

## MEMORANDUM

**Date:** May 14, 2014  
**To:** BCWA TRS Committee  
**From:** Russell N. Clayshulte, Manager  
**Re:** Draft Policy 26 - Point to Point Trade Administration

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### Statement of Basis and Purpose

The Bear Creek Watershed Association (Association) is required in the Bear Creek Control Regulation (Regulation No. 74 (5 CCR 1002-74)) to develop and maintain a total phosphorus trading program guidance document subject to review and approval by the Colorado Water Quality Control Division (WQCD). The Control Regulation allows point source to point source trades, nonpoint source to point source trades, temporary or permanent trades into and out of the reserve pool, and alternative trading subject to Division approval. Trading can be either temporary or permanent. The Association maintains a pollutant trading program as defined in the *Total Phosphorus Trade Program and Nonpoint Source Trading Guidelines* (BCWA January 12, 2012) and in *Bear Creek Reservoir Control Regulation #74* for total phosphorus trades specific to the Bear Creek Watershed. The primary function of the *Bear Creek Trading Program Guidelines* is to outline the process necessary for nonpoint source to point source trades that have a net water quality benefit in the watershed. The *Guidelines* do not define the administration process for point to point trades.

The WQCD is authorized by the Control Regulation to allow wastewater treatment facilities to discharge a total phosphorus concentration of greater than 1.0 mg/l if an agreement is made for equal phosphorus reduction at an alternative facility. The equivalent annual mass load from one wastewater treatment facility is calculated using a 1.0 mg/l total phosphorus concentration at the average daily wastewater flow for the most recent 12 months. The wastewater treatment facility which agrees to provide the equivalent phosphorus poundage reduction must demonstrate that it is achieving a total phosphorus effluent concentration of less than 1.0 mg/l for a period of time sufficient to remove the equivalent phosphorus load by which the other wastewater treatment facility is exceeding its wasteload allocation. The equivalent reduction provisions are incorporated as permit conditions in both discharge permits.

The Water Quality Control Commission (WQCC) and the WQCD have defined certain expectations for the Association:

- The agreement for alternative treatment must be executed by the owners of the facilities, updated annually, summarized in the Association annual report and submitted to the WQCD to reflect changes in average wastewater flows and performance in treatment of phosphorus.

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- Wastewater treatment facility dischargers apply to the Association for phosphorus trade credits which would allow corresponding increases to a discharger’s total phosphorus wasteload allocation.
- Wastewater treatment facility dischargers apply to the Association for permanent or temporary transfers of all or part of the discharger’s total phosphorus allocation to other wastewater dischargers.
- If new wastewater treatment facilities are proposed in the Bear Creek Watershed, the appropriate entities must apply to the Association for a phosphorus allocation.
- The Association reviews transfer proposals and makes recommendations to the WQCD and WQCC.

***Problem***

Smaller dischargers in the watershed may need phosphorus trade agreements. Brook Forest Inn, Bear Creek Cabins and Tiny Town and JCS Outdoor Lab all have small wastewater flows and have difficulty consistently meeting the 1.0 mg/liter phosphorus discharge limit. However, these facilities consistently meet the 5 pound wasteload allocation of phosphorus per year. The potential capital cost expenditures for these small facilities to comply with the 1.0 mg/l phosphorus limit is not cost effective.

The trading provisions in the Control Regulation are based on poundage trades and the small facilities require concentration trades. Still, the Control Regulation trade concept is to provide flexibility and relief to dischargers while complying with the goal of the regulation, which is based on meeting standards and improving watershed quality. As such, the Association needs an administrative trading program that will allow small dischargers to meet the intent of the control regulation trading provisions. Table 1 shows the permitted wastewater treatment facilities in BCW; the small treatment facilities in need of or potential need of point to point phosphorus trade programs are highlighted in red.

**Table 1      Wastewater Treatment Facilities Permitted in BCW**

<b>Wastewater Treatment Plants</b>	<b>Design Capacity MGD</b>	<b>Design Gallons/day</b>
<b>Bear Creek Drainage</b>		
Evergreen Metro District	0.99	990,000
Genesee Water and Sanitation District	0.8	800,000
West Jefferson County Metro District	0.7	700,000
Morrison	0.35	350,000
Kittredge Water and Sanitation District	0.125	125,000
Forest Hills Metro District	0.05	50,000
<b>Singing River Ranch</b>	<b>0.014</b>	<b>14,000</b>
<b>Brookforest Inn</b>	<b>0.009</b>	<b>9,000</b>

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Wastewater Treatment Plants	Design Capacity MGD	Design Gallons/day
JCS Outdoor Lab	0.0075	7,500
Bear Creek Cabins	0.001	1,000
<b>Turkey Creek Drainage</b>		
JCS Conifer High School	0.052	52,000
Conifer Metro District	0.043	43,000
Aspen Park Metro District	0.025	25,000
Conifer Sanitation Association	0.019	19,000
The Fort	0.012	12,000
Geneva Glen	0.0105	10,500
Tiny Town	0.005	5,000

**Point to Point Administration Assumptions**

The working assumptions for a point to point phosphorus program administration include:

1. Point to point phosphorus trades are primarily for “Small Trade Facility”, which are defined as having a wastewater effluent design capacity under 15,000 gallons per day (0.015 MGD) and located within the BCW (Table 1). The Control Regulation does allow point to point trades among any permitted discharger within the watershed and this new administrative program does not change that provision. Point to point phosphorus trades among larger trade facilities is defined in the *Total Phosphorus Trade Program and Nonpoint Source Trading Guidelines* (BCWA January 12, 2012).
2. Any larger wastewater treatment facility (at or >25,000 gallons per day) permitted within the BCW and listed in Table 2 is an “Eligible Trade Facility”. Additionally, *Eligible Trade Facilities* must be below annual wasteload trade pounds in the previous year (not to exceed 80% of the WLA) and have had no exceedances of the annual WLA (See Table 2) in the last 5-years. The Association will make a determination in January of each year which larger facilities can trade as *Eligible Trade Facility* for the upcoming year (Table 2). Since all *Eligible Trade Facility* are currently well below 80% of their annual WLA for phosphorus, phosphorus trade pounds are not a concern.
3. A *Small Trade Facility* and *Eligible Trade Facilities* must be consistent with *BCWA Policy 19 Nutrient Trading Program Eligibility* and defined as members in good standing.

**Table 2 2014 Eligible Trade Facility**

Bear Creek Watershed Wastewater Treatment Plants	Phosphorus Pounds/ year	2013 Phosphorus Pounds/year	Eligible Large Trade Facility 2014
Evergreen Metropolitan District	1,500	332.28	Yes
West Jefferson County Metro District	1,500	225.88	Yes
Genesee Water and Sanitation District	1,015	319.64	Yes
Town of Morrison	600	102.51	Yes

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<b>Bear Creek Watershed Wastewater Treatment Plants</b>	<b>Phosphorus Pounds/ year</b>	<b>2013 Phosphorus Pounds/year</b>	<b>Eligible Large Trade Facility 2014</b>
Kittredge Sanitation and Water District	<b>240</b>	76.24	Yes
Forest Hills Metropolitan District	<b>80</b>	62.0	No
Conifer Metropolitan District/Conifer Sanitation Association	<b>80</b>	0.88	Yes
Aspen Park Metropolitan District	<b>40</b>	5.07	Yes
Jefferson County Schools – Mt. Evans Outdoor Lab	<b>20</b>	6.70	No
Jefferson County Schools - Conifer High School	<b>110</b>	1.66	Yes
Bear Creek Cabins (Bruce & Jayne Hungate)	<b>5</b>	1.81	No
Brook Forest Inn	<b>5</b>	3.34	No
Geneva Glen <sup>1</sup>	<b>5</b>	5	No
<b>Total Operational Facilities Lbs/year</b>	<b>5,200</b>	1,143.01	No
Bear Creek Development Corp. - Tiny Town <sup>3</sup>	<b>5</b>	Hauling Columbia	No
The Fort <sup>2</sup>	<b>18</b>	No Monitoring	No
Singing River Ranch	<b>30</b>	Not Operational	No
Reserve Pool	<b>2</b>	Not used 2013	
<b>Total Phosphorus Wasteload lbs/year</b>	<b>5,255</b>		

4. The Association will serve as a fee based administrator for all trade agreements. As outlined in Interim BCWA Policy 24, the Association will receive monthly copies of all WWTF DMRs involved in trade agreements. The Association administration fee will be fixed for each trade agreement and established by the Association. The recommended current administrative fee is \$500/year/trade agreement, which could be split between the trade partners or paid by only one of the trade partners.
5. The Association will establish a “value” price per pound of phosphorus that is used in trade. Once a value is established in a trade agreement between two facilities that value will remain fixed for the life of the agreement. The future value of trade phosphorus will be established by the Association and based on expected market conditions. As such the value of trade phosphorus is expected to increase in the future. The current recommended 2014 poundage fee value is \$2,000 per pound of trade phosphorus. In January of each year the Association will review market or other information and establish a phosphorus trade value for the upcoming year, which may remain the same or increase.
6. A standard trade agreement template based from this trade policy will be drafted by the Association that can be used to establish trade agreements among traders with the Association listed as administrator. Any small discharger that has a potential to exceed their monthly total phosphorus limit of 1.0 mg/l for any given month is encouraged to establish a trade agreement with an *Eligible Trade Facility*. However, a trade agreement

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can be executed at any time within the year, subject to the then Association established phosphorus trade value. A phosphorus trade could also be required at the end of any given year if the WLA phosphorus poundage limit is exceeded; however this generally won't be the circumstance that triggers a phosphorus trade. A trade agreement can be executed at the end of any given year for a poundage trade based on established phosphorus trade value and having an *Eligible Trade Facility* that can trade.

7. The Association will work with the WQCD permit section on how they want to incorporate a trade agreement into permits or have a simple trade notification process. (Note, I think we can simply get a one-paragraph generic statement about trading into all future watershed permits). We will need WQCD blessing to make administrative program work.

***Point to Point Administration Process***

- 1) Point to Point trades will remain consistent with the requirements of the Control Regulation and are subject to change at the discretion of the WQCC.
- 2) Generally, Point to Point trades are based on exceedances of the monthly total phosphorus limit of 1.0 mg/l for any given month within a trade year. So if a *Small Trade Facility* only has one exceedance in a trade year, then they only pay a one-month poundage rate.
- 3) The Association Trade Administrator determines Small Trade facility 1-month average concentration from submitted DMRs, spreadsheet submittals or email notifications from the discharger. If the monthly total phosphorus reporting limit exceeds 1.0 mg/l for any given month then a trade is evoked by administrator:
  - a) Administrator confirms the 1-month average phosphorus discharge concentration,
  - b) Administrator confirms average flows for that one month as reported by the discharger,
  - c) The Administrator determines the 1-month excess pounds that must be reduced in trade or a minimal established poundage number (recommended ¼ pound),
  - d) The Administrator advises *Small Trade Facility* of the recommended trade pounds and trade value,
  - e) The Administrator then notifies *Eligible Trade Facility* a trade has been evoked with that facility.
- 4) The *Eligible Trade Facility* then notifies the Administrator that they have been below 1.0 mg/l for phosphorus for any given month in the trade year (trade complete); if not then they plan to be below 1.0 mg/l for phosphorus for any given month in the trade year and they will notify the Administrator when the trade is complete.

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- 5) Administrator tracks in a spreadsheet the 1-month reduction pounds and applies reduction to *Small Trade Facility* as an off-set Point to Point trade based on pounds. The Administrator will advise the WQCD permit staff that a trade was completed between trade facilities.
- 6) Administrator at end of year will demonstrate trades meet intent of control regulation.
- 7) *Small Trade Facility* pay trade partner at end of year (60-days from invoice) only for needed pounds at established rate.
- 8) A Trading status table will be incorporated into the Association annual summary report to the WQCC.