

PLATTE RIVER RECOVERY IMPLEMENTATION PROGRAM
Attachment 5
Section 9

COLORADO'S PLAN FOR FUTURE DEPLETIONS¹

October 24, 2006

Colorado will be responsible for mitigating the impacts of new water related activities in Colorado on the associated habitats, in the manner described below.² As part of the proposed Program, the mitigation described below shall constitute the means for mitigating new water related activities in Colorado, except for water related activities pursued by entities electing not to participate in the Program. Subject to the planned NEPA and ESA reviews, the Department of the Interior ("DOI") agrees that Colorado's Future Depletions Proposal is a sufficient contribution by Colorado to offset the impacts of new water related activities in the South Platte River Basin in Colorado. If Colorado implements the mitigation program described below, new water related activities in Colorado will not adversely affect the "Current Regime of the River," as that term is used in the document entitled "An Environmental Account for Storage Reservoirs in the Platte River System in Nebraska," (Program Attachment 5, Section 5). For purposes of this document, "new water related activities" shall be used as that term is defined in the Platte River Recovery Implementation Program (Program Document), footnote 3. New water related activities shall not include augmentation for wells existing pre-June 30 1997, provided the augmented wells do not increase irrigated acreage beyond that irrigated on June 30, 1997.³

¹ In the Cooperative Agreement and the Program Draft EIS, the Colorado Plan for Future Depletions was referred to as Tamarack II.

² Colorado offers this agreement as part of its efforts to resolve endangered species conflicts through a negotiated and mutually agreed upon basin-wide cooperative agreement and recovery program. Nothing in this agreement constitutes an admission by Colorado that any depletion to the North or South Platte Rivers or their tributaries in Colorado that have occurred or may in the future occur adversely affect or reduce state line flows. Similarly, Colorado does not admit that any changes in the amount or timing of flows at the Colorado-Nebraska or Colorado-Wyoming state lines that have occurred or may in the future occur reach or adversely affect endangered species habitat in Nebraska. This agreement is not intended, and should not be construed, to amend or modify the South Platte River Compact or any interstate decree, or to waive any rights thereunder.

³ Prior to 2003, ground water users in the South Platte River Basin augmented their out-of-priority depletions with administratively approved annual substitute water supply plans. In 2003, the Colorado General Assembly required these ground water users to transition to a system of court-approved plans for augmentation. The applications for approval of the court-approved plans for augmentation must be filed with the water court no later than December 31, 2005. The courts may need a number of years to approve the proposed plans, during the interim the ground water users will continue to operate pursuant to administratively approved substitute water supply plans. Because the court-approved plans are permanent, the replacement obligations contained in those plans may be more stringent than those included in the administratively approved plans. In order to resolve a potential controversy concerning whether the use of ground water under more stringent terms constitutes an expansion of an existing project, the parties to the Cooperative Agreement, based on the assumption that the court approved augmentation plans will not result in increased consumptive use in Colorado, have agreed that wells in existence prior to June 30, 1997 and the augmentation sources for those wells included in any court-approved plans for augmentation will be deemed existing uses of water and not new water-related activities as long as the augmented wells do not increase irrigated acreage beyond that irrigated on June 30, 1997.

I. SOUTH PLATTE RIVER BASIN

A. Population Estimates.

The 1997 "Population Baseline" for Colorado's Future Depletions Plan is:

1. Northern Region -- Boulder, Weld, Larimer, Washington, Morgan, Sedgewick, Logan, Phillips (701,470)
2. Central Region -- Denver, Jefferson, Adams, Clear Creek, Gilpin, Park (1,766,207)
3. Southern Region -- Arapahoe, Douglas, Elbert (194,602)

Within 90 days after the inception of the Program, the Colorado State Demographer shall report the amount by which the population of each region is expected to increase over the Population Baseline by the end of the initial reporting period ("projected Population Increase"). At the end of each reporting period, Colorado will provide the Governance Committee an estimate by the Colorado State Demographer of the actual population in each region (which shall be the Population Baseline for the next succeeding reporting period), and an estimate of the projected Population Increase for the next succeeding reporting period.

B. Water Use and Effect Assumptions.

Assumptions concerning per capita water use, supply source mix by region, and accretive/depletive effects of each supply source (including monthly distributions of said effects), set forth in this paragraph and the table below, represent reasonable estimates at the outset of the program, and may be modified by the Governance Committee based on information made available to that Committee by Colorado or others. The gross per capita water requirement in the South Platte River Basin in Colorado will be assumed to be 0.27 af/yr, with 35% consumptive use assumed for all municipal purposes, and 45% consumptive use assumed for agricultural irrigation purposes. It is anticipated that new water related activities within the three regions will be from six sources of supply to serve the Population Increase, each with a different depletive or accretive effect on flows in the South Platte River. The three regions will develop the six sources of supply in different combinations. It will be initially assumed that the sources of supply for new water related activities will be developed in the combinations and will have the accretive or depletive effect shown below:

Source	Northern Region	Central Region	Southern Region	Accretive (or Depletive) Effect
New Transbasin Imports	40%	30%	20%	64%
Nontributary Groundwater	0%	10%	50%	68%
Ag. to Urban Conversion	35%	5%	0%	10%
Conservation	5%	15%	10%	0%
Wastewater	10%	25%	10%	(41%)
Exchange/Reuse				
Native South Platte Flows	10%	15%	10%	(27%)

The Governance Committee has adopted assumptions concerning the monthly distribution of the accretive/depletive effect of the development of each source of supply, taking into consideration the accretive/depletive effect shown above, the weighted contribution to meeting total water demand, and the anticipated monthly return flow pattern based on municipal water use patterns. The assumptions shown herein or as may be modified by the Governance Committee shall be as measured at or near the point of use.

C. Transit Loss Assumptions.

Colorado's commitment to offset the cumulative accretive/depletive effect of new water related activities in the three regions (hereinafter referred to as "Cumulative Effect") will be as measured at or reasonably near the Colorado-Nebraska state line. The Cumulative Effect will be influenced by natural river gains and losses, and water uses and return flows downstream from the points of use. The three states have studied transit losses in a study entitled "Tracking/Accounting Procedure for Determining Depletion/Accretion Impacts for the Three Program Water Projects and New Water Related Activities, Including Water Conservation/Supply Projects." This study considered the routing of both accretions and depletions from the Kersey gauge to a point at or reasonably near the Colorado-Nebraska state line. This study indicated much higher transit losses than those set forth in the table below, but until the three states are able to more fully study transit loss issues as they exist in all states for both protected and unprotected flows, Colorado will temporarily use the monthly transit loss per-mile factors set forth in the table below. The transit loss assumptions will be updated when the final study and negotiations are concluded.

jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec
.02%	.02%	.05%	.1%	.3%	.45%	.5%	.5%	.5%	.4%	.1%	.02%

D. Reporting Periods.

The Initial Reporting Period will be two years from the initiation of a Program. Subsequent Reporting Periods will be each five years thereafter, for so long as the Program is in effect. At the close of each reporting period, Colorado will report:

1. an estimate of the actual population in each region (which shall be the Population Baseline for the next succeeding reporting period);
2. any new information relevant to the continued use or modification of assumptions set forth herein for:
 - a) gross per capita water requirements, including assumptions regarding the relationship among municipal, industrial and agricultural use of water,
 - b) the accretive/depletive effect of each source of supply, and
 - c) the cumulative effect at the state line;

3. the operations and effects of projects to mitigate new depletive effects;
4. an estimate of the projected Population Increase for the next succeeding reporting period;
5. estimates of the net accretive/depletive effects and Cumulative Effect for the next reporting period; and
6. net changes in irrigated agricultural acreage, using readily available data.

Colorado will also submit annual information reports to the Governance Committee estimating population increase in each of the three regions, and describing water sources used to supply new water related activities including type of water source, works used and water quantities supplied. Colorado will promptly report to the Governance Committee any new information that significantly affects assumptions relied upon in this Program.

E. Determination of Cumulative Effect – Initial Reporting Period.

Within 90 days after the inception of the Program, Colorado will provide to the Governance Committee a calculation of the average monthly distribution of the Cumulative Effect for anticipated water related activities in the South Platte River Basin in Colorado for the Initial Reporting Period. The calculation will be based on the projected Population Increase for that period, and the water use and transit loss assumptions described above or as may be modified by the Governance Committee. The Cumulative Effect as approved by the Governance Committee will determine the mitigation measures that will be undertaken by Colorado during the Initial Reporting Period.

F. Determination of Cumulative Effect – Subsequent Reporting Periods.

Colorado will monitor actual water use and development in the South Platte River Basin in Colorado beginning July 1, 1997. At the end of the Initial Reporting Period, and at the end of each Subsequent Reporting Period, Colorado will report to the Governance Committee for its review and approval any adjustments in the Population Increase and in the Cumulative Effect for that period. Such adjustments will serve as the basis for calculations for the next succeeding Reporting Period. Any resulting increase or decrease in Cumulative Effect will be added to or subtracted from the Cumulative Effect to be mitigated in the next succeeding Reporting Period.

G. Mitigation of Cumulative Effect.

The signatories assume that the Cumulative Effect for any annual period is expected to be a mix of net accretions during the fall, winter and spring period, and net depletions in the late-spring to mid-summer period, resulting in an estimated total seasonal net depletive effect on an order of magnitude of less than 1,800 af/yr for each 100,000 additional people in the South Platte River Basin in Colorado. Based on these assumptions, Colorado will, in each Reporting Period, undertake such re-regulation projects within Colorado as are necessary to shift water flows at a point upstream from the Colorado-Nebraska state line and downstream from the last diversion in Colorado, from periods of net accretion to periods of net depletion. The re-regulation projects divert water in priority through existing ditch head gates or wells downstream of Colorado's

Washington County line. After diversion, this water recharges the alluvial aquifer of the South Platte River. Colorado will locate the recharge areas the distance necessary from the South Platte or its tributaries to result in accretions at locations downstream of the last river diversion in Colorado in periods of net depletion Colorado's commitment to re-regulate flows in any Reporting Period shall equal the total depletive effect by month for those months in which a net depletive effect will occur. To the extent that Colorado constructs projects or obtains the ability to re-regulate water in excess of the total depletive effect for those months in which a net depletive effect will occur, such capacity will be available for use in the next succeeding Reporting Period. Should total annual net depletive effects exceed the assumptions set forth above, Colorado reserves the option of reconsidering different measures to mitigate those effects under the Program.

H. ESA Compliance.

ESA compliance for South Platte Basin future depletions in Colorado will conform to the Program document. Except as described below, qualifying new water related activities that are in the South Platte Basin and are operated on behalf of Colorado water users are covered by the Colorado plan for future depletions. Exhibit A to this plan for future depletions is a draft schematic and explanation of how Colorado water users may qualify to use this plan in any ESA Section 7 consultation process for water projects in Colorado. Exhibit B is the template Biological Assessment and request for formal section 7 consultation (including template recovery agreement) that program participants may use to address potential impacts from operation of their new water activity on federally-listed species in Nebraska. Exhibit C is the template biological opinion the United States Fish and Wildlife Service will issue in response to the template Biological Assessment and request for formal section 7 consultation.

1. New water related activities would not be covered by this plan after the average annual water supply to serve Colorado's population increase from "Wastewater Exchange/Reuse" and "Native South Platte Flows" exceeds 98,010 acre feet during the February-July period described below. The 98,010 acre-foot figure represents gross water deliveries (supplies) to meet new demands for an average hydrologic year, and is not a consumptive use or diversion limitation. In analyzing proposed new water related activities that have supplies derived from the storage of native South Platte flows, only those supplies resulting from diversions to storage or wastewater exchange and reuse during the period from February through July will be counted toward the 98,010 acre-feet. In the event that a new water related activity is not covered by Colorado's plan pursuant to this Section I.H.1, Colorado and the activity's proponent can propose, as provided in Section E of the Program document, amendments that will allow Colorado's Plan to provide ESA compliance for that new water related activity.

2. The Colorado plan for future depletions does not cover the construction of a major on-stream reservoir located on the main stem of the South Platte River anywhere downstream of Denver, Colorado. In addition, the Colorado plan for future depletions does not cover hydropower diversion/return projects that divert water including sediments from the main stem of the South Platte River anywhere downstream of Denver, Colorado and return clear water to the South Platte River.

3. Colorado's plan for future depletions will provide ESA coverage for new water related activities related to existing U.S. Bureau of Reclamation water supply projects that currently provide water for Colorado water users. At Colorado's discretion, new federal water related activities in Colorado that provide water to Colorado water users may be provided ESA coverage by the Colorado plan for future depletions. Nothing in the Colorado plan for future depletions shall be construed as changing the water rights, or ownership, of any federal water project.

The ESA compliance covered by this plan only concerns consultation on the target species. To the extent that a federal nexus activity has potential impact on "non-target" listed species, then impacts to those species must be addressed in that federal project's Biological Opinion (BO) required by ESA.

For the purposes of this section H. the following definitions apply:

Covered means in compliance with the Endangered Species Act with regard to potential impacts to the least tern, piping plover, whooping crane and pallid sturgeon in and along the central and lower Platte River in Nebraska, for the duration of the First Increment.

Average means the average estimated or modeled effect over a multi-decadal period of time including a mix of wet, normal and dry hydrologic conditions. Initially, this will be the 1947-1994 period used in the current version of the Central Platte Op Study Model and the Platte Programmatic EIS. However, this time period may be adjusted if the Governance Committee concurs.

Major On-Stream Reservoir means a reservoir of more than 2,000 acre-feet. It does not include new diversion facilities that may impound a small amount of water. Reservoirs, including gravel pit reservoirs, adjacent to the main stem of the South Platte River and reservoirs on tributaries to the South Platte River are not considered to be located on the "mainstem" for purposes of this paragraph.

I. No Power to Limit Colorado Water Rights.

Prior to the inception of this Program there was not legal authority to deny the appropriation of un-appropriated water of the State or prevent the diversion and re-diversion of legally re-usable water. Nothing in this Plan for Future Depletions shall be construed to authorize the Program to deny the appropriation of unappropriated water or prevent the diversion and re-diversion of legally re-usable water to achieve Program goals, objectives or Milestones.

J. Commitment to Revise.

This Plan for Future Depletions is premised on the assumptions contained herein. In the event that the assumptions underlying this plan are not realized, the State of Colorado commits to revise its Plan for Future Depletions accordingly.