CHERRY CREEK BASIN WATER QUALITY AUTHORITY

RESOLUTION 2023-1-1

ARAPAHOE AND DOUGLAS COUNTIES, COLORADO

A RESOLUTION REAFFIRMING THE DATE, TIME, AND LOCATION FOR THE REGULAR MEETINGS OF THE BOARD OF DIRECTORS OF THE CHERRY CREEK BASIN WATER QUALITY AUTHORITY AND AUTHORIZING POSTING PUBLIC NOTICE OF AUTHORITY MEETINGS ONLINE IN COMPLIANCE WITH THE OPEN MEETINGS LAW AND REAFFIRMING THE NEWSPAPERS TO USE WHEN NOTICE IS REQUIRED BY PUBLICATION

WHEREAS, pursuant to Section 25-8.5-109, C.R.S., the Authority is required to designate a schedule for regular meetings, indicating the dates, time and location of said meetings; and

WHEREAS, pursuant to Section 24-6-402(2)(c)(I), C.R.S., meetings of the Board at which the adoption of any proposed policy, position, resolution, regulation, or formal action is to occur, or at which a majority or quorum of the Board is in attendance, or is expected to be in attendance, shall be held only after full and timely notice of the meeting as given to the public; and

WHEREAS, Section 24-6-402(2)(c)(I), C.R.S., further requires that the Board annually designate one or more places where notice of Board meetings together with a meeting agenda, when available, shall be posted at least 24 hours prior to the convening of such meeting for the purpose of complying with the notice provisions of the Colorado Open Meetings Law; and

WHEREAS, pursuant to Section 24-6-402(2)(c)(III), C.R.S., the Authority is authorized to post full and timely notice of its meetings no less twenty-four hours prior to the holding of the meeting on the public website of the Authority; and

WHEREAS, the Authority's website is accessible at no charge to the public; and

WHEREAS, the Authority has provided the address of its website to the Department of Local Affairs for inclusion in the inventory maintained pursuant to Section 24-32-116, C.R.S.; and

WHEREAS, the Authority will retain one physical location within the Authority's boundaries designated for posting notice no less than twenty-four hours prior to a meeting if the Authority is unable to post a notice online in the event of an exigent or

emergency circumstance such as a power outage or interruption in internet service that prevents the public from accessing the notice online; and

NOW, THEREFORE, BE IT RESOLVED BY the Board of Directors of the Cherry Creek Basin Water Quality Authority, Arapahoe and Douglas Counties, Colorado:

- 1. **Regular Meetings**. It is hereby declared that the Board will meet regularly during calendar year 2023 on the 3rd Thursday of each month at 9:00 a.m. Meetings will be held in person in the offices of the Southeast Metro Stormwater Authority, located at 7437 South Fairplay Street, Centennial, Colorado 80112, unless said offices are closed due to Covid-19 concerns or other reasons, or at such other physical or virtual location as hereinafter designated by the Board.
- 2. <u>Special Meetings</u>. Special meetings of the Board may be held as often as the needs of the Authority require, upon the call of the Chair or upon the request of two Board members. The Authority shall inform all Board members five calendar days before each special meeting and shall post by notice online as provided herein at least twenty-four hours prior to said meeting.
- 2.1 <u>Informal Meetings.</u> Notice of any informal meeting such as study sessions, subcommittee meetings, or any meetings of three (3) or more Board members will be given to all members at least seventy-two (72) hours in advance of such meeting unless such informal meeting was set and authorized by the Board at a Regular or Special Meeting. Public notice of the meeting will also be posted on the District's website at least twenty-four (24) hours in advance of the meeting in accordance with Section 24-6-402(2)(c), C.R.S.
- 3. <u>Location for Posting Meeting Notices Online</u>. As of the effective date of this Resolution and pursuant to Section 24-6-402(2)(c)(III), C.R.S., the Authority's designated posting location for posting a public meeting (regular, special, and study sessions) shall be on the Authority's website, accessible online at the following address: https://www.cherrycreekbasin.org
- 4. <u>Designated Exigent/Emergency Circumstance Posting Location</u>. In the event of an exigent or emergency circumstance, such as a power outage or an interruption in internet service that prevents the public from accessing the online designated posting location or prevents the Authority from posting a notice at the online designated posting location, the Authority will post notice of public meetings at least twenty-four hours prior to the meeting at the following physical location within the Authority:

Offices of SEMSWA, 7437 South Fairplay Street, Centennial, CO 80012

- 5. <u>Bylaws, Rules and Regulations and Prior Resolutions</u>. This Resolution shall supersede any contrary provision contained in the Authority's Bylaws and/or Rules and Regulations and/or as set forth in any prior authority resolution.
- 6. <u>Representative Authorized to Post</u>. Any member of the Authority, Board of Directors, or any designee of the Board, including the Authority's Manager, is hereby authorized to post notice of Authority meetings as authorized herein.
- 7. <u>Newspapers for Publication of Notices</u>. The designated newspapers for publication are hereby reaffirmed to be *The (Greenwood) Villager* and *The Douglas County News Press*.
- 8. <u>Severability</u>. If any part, section, subsection, sentence, clause or phrase of this Resolution is for any reason held to be invalid, such invalidity will not affect the validity of the remaining provisions.
- 9. <u>Effective Date</u>. This Resolution shall take effect and be enforced immediately upon its approval by the Board.

ADOPTED this ____ day of January 2023.

CHERRY CREEK BASIN V	WATER
QUALITY AUTHORITY	

	By:	Joshua Rivero, Chair	
Attest:			
John A. McCarty, Secretary/Treasurer	_		

CONSULTANT AGREEMENT

FOR

SITE SPECIFIC STANDARDS – CHERRY CREEK RESERVOIR

THIS CONSULTANT AGREEMENT FOR SITE SPECIFIC STANDARDS – CHERRY CREEK RESERVOIR ("Agreement") is entered into as of the ______ day of ______, 2023, to be effective as of January 1, 2023 ("Effective Date"), between the CHERRY CREEK BASIN WATER QUALITY AUTHORITY, a quasi-municipal corporation and political subdivision of the State of Colorado ("Authority"), whose address is P.O. Box 3166, Centennial, CO 80161 and HYDROS CONSULTING INC., a Colorado corporation ("Consultant") whose address is 1628 Walnut Street, Boulder CO 80302 telephone number (303) 284-1841. Consultant and Authority may hereinafter singularly be referred to as a "Party" and collectively as the "Parties."

RECITALS

WHEREAS, the Authority was established for the purpose of preserving and protecting the water quality in the Cherry Creek Reservoir ("Reservoir") and the Cherry Creek Watershed ("Watershed"); and

WHEREAS, the Water Quality Control Division in the Department of Public Health and Environment for the State of Colorado is proposing Table Value Standards for Total Nitrogen ("TN") and Total Phosphorus ("TP") that would be applicable statewide; and

WHEREAS, the Reservoir is unique, and the Authority believes that it would be appropriate for the Water Quality Control Commission of the State of Colorado ("Commission") to adopt site specific standards for TN and TP for the Reservoir; and

WHEREAS, Consultant has provided a proposal to Authority outlining an approach, schedule, and budget to develop site specific standards for TN and TP for the Reservoir that will support the attainment of the site-specific standard for chlorophyll a for the Reservoir; and

WHEREAS, Authority desires to enter into a contract with Consultant whereby Consultant will provide to Authority such Services in accordance with Consultant's Technical Memorandum dated September 26, 2022, and revised November 17, 2022, a copy of which is attached hereto as **Exhibit A** ("Proposal"); and

WHEREAS, Consultant represents that it has the personnel and expertise necessary to perform such services for Authority in a competent and timely manner.

NOW, THEREFORE, in consideration of the promises set forth herein, Authority and Consultant agree as follows:

- 1. <u>Scope of Services</u>. Consultant agrees to perform the services described in the Proposal for the purpose of assisting the Authority in the development of site specific standards for TN and TP that will support the site specific chlorophyll "a" standard for the Reservoir ("Scope of Services"), together with all necessary labor, materials, scheduling, procurement and related work and services as may be necessary or reasonably inferable from the Scope of Services to complete the totality of the obligations imposed upon the Consultant by this Agreement (herein collectively the "Services"). The Services will be performed in accordance with this Agreement, including the Scope of Services; provided, however, that in an event of a conflict or inconsistency between the terms and provisions of the Scope of Services and the text of this Agreement, the text of this Agreement shall control.
- 2. <u>Notice to Proceed.</u> As of the Effective Date and provided Authority has received satisfactory certificates of insurance as required by Paragraph 16 below, Consultant is hereby authorized to provide the Services when requested to do so by the Authority's Technical Manager.
- 3. Completion Date. Consultant shall give this Agreement and the Services to be performed hereunder such priority as is necessary to cause the Services to be timely and promptly performed generally in accordance with the time periods and milestone dates set forth in the Scope of Services. At any time during the Term of this Agreement Authority may request and Consultant shall, within twenty (20) days of such request, submit for Authority's approval a written schedule for the completion of the various tasks which comprise the Services. Unless delayed by acts or the failure to act of Authority or other causes beyond the control of Consultant, and without extending any deadline established in this Agreement, all Services required under this Agreement shall be entirely completed to Authority's reasonable satisfaction and all deliverables as set forth in the Scope of Services shall be delivered to Authority no later than December 21, 2023. The final Technical Memorandum will be delivered no later than two (2) weeks after final comments are delivered to Consultant by the Authority.
- 3.1 <u>Deliverables</u>. Without in anyway limiting the deliverables as described in the Scope of Services, Consultant shall provide the Authority with an electronic and up to five hard copies of all final product documents and reports prepared by Consultant pursuant to this Agreement. In addition, all deliverables shall comply with such reasonable requirements as the Authority's Technical Manager may establish from time to time provided those requirements are communicated in writing to Consultant no later than twenty (20) days following the execution of this Agreement by both Parties.
- 4. Responsibility for Services. The Authority shall not supervise the work of Consultant or instruct the Consultant on how to perform the Services. Consultant shall be fully responsible for the professional quality, technical accuracy, timely completion, and coordination of Services including all work and reports that are a part thereof, whether such work is performed directly by Consultant or by any subconsultant or subcontractor hired by Consultant and approved Authority in accordance with Paragraph 12 below. Without

additional compensation and without limiting Authority's remedies, Consultant shall promptly remedy and correct any errors, omissions, or other deficiencies in the Services. Consultant warrants that all Services provided under this Agreement shall be performed with competence and in accordance with the standard of care of Consultant's profession prevailing in Colorado.

5. <u>Compensation</u>. Authority will compensate Consultant in accordance with Consultant's hourly rates and reimbursable costs, if any, as set forth on Exhibit B and in accordance with Consultant's anticipated cost per Task as set forth in the Scope of Services. The total amount of compensation that Consultant may receive under this Agreement for the Services will not exceed \$87,755.00 without the express prior written consent of the Authority, unless Optional Task 5 is requested by the Authority. If Optional Task 5 is requested by the Authority, the total amount of compensation that Consultant may receive under this Agreement shall not exceed \$97,775.00.

The per Task limit for each of the Tasks set forth in the Scope of Services (page 4 of 4) shall not be exceeded by fifteen percent (15%) without the Authority's prior written consent. Authority will not compensate Consultant for preparing or responding to Authority's questions regarding Consultant's invoices. If Consultant is requested to perform any work that is not expressly described in the Scope of Services or that will cause the estimated time to perform any work described in the Scope of Services to be increased, Consultant will immediately notify Authority in writing and will not perform such work until authorized to do so in writing by Authority's representative.

The compensation to be paid Consultant under this Agreement is entire and complete and includes any and all reimbursable and other costs as set forth, and only as set forth within the Scope of Services. Consultant further represents and agrees that the reimbursable costs charged to Authority together with any approved subconsultant or approved subcontractor costs are at Consultant's actual cost and will not include any additional markup. It is understood and agreed that Consultant will contract with and pay directly all approved subconsultants or approved subcontractors retained by Consultant for the performance of any Services or portion thereof.

Agreement, that change shall not in any way affect or modify the employee's billing rate under this Agreement unless the billing rate shall be enployee's billing rate under this Agreement and way affect or modify the employee's billing rate under this Agreement and way affect or modify the employee's billing rate under this Agreement unless the billing rate shall be applied for purposes of the invoices prepared and submitted to the Authority.

- 6. **Method of Payment.** No later than the 25th day of the month Consultant shall provide an invoice for the Services completed through the last day of the preceding month ("Billing Period"). Each invoice shall be submitted only for those Services actually performed during the Billing Period. Consultant shall submit with each invoice such supporting documentation as Authority may reasonably request. Each invoice submitted by Consultant shall constitute a representation to Authority that the Services are completed to the point as represented in the billing invoice. Unless Consultant does not properly perform the Services, invoices will be paid within thirty (30) to forty-five (45) days after receipt. Invoices that are not received by Authority within thirty (30) days after the last day of the Billing Period, shall be deemed inconsistent with this Agreement. Authority shall have the right to refuse to pay all or a portion of any invoice that is inconsistent with this Agreement. Authority may delay payment until it can verify the accuracy of an invoice, obtain releases or waivers with respect to Services covered in the invoice, or resolve a dispute with Consultant regarding an invoice. Further, with regard to any invoice that is submitted by Consultant ninety (90) days or more after the Billing Period, Authority shall have the right to deduct from said invoice all costs and expenses incurred by Authority in reviewing such invoice which are in the Authority's determination attributable to Consultant's delay in furnishing the invoice.
- 7. <u>Conflict of Interest</u>. Consultant agrees that it shall not accept any employment during the term of this Agreement that creates a potential conflict of interest or compromises the effectiveness of Consultant or otherwise interferes with the ability of Consultant to perform the Services required by this Agreement.
- 8. **Records and Audits.** Consultant shall at all times maintain a system of accounting records in accordance with its normal billing procedures, together with supporting documentation for all work, purchases, Services and billings under this Agreement. Consultant shall make available for audit and reproduction by Authority all records, in whatever form, related to the Services. Consultant shall provide such availability during the term of this Agreement and for two (2) years after final payment. Consultant shall refund to Authority any charges determined by Authority's audit to be inconsistent with this Agreement.
- 9. <u>Confidentiality of Information</u>. Except as required by law or as is necessary for the performance of the Services, Consultant shall retain in strictest confidence all information furnished by Authority and the results of any reports or studies conducted as a result of this Agreement, along with all supporting work papers and any other substantiating documents. Consultant shall not disclose such information to others without the prior written consent of Authority's representative. Notwithstanding the foregoing, Consultant shall have no confidentiality obligation with respect to information that: (i) becomes generally available to the public other than as a result of disclosure by Consultant or its agents or employees; (ii) was available to Consultant on a nonconfidential basis prior to its disclosure by Authority; and (iii) becomes available to Consultant from a third party who is not, to the knowledge of Consultant, bound to retain such information in confidence.

- 10. Ownership of Work Product and Documents. All printed materials and electronic documents produced as a result of the Services performed under this Agreement shall be the sole property of Authority and may not be used, sold or disposed of in any manner without prior written consent of Authority's representative. All documents applicable to each Task identified in the Scope of Work shall be delivered and turned over to Authority as and when such Task is completed, or at such time as Consultant has been paid in full all monies due Consultant hereunder. Notwithstanding the foregoing, Consultant may retain a copy of all printed material, electronic or other documents prepared under this Agreement.
- 11. <u>Changes in Services</u>. The Authority shall have the right to order additions, deletions or changes in the Services at any time, so long as such changes are within the Scope of Services covered by this Agreement. Requests for material changes in the Services may be made by Authority's representative orally or in writing; provided, however, that oral requests shall be confirmed by a written request within ten (10) days after the oral request. If Authority directs Consultant to proceed with a material change, Consultant shall be paid for the change as agreed to by the Parties.
- **Approval of Subconsultants.** Except as set forth in the Scope of Services, Consultant shall not employ any subconsultant or subcontractor without the prior written approval of Authority's representative nor shall Consultant assign any rights or obligations under this Agreement in whole or in part without the Authority's prior written approval which may be withheld for any reason. Consultant shall be responsible for the coordination, accuracy, and completeness of all Services in accordance with generally accepted principles and practices of Consultant's profession, regardless of whether the Services are performed by Consultant or one or more subconsultants. Consultant shall endeavor to bind each of its approved subcontractors or approved subconsultants, if any, to the terms of this Agreement. In the event that a subconsultant or subcontractor is unwilling or unable to comply with any term or provision of this Agreement, Consultant will inform Authority of the specific term or provision at issue. Authority may accept the lack of compliance to the terms of this Agreement on the part of the subconsultant or subcontractor or may request that a different subconsultant or subcontractor be retained. This Agreement may be terminated by Authority if subcontracted or assigned, either in whole or in part, by the Consultant without the express written consent of Authority's representative.
- 13. <u>Independent Contractor</u>. In the performance of the Services, Consultant shall be, for all purposes, an independent contractor and not an employee or agent of Authority. Consultant and its employees and Subconsultants shall in no way represent themselves to third parties as agents or employees of Authority.
- 14. <u>No Unemployment Insurance or Workers' Compensation Benefits.</u> Consultant agrees that it is not entitled to unemployment insurance or workers' compensation benefits as a result of performance of the Services for Authority. Consultant is required to provide workers' compensation and unemployment insurance benefits for its employees and/or subconsultants as required by law.

- 15. <u>Payment of Taxes.</u> Consultant is solely liable for any federal, state and local income and withholding taxes, unemployment taxes, FICA taxes and workers' compensation payments and premiums applicable to the performance of the Services under this Agreement. Consultant shall indemnify Authority for any liability resulting from nonpayment of such taxes and sums.
- 16. <u>Insurance</u>. It is understood and agreed that Consultant and any and all subconsultants and agents currently have and shall keep in full force and effect the following minimum insurance coverages:
- 16.1 <u>Workers' Compensation Insurance</u>. The Consultant and each subconsultant and each subcontractor, if any, shall carry workers' compensation insurance to cover liability under the laws of the State of Colorado in connection with the Services performed pursuant to this Agreement. Consultant and each subconsultant or subcontractor shall carry separate policies.
- 16.2 <u>Commercial General Liability Insurance</u>. The Consultant and each subconsultant and subcontractor, if any, shall carry commercial general liability insurance, which shall include blanket contractual liability coverage. Such insurance shall be in an amount specified in the Colorado Governmental Immunity Act, § 24-10-101, *et. seq.*, C.R.S., as may be amended from time to time (currently \$424,000 per person, \$1,195,000 per occurrence for bodily injury and property damage).
- 16.3 <u>Automobile Liability Insurance</u>. The Consultant and each subconsultant and subcontractor, if any, shall carry automobile liability insurance to include owned, non-owned and hired vehicles used in the performance of Services under this Agreement. Such insurance shall be in the amounts specified in the Colorado Governmental Immunity Act § 24-10-101, *et. seq.*, C.R.S., as it may be amended from time to time (currently \$424,000 per person, \$1,195,000 per occurrence for bodily injury and property damage).
- 16.4 **Professional Liability Insurance.** Consultant and each subconsultant and subcontractor, if any, shall carry professional liability insurance in the amount of \$1,000,000 per claim and aggregate limit, unless an alternate amount is agreed to in writing by the Authority.

If not already provided, within fifteen days after the date of this Agreement, Consultant shall provide the Authority a certificate of insurance evidencing the insurance policies required by paragraphs 16.1, 16.2, 16.3 and 16.4 as well as the amounts of coverage for the respective types of insurance required. The required commercial general liability and automobile liability policies shall: (i) name the Authority as an additional insured for coverage only, with no premium payment obligation; (ii) provide that coverage for the Authority shall not be impaired Consultants or any subcontractor's failure to comply with any of the terms or conditions of the policy. Authority and each subcontractor shall provide certificates of insurance (and renewals thereof) identifying this Agreement and

demonstrating that the required coverages have been obtained. The Consultant shall not allow any subcontractor, agent or employee to commence work on any Services until appropriate certificates of insurance have been obtained and approved by the Authority, or the Authority has modified or waived the insurance coverage requirements. The coverages specified in each certificate of insurance shall not be terminate, reduced or modified without providing at least thirty (30) days prior written notice to the Authority.

- 17. <u>Compliance with Laws</u>. In performing this Agreement, Consultant shall comply with all applicable laws, rules and regulations, including but not limited to all federal, state and local laws.
- 18. <u>Communications</u>. It is understood by Authority and Consultant that successful progress under this Agreement requires frequent, concise, and documented communication between the Party's representatives. Authority hereby designates Bill Ruzzo and Jane Clary, each of whom individually or together shall have authority to give information to and receive information from Consultant. Authority may change its designated representative or name additional representatives from time to time.

Consultant hereby designates Christine Hawley, Principal Environmental Engineer, Owner/Partner of Hydros Consulting Inc., as its representative who shall give information to and receive information from Authority. Consultant may change its designated representative only with the prior written approval of Authority. Each designated representative shall have full authority to not only accept and receive information but also to accept notices, give approvals and to fully represent its respective Party for all purposes under this Agreement.

19. <u>Liability</u>. Consultant agrees to pay any damages and costs for any liability or claim of whatsoever kind or nature arising in any way out of this Agreement, to the extent caused by any negligent or wrongful act or omission of the Consultant, Subconsultants, or Consultant's and Subconsultants' officers, agents, or employees. This Paragraph 19 shall survive termination of this Agreement.

Notwithstanding anything to the contrary elsewhere in this Agreement, Consultant's liability to Authority shall not exceed the amount of the total compensation paid to Consultant under this Agreement. This capped liability provision shall apply to: (i) direct claims by Authority against Consultant; (ii) Consultant's obligation to defend, indemnify and hold harmless for third party claims; and (iii) Authority's access to Consultant's insurance coverage as an additional insured.

20. <u>Acceptance Not a Waiver</u>. The Authority's approval of studies, drawings, designs, plans, specifications, reports, computer programs and other work or material shall not in any way relieve Consultant of responsibility for the technical accuracy of the Services. The Authority's approval or acceptance of, or payment for, any Services shall not be construed to operate as a waiver of any rights under this Agreement, or of any cause of action arising out of the performance of this Agreement.

- 21. <u>Termination or Suspension</u>. The Authority reserves the exclusive right to terminate or suspend all or a portion of the Services under this Agreement by giving fourteen (14) days written notice to the Consultant. If any portion of the Services shall be terminated or suspended, the Authority shall pay the Consultant equitably for all services properly performed pursuant to this Agreement. If the work is suspended and the Consultant is not given an order to resume work within sixty (60) days from the Effective Date of the suspension, this Agreement will be considered terminated. Upon termination, the Consultant shall immediately deliver to the Board any documents then in existence, that have been prepared by the Consultant pursuant to this Agreement.
- 22. **<u>Default.</u>** Each and every term and condition of this Agreement shall be deemed to be a material element of this Agreement. In the event either Party shall fail or refuse to perform according to the material terms of this Agreement, such Party may be declared in default by the other Party by a written notice.
- Party shall be allowed a period of fifteen (15) days within which to correct or commence correcting the default. In the event that the default has not been corrected or begun to be corrected, or the defaulting Party has ceased to pursue the correction with due diligence, the Party declaring default may elect to (i) terminate this Agreement and seek damages; (ii) treat the Agreement as continuing and require specific performance; or (iii) avail itself of any other remedy at law or in equity.
- 24. <u>Term.</u> Unless sooner terminated in accordance with the provisions of paragraph 21 above, this Agreement shall remain in effect until the Services are fully performed, at which time the Agreement shall terminate and be of no further force and effect, except as to those provisions which expressly survive termination, including but not limited to Paragraphs 8, 9, 10, and 19.
- 25. **Force Majeure.** The Parties shall not be responsible for any failure or delay in the performance of any obligations under this Agreement caused by acts of God, flood, fire, war or public enemy or the failure of Authority to furnish timely information or to approve or disapprove Consultant's instruments of service within a reasonable period of time.
- 26. <u>Assignment</u>. Subject to the provisions of Paragraph 12, this Agreement shall bind and inure to the benefit of the Parties and their respective successors and assigns.
- 27. **No Third-Party Beneficiaries.** This Agreement is intended to benefit only the Parties and neither subconsultants, subcontractors nor suppliers of Consultant nor any other person or entity is intended by the Parties to be a third-party beneficiary of this Agreement.
- 28. <u>Governing Law.</u> This Agreement shall be governed by and construed under the laws of the State of Colorado.

29. <u>Notice</u>. All notices required or given under this Agreement shall be in writing and shall be deemed effective: (i) when delivered personally to the other Party; or (ii) seven (7) days after being deposited in the United States mail, first-class postage prepaid, properly addressed as follows; or (iii) when sent by facsimile transmission and receipt is confirmed by return facsimile transmission.

If to Consultant:

Jean Marie Boyer, Ph.D., P.E., Principal

Hydros Consulting Inc. 1628 Walnut Street

Boulder, Colorado 80302

If to Authority: Jane Clary, Technical Manager

Post Office Box 3166

Centennial, Colorado 80161

With a copy to: Timothy J. Flynn

Collins Cole Flynn Winn & Ulmer, PLLC 165 South Union Boulevard, Suite 785 Lakewood, Colorado 80228-1556

Or such other persons or addresses as the Parties may designate in writing.

- 30. Governmental Immunity. The Parties understand and agree that the Authority is relying upon, and has not waived, the monetary limitations of \$424,000 per person, \$1,195,000 per occurrence, and all other rights, immunities and protections provided by the Colorado Governmental Immunity Act § 24-10-101 *et. seq.*, C.R.S., as it may be amended from time to time.
- 31. **Entire Agreement.** This Agreement constitutes the entire agreement between the Authority and Consultant and replaces all prior written or oral agreements and understandings. It may be altered, amended, or repealed only by a duly executed written instrument.
- 32. **Effective Date.** This Agreement shall become effective as of January 1, 2023, once it is signed by an appropriate representative of each Party.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate original as of the date set forth above. This Agreement must have the signature of an authorized person of Consultant on both original copies.

AUTHORITY: CHERRY CREEK BASIN WATER QUALITY AUTHORITY

	By:	
	·	Joshua Rivero, Chairman of the Board
Attest:		
John A. McCarty, Secretary/Treasurer		
Approved as to Form:		
Timothy J. Flynn, General Counsel Cherry Creek Basin Water Quality Autho	rity	
This Agreement is accepted by:		
	HY	DROS CONSULTING INC.,
		olorado Corporation
	By:	
		Jean Marie Boyer, Ph.D., P.E., Principal
Attest:		
John Carron, Secretary		

By execution, signer certifies that he or she is authorized to accept and bind Consultant to the terms of this Agreement.



TECHNICAL MEMORANDUM

TO: Jane Clary, Cherry Creek Basin Water Quality Authority (CCBWQA) Technical

Manager

FROM: Christine Hawley, Hydros Consulting Inc.

SUBJECT: Development of Site-Specific Standard Values for TN and TP in Cherry Creek

Reservoir

DATE: September 26, 2022 (with minor revision, November 17, 2022)

The Water Quality Control Division (WQCD) has proposed table value standards (TVS) for total nitrogen (TN) and total phosphorus (TP) in a proponent's pre-hearing statement (PPHS; WQCD, 2022) for the November 2022 Rulemaking Hearing (RMH). This includes TN and TP standards that would be applicable to Cherry Creek Reservoir (CCR) if adopted. The November 2022 RMH has since been delayed to April 2023 by the Water Quality Control Commission (WQCC, 2022) in response to stakeholder concerns. At this time, it is unclear whether the currently proposed TN and TP standards will be modified prior to the April 2023 RMH.

At the request of CCBWQA, Hydros reviewed the WQCD methodology behind the currently-proposed TN and TP standards in the context of CCR (Hydros, 2022). Several concerns regarding overall methodology and data issues were noted. Additionally, it was determined that the proposed standards would not be appropriate for CCR. Further, it was recommended that CCBWQA move forward with efforts to develop site-specific standards for TN and TP for proposal at the next South Platte Basin RMH, currently scheduled to occur in 2025.

This memorandum summarizes the proposed approach, schedule, and budget to develop site-specific TN and TP standards for Cherry Creek Reservoir. Briefly, standard development is expected to be based on analysis of observed CCR data and use of the existing reservoir water-quality model. The scope of work (SOW) is scheduled for completion in 2023, with delivery of a draft technical memorandum summarizing findings and recommendations for next steps by December 31, 2023. There are two decision points built into the schedule to provide opportunities for CCBWQA to revise/refine the approach or discontinue the effort entirely based on information that will become available or be developed during 2023. The anticipated time and materials budget is \$87,755. An optional task for up to \$5,000, subject to CCBWQA approval, is also included to cover CCBWQA-requested participation by Hydros in any currently-unanticipated relevant meetings/communications. Finally, in addition, an asneeded budget for other Hydros support in 2023 is included, as requested. Descriptions of the proposed approach, schedule, and budget are provided in the following sections.

1 Approach

The objective of this effort is to develop reasonable and defensible site-specific standards for TP and TN in Cherry Creek Reservoir that support efforts to attain the site-specific chlorophyll a standard. The proposed TN and TP standards will be defined to reflect site-specific chlorophyll a response, to the extent reasonably possible.

To meet this objective, four tasks (plus one optional task and one as-needed task) are proposed, as follows:

Task 1. Review Results of April 2023 Hearing

The current WQCD-proposed TN and TP standards for lakes may or may not be modified by WQCD for the April 10, 2023 RMH. Hydros will follow those developments closely, considering implications for CCR. If revised TN and TP standards are proposed by WQCD for the April 2023 RMH, Hydros will evaluate the reasonable applicability of those values to CCR. Following the April 2023 RMH, Hydros will brief CCBWQA and discuss whether Tasks 2 through 4 are still needed or whether any modifications to the SOW may be needed. This is the first (of two) decision point in this SOW. For scheduling, it is anticipated that this coordination and any resulting change of direction for the SOW will be resolved by May 15, 2023.

Task 2. Technical Analysis to Develop Site-Specific Standard Recommendations

A technical approach will be developed and implemented to generate recommended site-specific nutrient standards. This effort will make primary use of the extensive CCR observed dataset.

Additionally, the existing mechanistic, hydrodynamic, water-quality model of the reservoir will be used in this process. It is anticipated that the model will be useful to support quantitative consideration of complexities introduced by the strong nitrogen limitation at CCR. This includes modeling to evaluate the effects of reducing phosphorus to levels that show phosphorus limitation. This also includes evaluating concerns about inadvertently exacerbating the dominance of nitrogen-fixing cyanobacteria if nutrient targets lead to inappropriate modification of the nutrient balance in the reservoir.

In consideration of this SOW, it is important to understand that any appropriate site-specific TN and TP standards developed for CCR are likely to be at values that will be routinely exceeded in the reservoir (particularly for TP). In other words, the eventual site-specific TN and TP standards will not eliminate regulatory nutrient concerns for CCR. The nutrient standards should be set to reflect the Chl a standard, and CCR fails to meet the 18 μ g/L Chl a standard in most years. Therefore, it follows that CCR would likely fail to meet appropriate nutrient standards in most years. The TN and TP standard values will ultimately be relevant to discharge permits as well as to eventual targeted, TMDL-based load reductions, so they should be developed based on a scientifically-defensible, site-specific analysis.

Task 3. Coordinate with WQCD and CCBWQA during Technical Analysis

If possible, the CCR site-specific standard development effort should be coordinated with the WQCD between now and the 2025 South Platte Basin RMH, keeping the WQCD staff apprised of the planned approach and findings. Ideally such coordination will allow WQCD to support the eventual site-specific standard proposal as it is brought to the WQCC at the 2025 RMH. For this SOW, two meetings with WQCD are envisioned following the April 2023 RMH. The first meeting with WQCD will be an informational meeting to share the planned general approach and schedule and to seek any initial reactions or recommendations. This first meeting will likely take place when Hydros is well into Task 2,

Hydros Consulting Inc. 1628 Walnut Street, Boulder, CO 80302

and no major changes to the approach are expected. The purpose of the second meeting with WQCD will be to present draft findings and planned values for the site-specific proposal. It is envisioned that each of those meetings will be preceded by internal coordination meetings between Hydros and CCBWQA. The meeting between Hydros and CCBWQA that precedes the second meeting with WQCD will serve as the second decision point in this SOW. At that meeting, Hydros will present the proposed site-specific standard recommendations to CCBWQA, and CCBWQA may decide whether or not to proceed with those recommendations. For budgeting purposes, it is assumed that all meetings will be remote.

Task 4. Prepare Technical Memorandum Summarizing Findings and Recommended Standards A technical memorandum summarizing the objective, approach, findings, and recommended site-specific nutrient standards will be prepared and provided to CCBWQA. The draft technical memorandum will be delivered electronically by the close of business on December 16, 2023. A final technical memorandum will be provided to CCBWQA within two weeks of receiving comments. It is assumed for budgeting purposes that required edits will be minimal and revisions will require no more than 8 hours. Note that this SOW does not include development of a site-specific standards proposal for the 2025 RMH or time for Hydros participation in the 2025 RMH. It is assumed that any such additional support will be included in a subsequent SOW.

Optional Task. Additional Meetings/Communications as Directed by CCBWQA

This optional task is included here recognizing that additional meetings and/or communication needs (beyond what is anticipated in Tasks 1 through 4) may arise to meet the objectives of this SOW in 2023. There is uncertainty regarding how the process will unfold and the need for additional coordination with CCBWQA and/or WQCD is possible. Any activities conducted under this optional task would only occur in response to CCBWQA direction and approval.

As-Needed Hydros Support in 2023

This additional as-needed budget of \$10,000 for calendar year 2023 is included to cover coordination between Hydros and CCBWQA personnel on any relevant topics that may arise in 2023. This may include participation in a brainstorming/planning meeting regarding the future use of models to support design/testing of watershed and/or in-reservoir management projects.

2 Schedule and Budget

The proposed schedule is summarized in Table 1, including key anticipated meetings, CCBWQA decision points, and deliverables. Dates are approximate, recognizing that meetings have yet to be schedule and will likely need some adjustment to accommodate WQCD and CCBWQA schedules. The entire SOW is scheduled to be complete in 2023, thought the final technical memorandum may follow in early 2024, depending on the timing of CCBWQA review.

Table 1. Summary of Anticipated Project Timeline

Project Milestone	Target
Hydros Briefing to CCBWQA Following April 2023 RMH	On or before April 24, 2023
CCBWQA Decision-Point to Stop, Proceed, Modify SOW	On or before May 15, 2023
Approach Meeting with WQCD	Mid-September 2023
Draft Findings Meeting with CCBWQA	End of October 2023
CCBWQA Decision-Point to Stop, Proceed, Modify SOW	Mid-November 2023
Draft Findings Meeting with WQCD	Late November 2023
Draft Tech Memo to CCBWQA	December 16, 2023
Final Tech Memo to CCBWQA	Two Weeks after Receiving Comments

The total anticipated budget for this project is \$87,755. The task-by-task cost estimate is summarized in Table 2. This total does not include costs for the optional task (additional meeting participation/communications development, as directed by CCBWQA). The optional task is assumed here to have a not-to-exceed budget of \$5,000, with activities under this task only occurring with approval by CCBWQA. The total in Table 2 also does not include an additional \$10,000 as-needed budget for CCBWQA-requested support from Hydros on any tasks outside of Tasks 1 through 4 in this scope of work that may arise in 2023.

Table 2. Summary of Estimated Cost by Project Task

Project Task	Anticipated Cost
Task 1: Review Results of April 2023 Hearing	\$8,455
Task 2: Technical Analysis	\$45,536
Task 3: Coordinate with WQCD and CCBWQA	\$19,862
Task 4: Tech Memo	\$13,902
Total Cost:	\$87,755*

^{*}Does Not Include Optional Task: Additional Meetings/Communications as Directed by CCBWQA (Optional Task not-to-exceed \$5,000).

3 References

- Hydros. 2022. Applicability of WQCD-Proposed TN and TP Standards to Cherry Creek Reservoir. Technical Memorandum from C. Hawley (Hydros) to J. Clary (CCBWQA). August 8, 2022.
- WQCC. 2022. Procedural Order Regarding Joint Motions to Continue Hearing; In the Matter Concerning the Adoption of Revisions to the Nutrients Management Control Regulation, Regulation #85, and Revisions Pertaining to Lakes Nutrient Criteria in the Basic Standards and Methodologies for Surface Water, Regulation #31. September 7, 2022.
- WQCD. 2022. Prehearing Statement of the Water Quality Control Division to the Colorado Water Quality Control Commission. August 3, 2022.

EXHIBIT B

Hydros Consulting Inc. Hourly Rate and Expense Schedule

Hourly Labor Rates

Name	Title	2023 Hourly Rate
Jean Marie Boyer, PhD, PE	Principal	\$260
John Carron, PhD	Principal	\$260
Christine Hawley, MS	Senior Managing Environmental Engineer	\$234
Steve Setzer, MS, PE	Senior Water Resources Engineer	\$228
Kevin Bierlein, PhD	Environmental Engineer	\$181
Cory McDonald, PhD	Environmental Engineer	\$180
Taylor Adams, MS, PE	Environmental/Water Resources Engineer	\$178
Nick Mander, MS, PE	Water Resources Engineer	\$176
John Craven, MS	Water Resources Engineer	\$173
Karen Tomari	Administrative Support	\$89

Rates valid January 1, 2023 - December 31, 2023. Expenses billed at cost; mileage at published Federal rate.

AS NEEDED CONSULTING SERVICES AGREEMENT

THIS AS NEEDED CONSULTING SERVICES AGREEMENT ("Agreement") is entered into as of the 19th day of January, 2023, to be effective as of January 1, 2023, between the CHERRY CREEK BASIN WATER QUALITY AUTHORITY, a quasi-municipal corporation and political subdivision of the State of Colorado ("Authority"), whose address is P.O. Box 3166, Centennial, CO 80161, and HYDROS CONSULTING INC., a Colorado corporation ("Consultant"), whose address is 1628 Walnut Street, Boulder, Colorado 80302, telephone number 303-284-1841. Consultant and Authority may hereinafter singularly be referred to as a "Party" and collectively as the "Parties."

RECITALS

- **WHEREAS**, the Authority was established for the purpose of preserving, protecting, and enhancing the water quality in the Cherry Creek Reservoir ("Reservoir") and the Cherry Creek Watershed ("Watershed"); and
- WHEREAS, Consultant, pursuant to prior agreements worked with and developed for Authority a comprehensive reservoir model for the Reservoir ("Reservoir Model") and will be assisting the Authority in the development of site-specific standards for the Reservoir pursuant to an additional agreement with the Authority ("Standards Agreement"); and
- WHEREAS, at times, questions arise with respect to the Reservoir and the Reservoir Model that Consultant is uniquely qualified to address; and
- **WHEREAS**, Authority desires to confer with Consultant from time-to-time for the purpose of obtaining advice and information with respect to the Reservoir Model and Reservoir management issues; and
- **WHEREAS**, Consultant is willing to consult with Authority on an as needed basis from time to time and Authority is willing to utilize Consultant for that purpose, upon the terms and conditions hereinafter set forth.
- **NOW, THEREFORE**, in consideration of the promises set forth herein, Authority and Consultant agree as follows:
- 1. <u>Scope of Services</u>. For calendar year 2023, Consultant agrees to make its representatives, including, but not limited to, Jean Marie Boyer and Christine Hawley, available to assist Authority and Authority's consultants in answering questions and providing information with respect to management scenarios and other questions that are related to the Reservoir Model, linkage of the Model to the Watershed Model, and questions related to the Reservoir in general.

- 2. <u>Authorization to Provide Services</u>. Consultant will perform services on an as needed basis, but only when requested to do so in writing by the Authority's Administrator.
- 3. <u>Compensation</u>. For the services performed for Authority during the Term of this Agreement, Consultant will be compensated in accordance with Consultant's 2023 fee schedule, a copy of which is attached hereto as **Exhibit A** and incorporated herein by this reference. Notwithstanding any other provision contained herein to the contrary, total compensation for services provided by Consultant under this Agreement shall not exceed \$10,000 without the Authority's Board of Directors prior express written consent.
- 4. <u>Separate Agreement</u>. This Agreement is a separate agreement that is being entered into between the Authority and Consultant and is in addition to the Standards Agreement. Services chargeable to and/or authorized under the Standards Agreement shall not be charged to or performed under this Agreement. Nothing contained in this Agreement shall be deemed to modify or anyway amend or supersede the Standards Agreement.

Notwithstanding the foregoing, however, the terms and provisions of the Standards Agreement relating to such things as method of payment, conflict of interest, records, audits, confidentiality of information and the like as set forth in paragraphs 6 through 23 of the Standards Agreement are incorporated into this Agreement as if fully set forth herein.

- 5. **<u>Binding Effect.</u>** This Agreement shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns.
- 6. <u>Severability</u>. In the event any one of more of the provisions of this Agreement shall for any reason be held to be invalid or unenforceable, the remaining provisions of this Agreement shall be unimpaired, and shall remain in full force and effect and shall be binding upon the Parties hereto.
- 7. <u>Compliance with Laws</u>. In performing this Agreement, Consultant shall comply with all applicable laws, rules and regulations, including but not limited to all federal, state and local laws.
- 8. <u>Counterpart Signatures</u>. This Agreement can be executed in counterparts, each of which taken together shall constitute one original document.
- 9. <u>Governing Law</u>. This Agreement shall be governed by and construed in accordance with the laws of the State of Colorado.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate original as of the dates set forth below. This Agreement must have the signature of an authorized person of Consultant on both original copies.

AUTHORITY:

CHERRY CREEK BASIN WATER
QUALITY AUTHORITY, a quasi-municipal
corporation and political subdivision of the State
of Colorado

By:	
•	Joshua Rivero, Chair
Date:	
CON	SULTANT:
HYD corpor	ROS CONSULTING INC., a Colorado ration
By:	
•	Jean Marie Boyer, P.E., Principal
Date:	

Exhibit A

Hydros Consulting Inc. Hourly Rate and Expense Schedule

Hourly Labor Rates

Name	Title	2023 Hourly
		Rate
Jean Marie Boyer, PhD, PE	Principal	\$260
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John Craven, MS	Water Resources Engineer	\$173
Karen Tomari	Administrative Support	\$89

Rates valid January 1, 2023 - December 31, 2023. Expenses billed at cost; mileage at published Federal rate.



To: CCBWQA Board of Directors

From: Jessica DiToro, PE, LRE Water and Jane Clary, Wright Water Engineers

Date: January 19, 2023

Subject: Lake Nutrients WQCC Rulemaking Hearing Rebuttal Statement – <u>Supplemental</u>

Request: That the CCBWQA Board of Directors approve the Lake Nutrients Criteria Rulemaking Hearing (RMH) Rebuttal Statement (Rebuttal) and authorize submittal to the Water Quality Control Commission (WQCC).

Issue: Please reference the Action Item Memorandum (AIM) "4e AIM Lake Nutrients Criteria RMH" included in the Board Packet that was circulated for review on Friday January 13, 2023 for full background and issue. This AIM is for the purpose of addressing the revised Lake Nutrients Criteria RMH Rebuttal that was included in the Supplemental Board Packet that was circulated for review on Wednesday January 18, 2023.

CCBWQA's legal counsel, Zach Miller (Davis Graham and Stubbs (DGS)) provided CCBWQA Staff with edits to the Rebuttal after the January 13, 2023 packet had been sent out. Staff reviewed these edits and deemed them consistent with the direction given by the Regulation 38 RMH Subcommittee on December 28, 2022. The edits were editorial in nature and can be viewed as redlines in the revised Rebuttal included in the Supplemental Board Packet.

The most substantial change to the Rebuttal proposed by DGS was the addition of the following sentence at the end of Rebuttal Section II (page 5): "These technical inconsistencies further highlight the uniqueness of Cherry Creek Reservoir and the need for a deferral of the effective date of the Division's proposed standards for this waterbody so that the ongoing process of developing appropriate site-specific standards can be properly completed." The intention of this addition was to tie this section into our "ask". Staff agrees with this addition.

The request and motion have not changed from the AIM that was included in the January 13, 2023 Board packet.

Budget: Participation in this RMH effort is covered under the current CCBWQA regulatory budget for fiscal year 2023.

Motion: The CCBWQA Board of Directors moves to approve the Lake Nutrients Criteria Rulemaking Hearing Rebuttal Statement and authorize legal counsel to submit it to the to the Water Quality Control Commission.

WATER QUALITY CONTROL COMMISSION STATE OF COLORADO

REBUTTAL STATEMENT OF CHERRY CREEK BASIN WATER QUALITY AUTHORITY

IN THE MATTER OF PROPOSED ADOPTION OF REVISIONS TO THE CLASSIFICATIONS AND NUMERIC STANDARDS FOR SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN, REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN, REGULATION #38 (5 CCR 1002-38)

The Cherry Creek Basin Water Quality Authority ("CCBWQA" or the "Authority"), by and through its counsel, Davis Graham & Stubbs LLP, submits this Rebuttal Statement ("Rebuttal") for the above captioned matter to the Colorado Water Quality Control Commission ("Commission").

I. EXECUTIVE SUMMARY

The CCBWQA opposes adoption of the Water Quality Control Division's ("WQCD" or "Division") proposal to add table value standards for total phosphorus (TP) and total nitrogen (TN) to Cherry Creek Reservoir (COSPCH02) in April 2023. The reservoir already has a more stringent site-specific chlorophyll- α standard of 18 μ g/L in Regulation 38, stringent TP limits (0.05 μ g/L) for dischargers in Control Regulation 72, robust requirements for stormwater management in Control Regulation 72, and active nonpoint source pollution abatement projects underway. The CCBWQA has collected long-term data suitable for development of site-specific nutrient standards.

The CCBWQA continues to respectfully request that the Commission consider and adopt a delayed effective date of December 31, 2025, for warm lake TP and TN table value standards in Cherry Creek Reservoir (COSPCH02), to allow time for the CCBWQA to utilize its extensive long-term data, supported by linked watershed and reservoir models if needed, to develop appropriate and protective site-specific standards for the Cherry Creek Reservoir for consideration at the June 2025 Regulation 38 Rulemaking Hearing.

II. RESPONSE TO EPA'S RESPONSIVE PREHEARING STATEMENT

In EPA's Responsive Prehearing Statement (RPHS), EPA requested that the Division "reevaluate the proposed standards for Chatfield Reservoir (TN) and Cherry Creek Reservoir (TN and TP). The proposed values were not calculated from the chlorophyll-α standards that have been established as goals for these two water bodies." Additionally, EPA provided two pages of discussion regarding Cherry Creek Reservoir in its RPHS (pp. 23 & 24 of EPA's RPHS). In this Rebuttal, CCBWQA is providing additional information in response to EPA's general statement, as well as specific technical comments and areas of disagreement.

Overall Response

CCBWQA has two primary responses to EPA's overarching comment regarding Cherry Creek Reservoir nutrient standards:

- 1. CCBWQA agrees with EPA that Cherry Creek's site-specific chlorophyll-α standard warrants corresponding site-specific (or unique) standards for phosphorus and nitrogen.
- 2. CCBWQA disagrees with EPA that the Division's <u>proposed</u> statewide methodology should be applied to Cherry Creek Reservoir because the Division's methodology does not represent <u>or account for site-</u>

specific conditions in Cherry Creek Reservoir as described in the analysis provided in CCBWQA's RPHS. Adoption of known incorrect standards for the Reservoir is <u>counterproductive and</u> not helpful to CCBWQA in working towards its goal of improving water quality in the Reservoir and could inhibit development of more appropriate <u>site-specific</u> standards due to statutory constraints related to CCBWQA's involvement with regulatory processes. *See* C.R.S. 25-8.5-101(2) ("the authority shall expend funds only pertaining to the water quality standards, control regulations, or similar regulations regarding the water quality of Cherry Creek and Cherry Creek reservoir if such expenditures are clearly consistent with improving, protecting, and preserving such water quality.")

Since the submittal of our RPHS, the CCBWQA has completed the following concrete steps towards developing site-specific standards for the Reservoir to ensures that phosphorus and nitrogen standards properly correspond to Cherry Creek Reservoir's site-specific chlorophyll- α standard:

- 1. Authorized over \$90,000 in the 2023 budget to conduct a technical analysis to develop and propose site-specific standards for TP and TN.
- Developed a scope of work that outlines the general approach to developing the site-specific standard, including working collaboratively with WQCD and utilizing parts of the WQCD's standards approach that are appropriate for the Reservoir (e.g., growing season averages, allowed once in five-year exceedance).
- 3. Signed a contract to complete the work with a December 2023 deliverable schedule.
- 4. Shared the work plan with the WQCD staff and discussed the approach with Colorado Parks and Wildlife.

Additionally, as stated in our RPHS, if the CCBWQA fails to propose appropriate site-specific standards, then CCBWQA's proposed Statement of Basis and Purpose language indicates the Division's Table Value Standards would apply.

Specific Response to Technical Comments Provided by EPA on pp. 23-24

CCBWQA would also like to respond rebut and correct to the following inaccurate technical EPA's comments on pp. 23-24 of their EPA's RPHS. We agree with EPA that Cherry Creek Reservoir does not meet its chlorophyll α standard, is typically nitrogen limited, and that ongoing work is needed to reduce nutrient loading to the Reservoir and improve conditions in the Reservoir. CCBWQA has planned over \$5 million in work for 2023 specifically for this purpose, with examples of CCBWQA's efforts provided in its RPHS. Additionally, CCBWQA would like to clarify and correct several specific statements made by EPA in its RPHS for purposes of the hearing recordSpecifically:

EPA Responsive Comment #4) "Summer average TN levels in Cherry Creek Reservoir have been comparatively stable over time. By contrast, it is clear that TP has increased to higher concentrations"

> CCBWQA's Response: While CCBWQA agrees with EPA that the seasonal average TN concentrations have remained within a similar range over time; however, there is a notable reduction in seasonal variability since 2017 (Figure 1). With regard to TP, CCBWQA recognizes that TP concentrations are higher than they were in the 1990s, along with significant year to year variation in TP. CCBWQA also observes that the average seasonal TP concentration in Cherry Creek Reservoir has been notably lower over the last two years. The seasonal TP was 76.8 μg/L in 2021 and 66.2 μg/L in 2022, which were both below the interim standard criteria of 83 μg/L. The seasonal TP concentrations have not been this low since 2002.

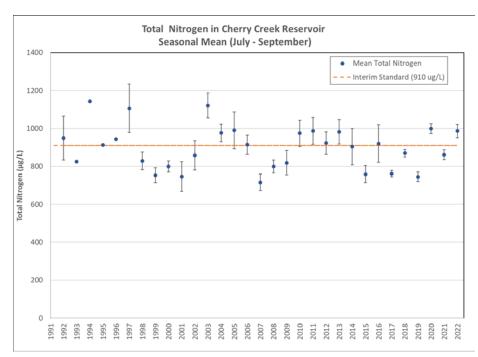


Figure 1. Total Nitrogen in Cherry Creek Reservoir, Seasonal Average, 1992-2022.

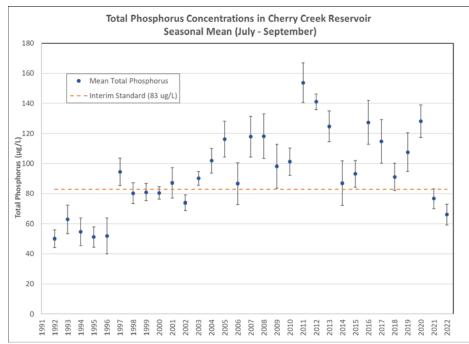


Figure 2. Total Phosphorus in Cherry Creek Reservoir, Seasonal Average, 1992-2022.

EPA Responsive Comment #5) "For example, the 80th percentile concentration was 115 μ g/L TP over the most recent 5-year period (2017-2021). By comparison, when a TP standard was first established, the 1985 SBP noted that 'the adopted standard of 35 μ g/L TP (corresponding roughly to 15 μ g/L chl a) is higher than the 1982 ambient level of 30 μ g/L P but will preserve the quality of the recreational and aquatic uses.' This comparison shows that TP levels in Cherry Creek Reservoir have increased substantially since 1982."

 \triangleright CCBWQA's Response: The most recent two years that the chlorophyll-α standard was met were in 2015 (16.2 μg/L) and 2019 (16.0 μg/L). In 2015, the seasonal TP concentration was 93.2 μg/L and the seasonal TN concertation was 759.3 μg/L. In 2019, the seasonal TP concentration was 107.6 μg/L and

the seasonal TN concentration was $683.8 \,\mu\text{g/L}$. In both of these years when the chlorophyll- α standard was met, the seasonal TN concentration was below the interim TN criteria of $910 \,\mu\text{g/L}$; however, the seasonal TP concentrations were not below the interim TP criteria of $83 \,\mu\text{g/L}$. This provides examples of how the Cherry Creek Reservoir's chlorophyll- α response to nutrients is unique.

EPA Responsive Comment #6) "That TP has increased over time could potentially be a signal that, under current conditions, the phytoplankton community is more often limited by N during summer (compared to P). This would be consistent with the Cherry Creek Reservoir nutrient enrichment study results. Thus, the data suggest that it would be appropriate to implement a dual control approach (i.e., to reduce the concentrations of both nutrients). For example: 'Nutrient enrichments showed response of phytoplankton biomass to N on all dates. In only one case (14 July 2003) was there also a response to P.' 'Concentrations of total soluble P (TSP) were high throughout the growing season in the upper water column of Cherry Creek Reservoir, and soluble reactive P (SRP) was consistently detectable.'"

CCBWQA's Response: The Lewis et al. (2008) publication utilized data from a microcosm study completed on only 8 dates in 2003. The CCBWQA has a robust database that includes over 30 years of data. The CCBWQA's Cherry Creek Reservoir dataset demonstrates that even during periods of nitrogen limitation, total algal biovolumes are very high and a significant percentage is composed of cyanobacteria during the summer months. During the last five years (2018-2022), total phytoplankton biovolume averaged almost 3.7M μm³/mL annually and 3.5M μm³/mL seasonally (July through September). Of the total biovolume, cyanobacteria averaged almost 600K μm³/mL (16% of the total) annually and 1.1M μm³/mL (32% of the total) seasonally (July through September).

The Lewis et al. (2008) publication also states:

"One risk of N management could result from an unexpected change in physical conditions that renders N fixation more effective, thus undermining N management. In Cherry Creek Reservoir, for example, greater stability of the water column caused by changes in water management or even climate warming could create more favorable conditions for N fixers.

Cherry Creek Reservoir is an illustration of the importance of nutrient saturation to nutrient management in lakes. Wherever phosphorus saturation is continuous and N fixers are absent, present only sporadically, or of low abundance, suppression of phytoplankton biomass by P management may be feasible in some cases, but quite impractical in others, and typically will involve an initial interval of P suppression that produces no suppression of phytoplankton biomass."

Cherry Creek Reservoir is a nutrient-enriched environment; therefore, consideration of changes to nutrient dynamics is important to avoid unintended negative impacts. Total inorganic nitrogen (TIN), the form most readily available for uptake by algae, is consistently limited in the Cherry Creek Reservoir during the summer months and during periods of severe cyanobacteria blooms. Ratios of TIN to soluble reactive phosphorus (SRP) demonstrate that Cherry Creek Reservoir has been nitrogen-limited since at least the 1990s, but at the same time, phytoplankton dynamics have shifted. Although nitrogen-fixing species were not present during the 2008 Lewis study, recent microscopic analysis by Phycotech, Inc. of cyanobacteria responsible for the significant blooms in 2016-2021 confirmed the presence of heterocysts. Heterocysts are differentiated cells formed by cyanobacteria specialized for nitrogen-fixation; their presence confirms that nitrogen-fixation by cyanobacteria in Cherry Creek Reservoir is occurring.

¹ Lewis, W.M. Jr., J.F. Saunders, and J.H. McCutchan, Jr. 2008. Application of a nutrient-saturation concept to the control of algae growth in lakes. Lake and Reservoir Management. 24:41-46. https://www.tandfonline.com/doi/abs/10.1080/07438140809354049

² Downing, J.A., S.B. Watson, and E. McCauley. 2001. Predicting cyanobacteria dominance in lakes. Canadian Journal of Fisheries and Aquatic Sciences. 58: 1905–1908. https://cdnsciencepub.com/doi/10.1139/f01-143

Due to the presence of nitrogen-fixing cyanobacteria in Cherry Creek Reservoir that have been responsible for multiple severe blooms requiring closure based on toxin production, CCBWQA continues to believe that the most effective nutrient management strategy for Cherry Creek Reservoir should continue to focus on phosphorus management prior to the implementation of nitrogen controls due to the potential of the unintended consequences described by Lewis et al. (2008).

Lastly, based on review of CCBWQA's long-term data set, we would like to clarify that SRP is not "consistently detectable" as EPA claims, and concentrations are demonstrating a decreasing trend over time. Over the last 5 years (2018-2022), concentrations of SRP were below the detection limit (1 μ g/L) during approximately 11% of the monitoring events. When comparing the past five years of SRP data to the historical mean (2002-2017), SRP was below the detection limit (2 μ g/L³) 4% of the time during the year and 3% during the season (July through September).

These technical inconsistencies further highlight the uniqueness of Cherry Creek Reservoir and the need for a deferral of the effective date of the Division's proposed standards for this waterbody so that the ongoing process of developing appropriate site-specific standards can be properly completed.

III. SUMMARY OF CONCERNS WITH THE ADOPTION OF TABLE VALUE STANDARDS FOR TP & TN IN APRIL 2023

CCBWQA's RPHS describes the reasons that the CCBWQA requests a delayed effective date for the Division's table value standards so that the CCBWQA has time to propose appropriate site-specific standards at the June 2025 Regulation 38 Rulemaking Hearing. These reasons, which are described further in this RPHS, are briefly re-summarized as follows for convenience:

- 1. The Cherry Creek Reservoir and watershed are unique and complex systems that are not appropriately represented by the stressor-response relationships in the proposed Table Value Standards.
- 2. Elevated background TP concentrations in the Cherry Creek Basin and extreme N:P ratios in the Cherry Creek Reservoir are well documented unique conditions that warrant site-specific standards.
- 3. Significant nutrient controls and reductions for point sources are actively occurring in the basin under Control Regulation 72. This includes wastewater treatment plant discharge limits of 0.05 μ g/L of total phosphorus and compliance schedules for nitrogen reduction.
- 4. Advanced stormwater and nonpoint source controls are being implemented in the basin under Control Regulation 72, with stringent stormwater requirements for developments triggered at thresholds well below the statewide 1-acre disturbance threshold.
- 5. The CCBWQA is actively working towards site-specific standards and better understanding watershed nutrient loading and reservoir dynamics. A budget, contract and initial work plan are complete with a deliverable schedule.
- 6. Unique statutory constraints exist for CCBWQA that constrain some types of participation in standards revisions. Particularly if either the site-specific phosphorus or nitrogen standards have higher numeric values than proposed by Division, we have significant concerns about perceived backsliding and constraints related to effective participation in the 2025 Regulation 38 Rulemaking Hearing.

Additional discussion of these themes was provided in CCBWQA's RPHS and is not repeated in this Rebuttal Statement.

 $^{^3}$ Detection limits prior to 2016 have varied between 2 and 5 $\mu g/L.$

IV. SUMMARY OF REQUEST

The CCBWQA continues to respectfully request that the Commission consider and adopt a delayed effective date of December 31, 2025, for warm lake TP and TN table value standards in Cherry Creek Reservoir (COSPCH02), to allow time for the CCBWQA to utilize its extensive long-term data, supported by linked watershed and reservoir models if needed, to develop appropriate and protective site-specific standards for the Cherry Creek Reservoir for consideration at the June 2025 Regulation 38 Rulemaking Hearing.

V. <u>WITNESSES</u>

The CCBWQA's witnesses were identified in its RPHS and no additional witnesses have been added.

VI. EXHIBITS

The CCBWQA's exhibits were provided in its RPHS. No additional exhibits have been added to this Rebuttal.

VI. RESERVATIONS

The CCBWQA reserves the right to present testimony, witnesses, and exhibits for purposes of the rebuttal statement and at the hearing, to use demonstrative aids at the hearing that contain information provided in any exhibits and testimony supplied by the CCBWQA, to present alternative language to the proposed revisions to Regulation No. 38, to respond to alternate proposals submitted by any party, and to address future changes to any alternate proposals of any party.

Respectfully submitted this 15th day of February 2023.

Davis Graham & Stubbs LLP

By:	
	Andrea M Bronson, Reg. No. 40620
	Zach C Miller, Reg. No. 10796

Davis Graham & Stubbs LLP 1550 Seventeenth Street, Suite 500 Denver, CO 80202 Telephone: (303) 892-9400

Facsimile: (303) 893-1379 <u>andrea.bronson@dgslaw.com</u> zach.miller@dgslaw.com

CERTIFICATE OF SERVICE

I, Andrea Bronson, hereby certify that a true and correct copy of the attached Responsive Prehearing Statement of Cherry Creek Basin Water Quality Authority was served by e-mail transmission on the 21st day of December 2022 on the office of the Water Quality Control Commission, addressed to:

Water Quality Control Commission Attn: Jeremy Neustifter 4300 Cherry Creek Drive South Denver, Colorado 80246-1530

email: cdphe.wqcc@state.co.us

Andrea Bronson