOLVED that the Members of the Management Committee for the Company agree and authorize that:

1. Cody Duncan, Manager, US Coal Admin, Growth & Development is given authority to submit the application to the Bureau of Reclamation for the WaterSmart Grant Program.
2. Cody Duncan, Manager, US Coal Admin, Growth & Development is given authority to enter into an agreement with the Bureau of Reclamation for the WaterSmart Grant Program.
3. The Company can provide the amount of funding and in-kind contributions specified in the funding plan.
4. If selected to receive funds from the Grant the Company will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

Dated this 23rd day of March 2021.

TECWA POWER INC.



Mickey Dreher, President



Lori Schmitt, Secretary