CHERRY CREEK BASIN WATER QUALITY AUTHORITY

CHERRY CREEK RESERVOIR WATERSHED

TRADING PROGRAM GUIDELINES

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CHERRY CREEK BASIN WATER QUALITY AUTHORITY TRADING PROGRAM GUIDELINES

I. ESTABLISHMENT OF TRADING PROGRAM

- Legal Basis: The Cherry Creek Basin Water Quality Authority ("Authority") is authorized to implement and maintain a Trading Program in the Cherry Creek Watershed that allows phosphorus trading from the Phosphorus Bank. The Trading Program and these trading guidelines ("Guidelines") are developed pursuant to the Cherry Creek Basin Water Quality Authority Enabling Act, C.R.S. '25-8.5-101, et seq. and the Cherry Creek Reservoir Control Regulation, 5 C.C.R. 1002-72 ("Control Regulation"). The Authority will administer and oversee the Trading Program.
- **B.** <u>**Purpose:**</u> The Control Regulation allows Allocatees to receive phosphorus pounds for new or increased phosphorus wasteload allocations from the Phosphorus Bank in exchange for phosphorus loading reductions from nonpoint source control projects ("Projects") built by the Allocatees or third parties. The goal of the Trading Program is to encourage and facilitate the construction of Projects.
- C. <u>Scope</u>: These Guidelines provide for phosphorus trading, from new projects, through the Trading Program.

The Trading Program allows landowners, local governments, and Allocatees to construct phosphorus removal projects and receive Credits for their own use or for transfer by the Project Owner to an Allocatee (New Trade Projects). A Trade Ratio will be established for each Project on a project-specific basis. Through the Phosphorus Bank, New Trade Projects that have final approval from the Authority shall have the traded pounds of phosphorus credited to the entity instituting the Project, subject to use by the Project Owner or transfer to an Allocatee.

- **D.** <u>**Definitions:**</u> All definitions contained in the Cherry Creek Control Regulation at 5 C.C.R. 1002-72, '72.2 ("Control Regulation") apply to these Guidelines. The following definitions also apply:
 - 1. *Allocatees* are point source dischargers, holders of wastewater reuse authorizations, entities providing land applications, industrial dischargers, and any entities requiring a load or wasteload allocation ("Total Maximum Annual Load" or "TMAL") under the Cherry Creek Control Regulation.
 - 2. *Authority* is the Cherry Creek Basin Water Quality Authority, as created by its Enabling Act, C.R.S. '25-8.5-101, et seq.

- 3. *BMPs* are best management practices as set forth in the Authority's "Cherry Creek Reservoir Watershed Stormwater Quality Requirements," adopted February 16, 2000, as updated.
- 4. **Board** is the Board of Directors of the Cherry Creek Basin Water Quality Authority, as established under C.R.S. '25-85-106.
- 5. *Commission* is the Water Quality Control Commission of the Colorado Department of Public Health and Environment.
- 6. *Control Regulation* is the Cherry Creek Reservoir Control Regulation, 5 C.C.R. 1002-72, '72.1, et seq.
- 7. *Credits* represent the pounds of phosphorus awarded a Project Owner or Allocatee as a result of a Trade under these Guidelines.
- 8. *Division* is the Water Quality Control Division of the Colorado Department of Public Health and Environment.
- 9. *Empirical Modeling* means a calculation, series of calculations, or model that quantifies the net nonpoint source phosphorus removed by a Project.
- 10. *New Trade Projects* are projects constructed for Phosphorus Credits as part of the Trading Program.
- 11. *Phosphorus Bank* consists of those certain credits that can be assigned by the entity instituting the nonpoint source project, held as credits for possible future use by the entity instituting the trade or its designee, or permanently retired to further protect water quality.
- 12. *Project* means a structural nonpoint source control project or nonstructural practice designed or intended to remove or retain phosphorus that would otherwise enter the Cherry Creek Reservoir or a tributary thereto. Examples are nonstructural practices that reduce phosphorus loads beyond required BMPs.
- 13. *Project Owner* means the owner or authorized representative of the New Trade Project.
- 14. *Technical Advisory Committee ("TAC")* is the subcommittee created by the Cherry Creek Board of Directors to, among other tasks, review New Trade Projects.
- 15. *Trade Ratio* represents the pounds of nonpoint source phosphorus removal required by a New Trade Project to establish one pound of Credit.

16. *Trade Credits or Transferred Credits* are pounds of phosphorus Credits approved by the Authority for New Trade Projects, which are held by the Project Owner or a subsequent Allocatee.

II. <u>NEW TRADE PROJECTS</u>

- A. <u>Potential Trading Opportunities and Limitations</u>: Eligible projects are those New Trade Projects which the Authority may approve. Eligible projects for trading are:
 - 1. <u>Additions to Existing Development</u>. Land development activities undertaken prior to January 1, 2000 for which BMPs were not constructed during the original development activities qualify for the addition of BMPs to the project. The phosphorus removals from such added BMPs are available for trading.
 - 2. <u>Expanded or Retrofitted BMP Removals</u>. Land development activities undertaken prior to January 1, 2000 which implemented required BMPs qualify for expanded or retrofitted BMPs to achieve a higher level of phosphorus removal. For such enhanced BMP removal projects, only the increase in phosphorus removal beyond the existing BMP removals is available for trading.
 - 3. <u>Projects Beyond Required BMPs</u>. BMPs for new development (development subsequent to January 1, 2000) that demonstrate phosphorus reduction greater than that resulting from the implementation of the required BMPs through the provision of additional physical, biological, or chemical processes, or through enhanced operational or maintenance procedures.
 - 4. <u>Cooperative Authority Projects</u>. When the Authority constructs or funds a new nonpoint source project in partnership with a third party, only that portion of the project constructed or funded by the third party shall be eligible for Trade Credits, on a pro rata basis.
 - 5. <u>Engineered Authority Projects</u>. Any nonpoint source project for which the Authority has completed preliminary engineering and design may be constructed by a third party and be eligible for Trade Credits, provided the Authority agrees to the third party's construction of such project as a New Trade Project.
 - 6. <u>Water Supply Operations</u>. Municipal water supply activities that are specifically modified or designed to remove phosphorus beyond the incidental reductions from regular, normal operations shall be eligible for Trade Credits for the additional phosphorus pounds removed. For example, Trade Credits may be available for additional phosphorus removals (beyond normal operations) from:
 - a. projects which pump and treat alluvial waters to remove background or nonpoint phosphorus, provided the alluvial waters

are not supplied for any beneficial uses such as drinking water or irrigation; or

- b. interception and treatment of lawn irrigation return flows to remove phosphorus loads beyond BMP removals.
- **B.** <u>**Trade Ratio and Credits:**</u> The Trade Ratio is applied to the pounds of phosphorus removed by a Trade Project to determine the pounds of Credit. The Trade Ratio and resulting Credits are specific determinations for each <u>**New**</u> Trade Project and shall be decided on the following factors:
 - 1. Calculation of the eligible Project's (or eligible portion of a multi-use Project) annual phosphorus removals expected;
 - 2. The minimum Trade Ratio is 2:1, so that for every 2 pounds of total phosphorus removed by a Project, there is 1 pound of Credits available (the minimum Trade Ratio of 2:1 incorporates a margin of safety to address potential uncertainty associated with nonpoint source reductions);
 - 3. Trade ratios may be further adjusted up to assure that:
 - a. The relative load of dissolved and particulate phosphorus between the nonpoint source loading reduced by the Project, and the point source that receives the trading Credit, are comparable; and
 - b. The fate and transport characteristics (<u>e.g.</u>, chemical and physical transformations and time of travel) of the reduced and controlled phosphorus to be traded from a Project are similar to or pose a greater risk of impact upon the Reservoir than the phosphorus loading to be discharged from the point source receiving the Credit.
 - 4. Calculation of the Trade Ratio and Credits shall be determined initially upon site-specific monitoring data, empirical modeling, and/or best available scientific evidence involving similar types of Projects, so as to characterize the expected annual phosphorus loading reduction to be achieved by the Project.
- C. <u>Authority Criteria in Considering Trades</u>: In considering whether to approve a trade proposal and the limitations, if any, to impose thereon, the Authority shall consider the following criteria:
 - 1. Consistency with these Guidelines and the Control Regula`ion, including, but not limited to:

- a. implementation of BMPs for the Project and areas to be served by the Project;
- b. direct discharges which comply with the effluent concentrations in compliance with the Owner's or Allocatee's effluent limitations for phosphorus set forth in its discharge permit, except after August 1, 2004, such phosphorus effluent concentrations shall not exceed 0.05 mg/l total phosphorus as a 30-day average; and
- c. land application of treated wastewater which complies with the phosphorus effluent limitations set forth in the Control Regulation.
- 2. Predicted effect on the water quality in the Cherry Creek Watershed and the Cherry Creek Reservoir;
- 3. Completeness and technical soundness of the Project, including, but not limited to, the reliability of the nonpoint phosphorus removal technology being utilized. For new types of projects, the Project Owner shall provide information on the functioning and removals by other similar projects and engineering valuations of the Project's anticipated effectiveness;
- 4. The operations, maintenance, and legal protocols to assure continuous control and operation of the Project;
- 5. Extent and sufficiency of construction BMPs during construction of the Project;
- 6. Adequacy of the Project proposed monitoring plan to characterize and evaluate the annual phosphorus loading reduction achieved by the Project;
- 7. Financial capability of the Owner to construct the Project and viability of the Owner's plan to finance the continuous control and operation of the Project;
- 8. Receipt of, or specific plans and schedules for obtaining, approvals necessary for construction, implementation, and operation of the Project, such as water rights, modifications to water decrees, and zoning or land use modifications;
- 9. Evaluation and comments from the Division and the TAC; and

- 10. Likelihood of completion of a New Trade Project:
 - a. If a Project has been completed, and Credits are sought, Credits may be awarded.
 - b. If a Trade Project has not been constructed, consideration shall also be given to the Project's scheduled completion date.
- 11. No Trade Credits will be awarded for Projects constructed to offset penalties or required to be constructed pursuant to consent decrees or court orders, including, but not limited to, supplemental environmental projects.

D. <u>Applications for New Project Trades</u>:

- 1. <u>Pre-Application Discussion.</u> Project Owners shall consult with the TAC to discuss the proposed Project and to consider the applicability of these Guidelines. Prior to the Pre-Application discussion, the Project Owner must submit to the TAC a Project Summary, in the format set forth in Appendix A. The TAC will present the Project Summary to the Board at the following monthly Board meeting for information and direction on review of the full application.
- 2. <u>Application</u>. An entity seeking approval for a New Trade Project shall file:
 - a. two (2) sets (one hard copy and one electronic file, (preferably in PDF format) of its Project Application with the Authority at the office of the Authority's Administrator; and
 - b. one hard and electronic copy with the Water Quality Control Division.

Applications shall be filed concurrently with the Authority and the Water Quality Control Division at least 30 days prior to the monthly Authority TAC meeting or the Authority will process the application in the following monthly meeting cycle.

- 3. Contents of Application. Any Application for a Project shall include, at a minimum, the following:
 - a. Name and address of the Project Owner;
 - b. Name, address, and contact information for Project Owner's representatives;

- c. Project Summary, in format and with contents shown in Appendix A.
- d. A description of the Project and its specifications, including, but not limited to:
 - (i) General location of the Project and, if known, the Allocatee and its point of discharge;
 - (ii) A map (8-1/2" x 11" or 11" x 17") to scale, showing the location of the Allocatee's point of discharge (if known), the proposed Project, the Reservoir, and major drainageways(s) from the Project and discharge point(s) to the Reservoir;
 - (iii) Description of the type of Project, e.g., new facility or retrofit of existing facility, extended detention basin, wetlands, water reuse, or other. Some narrative may be appropriate; and
 - (iv) Sketch and/or diagram of the proposed Project.
- e. Adequate information demonstrating that the proposed Project is an eligible Project within these Guidelines and the Control Regulation;
- f. Evidence of ownership or sufficient legal controls over the Project site;
- g. Proposed Trade Ratio and estimate of Credits requested and supporting technical bases for the Trade Ratio and Credits;
- h. Explanation of why the trade should occur, addressing each of the Authority's criteria in considering Trades, Section II, to the extent not already addressed elsewhere in the Application;
- i. Schedule for final design, construction and completion of the Project. Construction must be scheduled to commence within 2 years of approval. Failure to commence physical construction within 2 years of approval will result in the automatic forfeiture of the approved Credits. Applicants may, within 2 years of approval, petition for an extension of the commencement deadline, which extension will be granted or denied at the discretion of the Authority;
- j. Operation and maintenance plans for the Project;
- k. Evidence of sufficient financial resources to construct, operate, and maintain the Project throughout its expected life;

- 1. Plans for monitoring and reporting the Project's annual performance and verification of monitoring the Project to substantiate Credits;
- m. Payment of the Application Fee and deposit for Direct Costs, and agreement to pay all Direct Costs;
- n. Certification that the Project is not mandated nor required by any enforcement action, order, or consent decree for water quality violations or exceedances, nor is the project constructed as a supplemental environmental project, mitigation, offset, or in lieu of any fine or penalty;
- o. Proposed use and disposition of the Credits by the Project Owner, Allocatee, or retention in the Trade Credit Bank; and
- p. Such other information or data as the Project Owner, the Authority, or the TAC may determine is necessary or desirable in evaluating the request.

If an Application is incomplete, it shall be returned to the Project Owner with an identification of the additional information needed to evaluate the Project. An Application shall be considered complete unless it is returned as incomplete to the Project Owner within forty-five (45) days after submittal to the Authority.

- 4. <u>TAC</u>. Following submittal of the Application, the Project Owner shall present the Project to the TAC at its next meeting.
- 5. <u>Application Costs</u>.
 - (a) <u>Application Fee</u>. An initial non-refundable fee of \$100 shall be submitted with the Application.
 - (b) <u>Direct Costs</u>. The Project Owner shall deposit \$2,500.00 with the Authority for Direct Costs. The Authority will charge the Project Owner for Direct Costs incurred by the Authority to review the Application, including costs of consultants to review the Application and advise the Authority. Such Direct Costs will be assessed regardless of the outcome of the Application. The Direct Costs shall be paid from the Project Owner's deposit for Direct Costs. Within 30 days following the Board's decision or the Projects Owner's withdrawal of the Application, the Authority shall remit to the Project Owner all amounts remaining in the deposit for Direct Costs not spent for the Application review. If

the deposit for Direct Costs is insufficient to cover the Direct Costs related to the Project Owner's Application, the Project Owner shall pay such additional Direct Costs. Upon request by the Project Owner, the Authority shall provide invoices or other documentation supporting the Direct Costs.

- 6. <u>TAC Review</u>: The TAC shall review all Applications for New Trade Projects. The TAC review shall include the following:
 - a. <u>Completeness Review</u>. Applications will be reviewed for completeness;
 - b. <u>Division Comments</u>. The TAC shall solicit and consider comments and evaluations of New Trade Applications by the Division prior to making a recommendation to the Authority Board;
 - c. <u>Trade Criteria</u>. The TAC shall consider and apply the criteria in Section II of these Guidelines in its review; and
 - d. <u>commendations and Advice to the Board</u>. Following completion of its review, the TAC shall recommend to the Board whether the proposed New Trade Project should be approved, conditionally approved, or denied.
- 7. <u>Authority Review of New Trade Project</u>. Before making a final decision on a proposed New Trade Project, the Authority shall hold a hearing on the Project. At least 10 days prior to the hearing, the TAC and other interested parties, if any, shall submit to the Board and the Project Owner their written recommendations and evaluations. Comments by the Division, if any, should also be submitted to the Board and Project Owner at least 10 days prior to the hearing. The Project Owner, the TAC, the Division, and any interested parties which timely submit written comments may comment on the Application at the hearing. The Project Owner shall have an opportunity to respond to any comments or evidence presented. The Authority shall provide notice of the Project hearing through its customary mailing of its meeting agenda, which identifies a hearing on a specific proposed New Trade Project, and shall mail the meeting agenda to the Project Owner and any other specific parties that request notification.
- E. <u>Authority Decision on Project Proposal</u>: After the Board's hearing on the New Trade Project, the Board shall vote on the Project in the manner governed by the voting requirements of C.R.S. '25-8.5-107. Based on these Guidelines, the Board may approve, conditionally approve, or deny any Project. The Authority shall issue a written record of decision regarding each trade.

- 1. <u>Decisions Approving a Trade</u>. If a Project has been completed, a final decision on approval shall be made. For New Trade Projects that have not been constructed, the Authority's approval shall be conditional pending timely commencement (within two years) and completion of the Project in accordance with the Project's construction plans and specifications. The Board's decision on trades shall specify:
 - a. The Credits to be awarded the New Trade Project, based on the total removals and Trade Ratio used to calculate the Credits;
 - b. The disposition of the Credits to a particular Allocatee or the Trade Credits Bank. The Project Owner may request the Trade Credits be allocated directly to the Project Owner for its own allocation. Otherwise, the Credits shall be held in the Phosphorus Bank under the name of the Project Owner for later release as authorized by the Project Owner to an Allocatee, or the Credits may be permanently retired by the Project Owner.
 - c. Any other limitations on the trade and the reasons for such limitations; and
 - d. The rationale for the Board's findings under these Guidelines.
- 2. <u>Decisions Disapproving a Trade</u>. Board decisions disapproving a proposed trade shall specify the rationale for the Board's decision under these Guidelines.
- 3. <u>Reconsideration</u>. The Authority's decision on the Project proposal is final the day the Authority's final written decision is issued. Affected parties may file for reconsideration of the Authority's decision within 20 days of an adverse Authority decision on a New Trade Project. The Authority shall thereafter reconsider the merits of its decision. No hearing is required on reconsideration. Following the Authority's vote on reconsideration, the Authority's decision on the Application is deemed final.
- 4. <u>Permits</u>. All trades are subject to the requirements of the Project Owner's or Allocatee's discharge permits, reuse permits, and other limitations on discharges. It shall be the sole responsibility of the Project Owner or Allocatee to obtain any approvals or modifications to its discharge permits necessary to allow increased or modified phosphorus discharges.
- 5. <u>Conditional Approval</u>. Any conditional approval of a Project by the Board shall become final and unconditional upon the Project Owner or Allocatee filing with the Authority a certification by a professional engineer, landscape architect or other professional designated by the Authority for

the Project that the Project has been constructed substantially in accordance with the plans. If the construction is not in accordance with the original plans, the Project Owner or Allocatee must identify any variations from the approved plans and describe the expected effect of the variations on the phosphorus removals and the Credits to be awarded.

- 6. <u>Release of Transferred Credits to Allocatee</u>. A Project Owner with Credits not yet allocated may release some or all of its Credits to an Allocatee. To effect the transfer of Credits, the Project Owner and Allocatee must file a joint statement with the Authority containing:
 - a. Certification by the Project Owner to transfer a set number of Credits to the Allocatee and any limits on the term of the transfer;
 - b. Certification by the Project Owner that the Credits being transferred have not been previously transferred to another Allocatee;
 - c. <u>Acknowledgement</u> by the Allocatee that it must utilize the Credits in accordance with the Allocatee's permit and allocations.
- 7. <u>Authority Review of Request to Release Transferred Credits</u>. Upon receipt of completed information in the transfer statement, including the certifications, the Authority shall accept the transfer of Credits. The transfer shall be documented in the Authority records for the Phosphorus Bank. Upon request by the Project Owner or Allocatee, the Trade Ratio may be adjusted depending upon the locations of the Project and Allocatee's discharges.

III. ADJUSTMENTS AND REVOCATIONS

- A. <u>Upward Adjustments</u>: At any time after approval or conditional approval of a Project Trade, the Project Owner or Allocatee may apply for an increase in Credits. If, based on monitoring on other relevant information, the Authority concludes that an adjustment of the Credits is warranted, the Authority may, in its discretion, approve all or any portion of the requested adjustment and the cocommitant increase in Credits.
- **B.** <u>Annual Report</u>: The Project Owner shall file annually with the Authority a certification that the Project Owner or qualified professional has inspected the Project and that the Project is operating and that any appropriate or necessary maintenance has been completed.
- C. <u>Downward Adjustments and Revocations</u>: If the Project Owner fails to provide the required annual certification of operation to substantiate Trade Credits or

reports that the Project is no longer operable or is not being maintained, the Authority may reduce or revoke the Credits previously awarded.

- D. <u>Hearing on Adjustments</u>: Before making a final decision to adjust, revoke, or otherwise modify a previously approved New Trade Project, the Authority shall provide notice to the Project Owner and Allocatees and hold a hearing on the proposed adjustment. At least 10 days prior to the hearing, the TAC, the Division, and any other interested parties shall submit their written recommendations or comments, if any, to the Board. The Project Owner, the Allocatee, the TAC, the Division, and any interested parties which timely submit written comments may comment of the proposed modification at the hearing. The Project Owner and Allocatee shall have the opportunity to respond to any comments or evidence presented. The Authority shall provide notice of the hearing through its customary mailing of its meeting agenda and shall mail the meeting agenda to the Project Owner, the Allocatee, and any other specific parties that request notification.
- E. <u>Rectifying Downward Adjustments of Credits</u>: After the Authority has made a final decision on a downward adjustment or revocation of Credits, the Authority shall allow the Project Owner or Allocatee to rectify the downward adjustment by reviving the Project that was the subject of the prior trade or by initiating a New Trade Project. Any revival of an existing Project or New Trade Project, shall be subject to the applicable provisions of sections II and III of these Guidelines. If the Project Owner or Allocatee does not initiate an application for reviving the Project or a New Trade Project within 1 year of the Authority's final decision to adjust or revoke the Credits, the Project Owner and Allocatee shall irrevocably lose the Credits.

IV. ADMINISTRATION

- A. <u>Oversight</u>: All Trades, Projects, Trade Ratios, and Credits approved under these Guidelines shall remain subject to Authority oversight.
- **B.** <u>**Duration of Credits**</u>: Credits received in approved Trades shall remain valid in perpetuity, subject to adjustments, modifications, or revocation by the Authority as set forth herein; actions or decisions by any other state or federal governmental body or court; or changes in state or federal law.
- C. <u>**Trade Documentation**</u>: Trades approved by the Authority shall be incorporated into these Guidelines as Appendix B.
- **D.** <u>**Review of Guideline**</u>: Upon motion by the Authority, and consistent with the Control Regulation, the Authority may review and propose revisions to these Guidelines at any time.

APPENDIX A

Requirements for the Pre-Application Summary

Purpose

Provides a project summary and basic information to be submitted to the TAC as part of the Pre-Application process or included with the full Application presented to the Authority Board.

As part of the Pre-Application, the information in this Notice will assist the TAC in assessing whether the proposal complies with these Guidelines and the Control Regulation before the full application is presented to the Board. As part of the Notice to the Board, the information will summarize the proposed trading project such that the Board can direct the TAC to review and comment on the full application.

Assumes that some of the information will be provided in more detail or with greater technical support within the actual application.

Recommend that most information be provided in an outline format, where possible, instead of a narrative, although some narrative may be appropriate.

Applicant Information

- □ Name of the applicant and contact name, phone and email address for information.
- □ Whether the trade credits will be retired or the name of Allocatee for whom the trade credits will be sold and/or assigned.
- □ Basis for the proposed project and request for credits from the Phosphorus Bank.
- □ Allocatee's current phosphorus allocation.
- □ Allocatee's current and projected capacity.
- □ Whether the request is to participate in an Authority funded Project for which the Applicant is requesting a portion of the eligible trade credits.

Note: If the trade request is to participate in and Authority Funded Project or Authority Engineered Project, the following information is NOT required.

□ General location of the point of discharge and the proposed project:

• Include a map (8-1/2" x 11" or 11" x 17") at a scale to show location of the point of discharge, the proposed project, the Reservoir, and major drainageway(s) from the Project or discharge point to the Reservoir.

□ General location of the point of discharge and the proposed project:

- Type of Project (i.e., new facility or retrofit of existing facility, extended detention basin,1 wetlands, water reuse, other). Some narrative may be appropriate.
- Sketch and/or diagram of the proposed project.
- Estimate of phosphorus trade credits requested.
- Schedule for design and construction.

□ Trade Credit Cost Basis:

• Preliminary estimate of annual cost of the Project, including amortized capital, O&M, and replacement cost, as necessary.

□ Information regarding O&M and financial commitments:

- Method of financing the construction.
- Identification of party (s) responsible (including financial commitment) for operations and maintenance, including monitoring to verify Trade Credits.

¹ UDFCD, September 1999. Urban Storm Drainage Criteria Manual Volume 3 Best Management Practices.

APPENDIX B

TRADES APPROVED BY THE AUTHORITY (Update with each trade)

		Destimation of	Approved Phosphorus	Trade	Conditional	Final	
Applicant	Project Title	Trade Credits	Credits	Ratio	Approval	Approval	Status
Arapahoe County							Project constructed. Final approval
Water and Wastewater		Arapahoe County					pending documentation that project
Public Improvement	Pond L-3	Water and					constructed in accordance with plans
District	Retrofit	Wastewater Authority	57	2.9:1	January 2004		and specifications.
Arapahoe County							Project constructed. Final approval
Water and Wastewater		Arapahoe County					pending documentation that project
Public Improvement		Water and					constructed in accordance with plans
District	Pond W6/W7	Wastewater Authority	28	2.5:1	February 2006		and specifications.

GUIDANCE FOR TRADE PROJECT MONITORING PLAN

The Cherry Creek Basin Water Quality Authority (Authority) Trading Program Guidelines require a plan for monitoring and reporting a Trade Project's annual performance and verification of monitoring the Project to substantiate Trade Credits (See Section II.B). The purpose of the document is to describe the minimum elements required for a monitoring plan.

The monitoring plan for each Trade Project will need to characterize and evaluate the annual phosphorus loading reduction achieved by the Project to confirm the Trade Credits associated with the Project.

Monitoring Plan Outline Guidance

The following outline includes the minimum elements that should be included in a Trade Project monitoring plan.

1. Goal and Objectives

Describe the goal and specific objectives of the monitoring, including but not limited to the following:

- Define, quantify, and document the Trade Project performance for phosphorus removal.
- Quantify total vs. dissolved phosphorus removal.

2. Monitoring Design

The monitoring program design should provide the information needed to achieve the monitoring goals.

- Sampling locations.
- Field and laboratory constituents.
- Sampling frequency.
- Sampling and analytical methods (must be recognized and approved methods [EPA, Standard Methods, etc.].
 - Minimum monitoring constituents should include total and dissolved phosphorus, total suspended solids, and flow.
 - Analytical detection limit for phosphorus should be $2 \mu g/L$ or lower.
- Field sampling documentation.
- Quality assurance and quality control procedures.
- If any modeling will be used, the sampling design should be sufficient to provide enough data to calibrate and validate the model.

3. Data Analysis and Reporting

- Describe the data analysis procedures that will be used to quantify annual phosphorus removal (e.g., statistical analyses, confidence intervals, and method for calculating phosphorus load reduction).
- Describe annual reporting procedures, including reported information and distribution.