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United States
Department of
Agriculture

USDA Forest Service
Arapaho and Roosevelt
National Forests

State of Colorado
Department of
Natural Resources

CACHE LA POUDRE WILD and SCENIC RIVER

EIS
Shelves

Addendum To
Final Environmental
Impact Statement
and
Study Report



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APPENDICES

Appendix A. November 1, 1983, letter from State of Colorado

Appendix B. December 23, 1983, letter from State of Colorado

Concept for Flow Quantification of Poudre River

- (1) **Outstanding recreation values:** Although the study identifies recreation as an outstandingly remarkable value, it is important to note that about 90% of the whitewater boating occurs in that segment of the river that was not designated as part of the WSR. As a result, most remaining recreational values of importance center around fishing, camping by a river, picnicking by a river and other days use activity for which the river is an attraction. In the comprehensive plan we need to identify those activities to be managed and identify appropriate management techniques. The relationship of flow in the river to those activities needs to be analyzed. The activities to be considered as having a direct water relationship need to be considered in the recreation section. Scenic/aesthetic attributes that attract visitors or contribute to experience quality are dealt with separately.

Based on the above, these are the probable activities and their relationship to the flow in the river than need to be discussed:

- a) **Whitewater boating:** directly related to flow, depth, and difficulty of rapids. Actual use influenced by public access, presence of barriers and hazards. Timing of flow is important. About 90% of use is on weekends, about 90% of use is commercially outfitted and occurs outside the designated area. Most boating occurs at flows above 500 cfs, ceases at flows above 5000 cfs. "Tubing" prohibited by State. Recent increase in canoeing (one of nation's fastest growing sports) at moderate flow levels.
- b) **Fishing:** Fishing has two main parts: fish and fisherpeople. The fish component is directly related to the biological aspects of habitat, including the amount and timing of flows. The fisherpeople component is related to a variety of components that affect the fishing experience, such as access (including ownership, bank topography, depth and velocity), height and density of riparian vegetation, size of fish, abundance of fish as measured by catch rate, species present (some are hard to catch). The fishing experience is also indirectly related to flowing water as it affects the areas scenic/aesthetic values. Generally speaking, the fishery component is enhanced by higher minimum flows, reduction of flood peaks, increased average flow, channel stability, and riparian vegetation maintenance through periodic minor flooding. The fishery component is adversely affected by erratic flows, high flood peaks, low winter flows, unstable channels and loss of riparian vegetation (and food sources.)
- c) **Camping/Picnicking, sightseeing and hiking:** These activities are less directly related to river flows since the activity itself does not depend primarily on water. However, there is a direct relationship between the quality of the recreation experience and river characteristics from the standpoint of a visual/aesthetic value. See below.

CACHE LA POUDRE WILD AND SCENIC RIVER STUDY

ADDENDUM TO FINAL ENVIRONMENTAL IMPACT STATEMENT AND STUDY REPORT

I. INTRODUCTION

A. Purpose of Addendum

This Addendum to the Final Study Report has been prepared to analyze two alternatives not examined in previous documents and identify the Federal and the State of Colorado recommendations for consideration by the President and the Congress (See Chapter II).

In early 1981, a Final Environmental Impact Statement and Study Report (FEIS/SR) on the Cache La Poudre River was completed by the Forest Service, USDA, and the State of Colorado. The Final Report recommended designation of 39 miles of the Poudre's upper reaches, but suggested that a decision on the lower reaches be deferred until better information became available with which to assess the trade-offs between preservation of the River and water resource development.

Since completion of the Final Report, yet before its submission to the Congress, a study of the upper Poudre basin was finalized by the Tudor Engineering Corporation under a contract to the State of Colorado. The conclusions of that study, while not considerate of development options in the entire Cache la Poudre River basin, are sufficient to provide current data with which to resolve some of the uncertainty that was present in the Final Report (See Section C of this Chapter). The study results have satisfied the State and Department of Agriculture (USDA), that knowledgeable recommendations may now be made on the main stem reaches of the Poudre River within the study area.

B. Relation of Addendum to FEIS and Study Report

The Final Study Report contains the main body of information necessary to analyze and document the conduct of this study. The basic findings of the River's eligibility for designation are unchanged. This Addendum describes and identifies two additional alternatives; they are developed, analyzed, and portrayed in a format similar to the FEIS/SR. Only the data which are new to the study, or analyses not made previously, are considered here. Dollar amounts have been indexed to 1982 values using accepted Federal standards.

During the preparation of this Addendum, some discrepancies in the number of acres contained in the various segments, as shown in the FEIS/SR, were found. Some of the discrepancies were due to land ownership changes which have occurred since the FEIS/SR was completed. Others were errors discovered during this Addendum's preparation. The current acreage figures are presented in Table A-6 of this Addendum. The discrepancies were not of a magnitude sufficient to warrant revision of conclusions reached or recommendations presented in the FEIS/SR.

This Addendum should be considered a part of the FEIS/SR, providing additional maps, tables, descriptions, and data, and appears as an integral part of the final document.

C. State of Colorado - Reconnaissance Report on Cache la Poudre Water Resource Development

In 1981, the Colorado General Assembly authorized the Colorado Water Conservation Board to conduct studies of four potential water resources development projects. Among these was the Cache la Poudre Project--an integrated project upstream of the town of Fort Collins on the Cache la Poudre River (Section 7, S.B. 439).

The objective of the State's study was to evaluate, at a reconnaissance level of detail, the engineering and economic feasibility of alternative projects which could develop new water supplies, improve the management of already developed water, and provide hydroelectric power production. Consistent with legislative intent and the constraints imposed by time and budget limitations, the State did not analyze a ". . . non-structural alternative nor evaluate the environmental and recreational impacts of any of the alternative projects under consideration." Rather, the study was limited to addressing the threshold questions of whether there appeared to be any project which may be feasible from an engineering and economic point of view.

The study, as ordered by the Colorado State Legislature, did not provide the level of analysis envisioned in the FEIS/SR when further investigation was suggested. It does, however, offer adequate information to consider trade-offs between water development and preservation of the Poudre River. Where necessary, recreation data has been developed by the Forest Service to allow adequate comparison of new alternatives with those of the FEIS/SR.

A total of 16 potential project configurations were investigated in the study conducted for the State by Tudor Engineering . Eight preliminary alternatives were evaluated in Phase I of the study. Four of these alternatives were selected by the Colorado Water Conservation Board for further evaluation during Phase II of the study. The level of study did not provide precise answers to the absolute magnitude of effects, rather, it is most useful in a comparative evaluation of the four alternatives studied in detail.

Tudor/State Alternative 1

Alternative 1 would have only one major feature, a 200,000 acre-foot Grey Mountain Reservoir (See Map 3). This reservoir would store flows from the total upper basin for eventual release to the River to serve conservation uses in the lower basin. A 12.0-megawatt Grey Mountain Dam Power Plant would generate power using these flows. These flows would occur mainly during the irrigation season and would produce some intermittent dependable capacity. A total of 42,500,000 kilowatt-hours of energy would be produced by this alternative. Grey Mountain Reservoir would supply 64,800 acre-feet of water per year for municipal and industrial uses and 218,600 acre-feet of water per year for agricultural uses. It would produce a yield of 16,300 acre-feet of water per year of new water.

Tudor/State Alternative 2

Alternative 2 is basically the system studied by the U.S. Bureau of Reclamation in the early 1960's and appears in the FEIS/SR as Alternative D. (See Map 3). It would include two large mainstem storage reservoirs, Grey Mountain and Idylwilde, each with 200,000 acre-feet of total storage. It would also include Kinikinik Afterbay Dam, Rustic Diversion Dam, and Cache la Poudre Forebay Dam. Mainstem flow would be stored at Idylwilde Reservoir for release through a 24.0-megawatt Idylwilde Dam Power Plant which would provide 22.0 megawatts of dependable peaking capacity. These power releases would be stored at Kinikinik Afterbay Dam for continual release to the River. This flow, with the exception of downstream bypass releases, would be diverted into a tunnel and conduit at Rustic Diversion Dam. The conduit would carry the flow to Cache la Poudre Forebay Reservoir where it would be stored temporarily for release to the Grey Mountain Power Plant, an 81.5-megawatt peaking power plant. Grey Mountain Reservoir would serve as an afterbay for this power plant and would store the flows for eventual release to serve conservation uses in the lower basin. A 0.5-megawatt Kinikinik Dam Power Plant would produce dependable base load capacity using the downstream bypass releases and a 12.0-megawatt Grey Mountain Dam Power Plant would provide intermittent dependable capacity using the releases to serve conservation needs. This alternative would provide a total of 103.5 megawatts of dependable peaking capacity and 14.5 megawatts of non-peaking capacity. The total energy production would average 229,000,000 kilowatt-hours per year. Grey Mountain Reservoir would supply 64,800 acre-feet of water per year for municipal and industrial uses and 216,600 acre-feet of water per year for agricultural uses. It would produce a yield of 14,300 acre-feet per year of new water.

Tudor/State Alternative 7

Preliminary Alternative 7 would include two large storage reservoirs, New Seaman with 200,000 acre-feet of total storage and Elkhorn with 196,000 acre-feet of total storage (See Map 3). Mainstem and South Fork flows would be stored at Elkhorn Reservoir and released directly through a power tunnel to New Seaman Power Plant, a 79.0-megawatt peaking power plant. Downstream bypass flows would be released to the River from Elkhorn Dam Power Plant and would provide 1.3 megawatts of dependable base load capacity. New Seaman Reservoir would serve as an afterbay for the peaking power plant and would store the flows for eventual release to serve conservation uses in the lower basin. These flows would pass through a 8.0-megawatt New Seaman Dam Power Plant to provide intermittent dependable capacity. This alternative would provide a total of 79.0 megawatts of dependable peaking capacity and 9.3 megawatts of non-peaking capacity. The total energy production would average 205,100,000 kilowatt-hours per year. New Seaman Reservoir would supply 64,800 acre-feet of water per year for municipal and industrial uses and 215,400 acre-feet of water per year for agricultural uses. It would produce a yield of 13,100 acre-feet per year of new water.

Tudor/State Alternative 8

Preliminary Alternative 8 would have only one major feature, a 196,000 acre-foot capacity Elkhorn Reservoir (See Map 3). This reservoir would store flows from the South Fork and upper mainstem for eventual release to the River to serve conservation uses in the lower basin. A 14.0-megawatt Elkhorn Dam Power Plant would generate power using these flows. These flows would occur mainly during the irrigation season and would produce some intermittent dependable capacity. An average of 47,300,000 kilowatt-hours of energy would be produced annually by this alternative. Elkhorn Reservoir would supply 64,800 acre-feet of water per year for municipal and industrial uses and 216,700 acre-feet of water per year for agricultural uses. It would produce a yield of 14,400 acre-feet of water per year of new water.

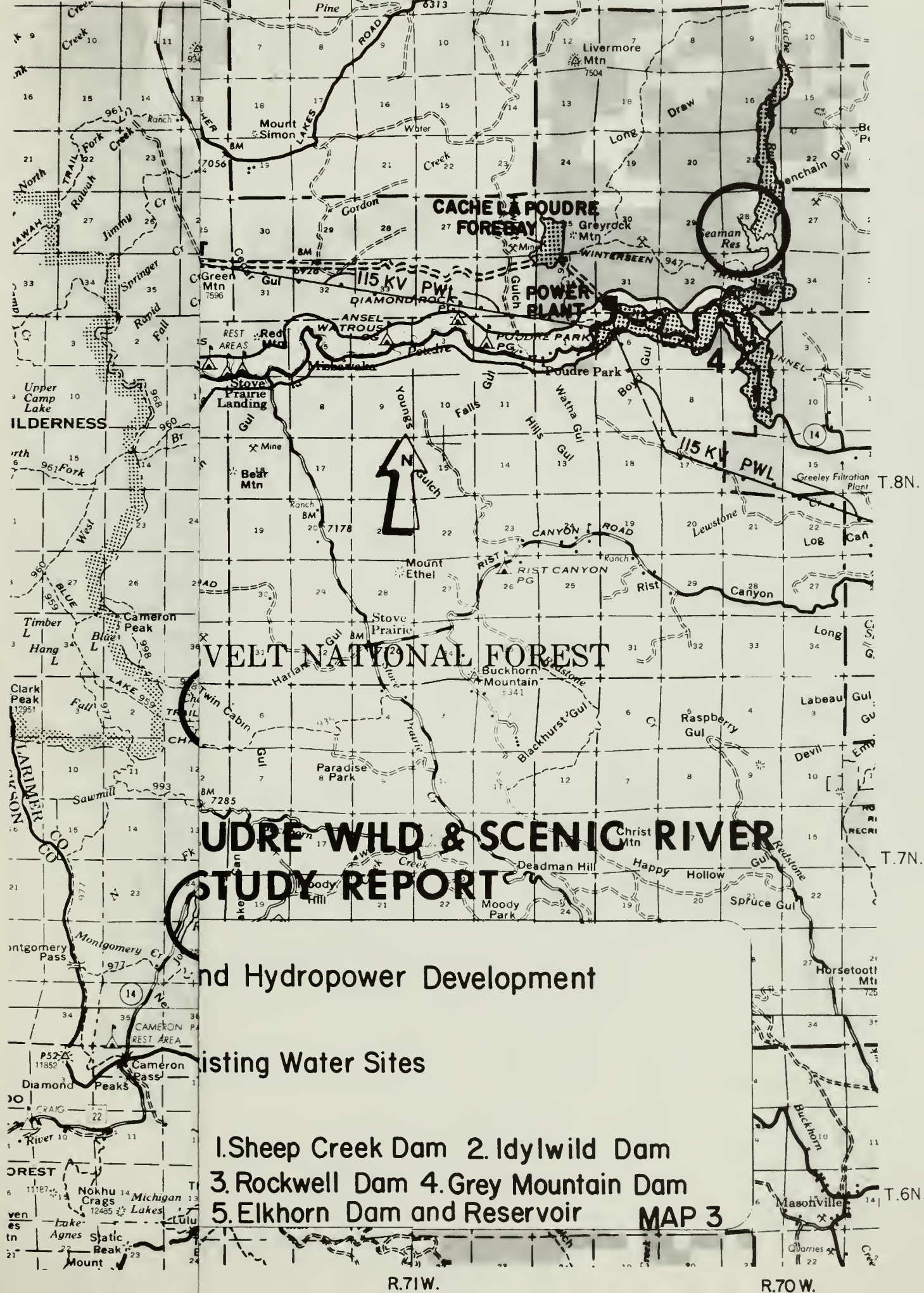
It should be noted that there are only two competitive "sets" of alternative projects. The first set would be Grey Mountain Reservoir standing alone (Alternative 1), with a possible major peaking power addition consisting of Idylwilde Reservoir plus major power works, which produces Alternative 2; and the second set being Elkhorn standing alone (Alternative 8), with a major peaking power addition consisting of New Seaman Reservoir plus major power works, which produces Alternative 7. The two major sets are mutually exclusive, as the selection of one set forecloses on the development of the other. Within each set, however, the conservation reservoir could be developed independently with or without the peaking power elements.

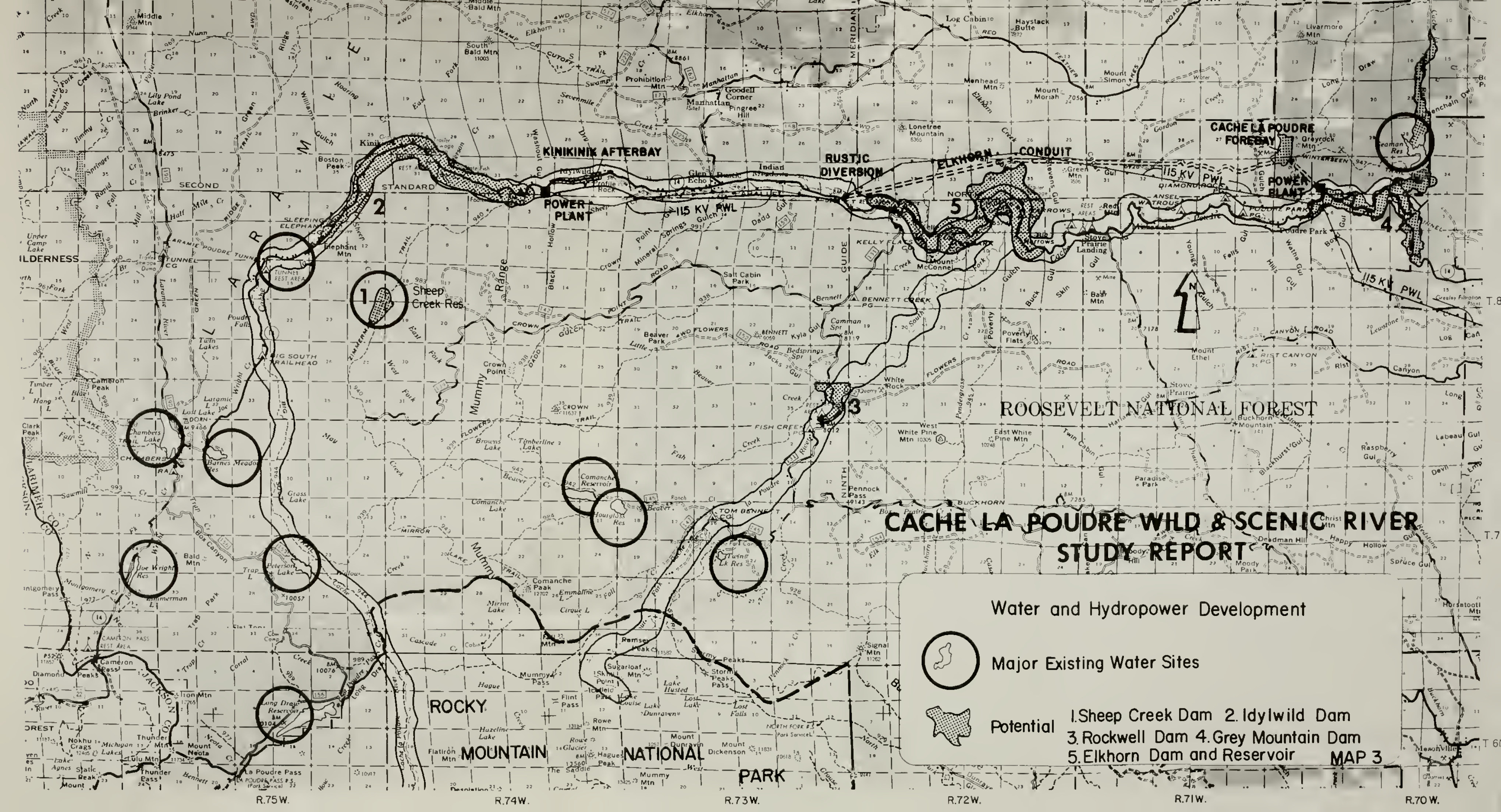
Thus, it is probably most meaningful to compare the single reservoir alternatives, Alternative 1, with Grey Mountain Reservoir, versus Alternative 8, with Elkhorn Reservoir, separately and then the peaking power increments consisting of Idylwilde plus associated features (Alternative 2 minus Alternative 1) and New Seaman plus associated features (Alternative 7 minus Alternative 8). Because of the high heads and flows available, run-of-the-river power is a logical increment for all alternative projects. Thus, it would be most enlightening to view the single-reservoir alternative projects as multipurpose conservation storage structures encompassing run-of-the-river hydropower. It is not appropriate to attempt to compare Idylwilde and New Seaman separately, as they were not formulated to stand alone.

Summary Evaluation

From an engineering standpoint, no apparent reasons are found to preclude construction of any of the four alternatives studied. No serious geologic problems were found.

Further optimization of facilities' designs would be necessary, according to the report, to develop more refined cost estimates and better project output data.





Water and Hydropower Development



Major Existing Water Sites



Potential

- 1. Sheep Creek Dam
- 2. Idylwild Dam
- 3. Rockwell Dam
- 4. Grey Mountain Dam
- 5. Elkhorn Dam and Reservoir

MAP 3

R.75W.

R.74W.

R.73W.

R.72W.

R.71W.

R.70W.

The following material is reproduced verbatim from the draft study report:

"The economic analyses show that, with a 7½ percent interest rate, the single reservoir conservation storage alternatives as presently scoped and evaluated result in benefit-cost ratios less than unity. Indications are that Alternative 8 with Elkhorn Reservoir is economically superior to Alternative 1 with Grey Mountain Reservoir. When a second reservoir and peaking power facilities are added to form multiple reservoir peaking power alternatives, the peaking power additions of Alternatives 2 and 7, are comparable, but because of the lower cost conservation storage, Alternative 7 is relatively more economically attractive than Alternative 2. The breakeven cost of peaking power compares favorably with the peaking power benefits developed during Phase I.

A sensitivity analysis of interest rates shows, that with five percent, the benefit-cost ratio of Alternative 8 with Elkhorn Reservoir is greater than unity but for Alternative 1 with Grey Mountain Reservoir falls slightly below. At 10 percent, both fall far short of unity. At 5 percent the breakeven value for peaking appears to be very attractive; at 10 percent the breakeven value is somewhat in excess of the peaking power benefits developed during Phase I.

The financial analyses show that Alternative 8 with Elkhorn Reservoir would require the lowest level of funding. Under the State funding approach with a five percent cost of money over 40 years, it appears that the cost of peaking power would be competitive in the marketplace. Under the revenue bonding approach, with 12 percent cost of money over 30 years, it appears doubtful that the output could be marketed.

There appear to be prospects for improved economic justification and financial feasibility of any of the alternatives from possible cost reduction resulting from optimization of facilities designs and from a better evaluation of the monetary effects of improved system management and possible higher value use of the yield of new water.

The analysis of non-monetary, physical impacts from inundation show that the alternatives which include Elkhorn Reservoir, Alternatives 8 and 7, would result in inundation of less river, highway and developed properties and may include possibilities of improved fishery and recreation. They would, however, cause some impact on designated wilderness areas.

The results of this study could be affected by a comprehensive basin study which would include the broader South Platte River Basin. Environmental and social impacts, not included in this study, need to be identified for evaluation along with economic and financial aspects of any alternative project. Effects on fishery and recreation, whether positive or adverse, should be evaluated, as should the effects of flood control."

Additional discussion of the Tudor/State study report is found in Chapter III.

II. RECOMMENDED ACTION

A. FEIS Recommendations

The FEIS described Alternative A as the environmental quality (EQ) plan, which most contributes to achieving environmental quality objectives. Absent unresolved conflicts concerning the alternative uses of the Poudre's water resource, the conclusion of the study would have been to recommend either Alternative A or Alternative E (the preferred alternative of the DEIS/SR) to the President and Congress. From a purely environmental standpoint, these two alternatives are preferred. The State of Colorado recommends adoption of Alternative A, which recommends designation of the entire Cache la Poudre within the study area. (See Section II.D. for a complete description of the State's recommendation.)

The development of Alternative E reflected a concern over the impacts of designation on private property ownership and rights. The DEIS deleted Segment 1 from its recommendation because of the amount of private ownership in the study corridor. In the FEIS, the effects of designation on privately-owned lands are minimal because most of the private lands are within Segments 1 and 4, which were both recommended for "no decision." Public concern over impacts on private lands have been identified throughout the consultation process and are discussed in Chapters V and VIII.

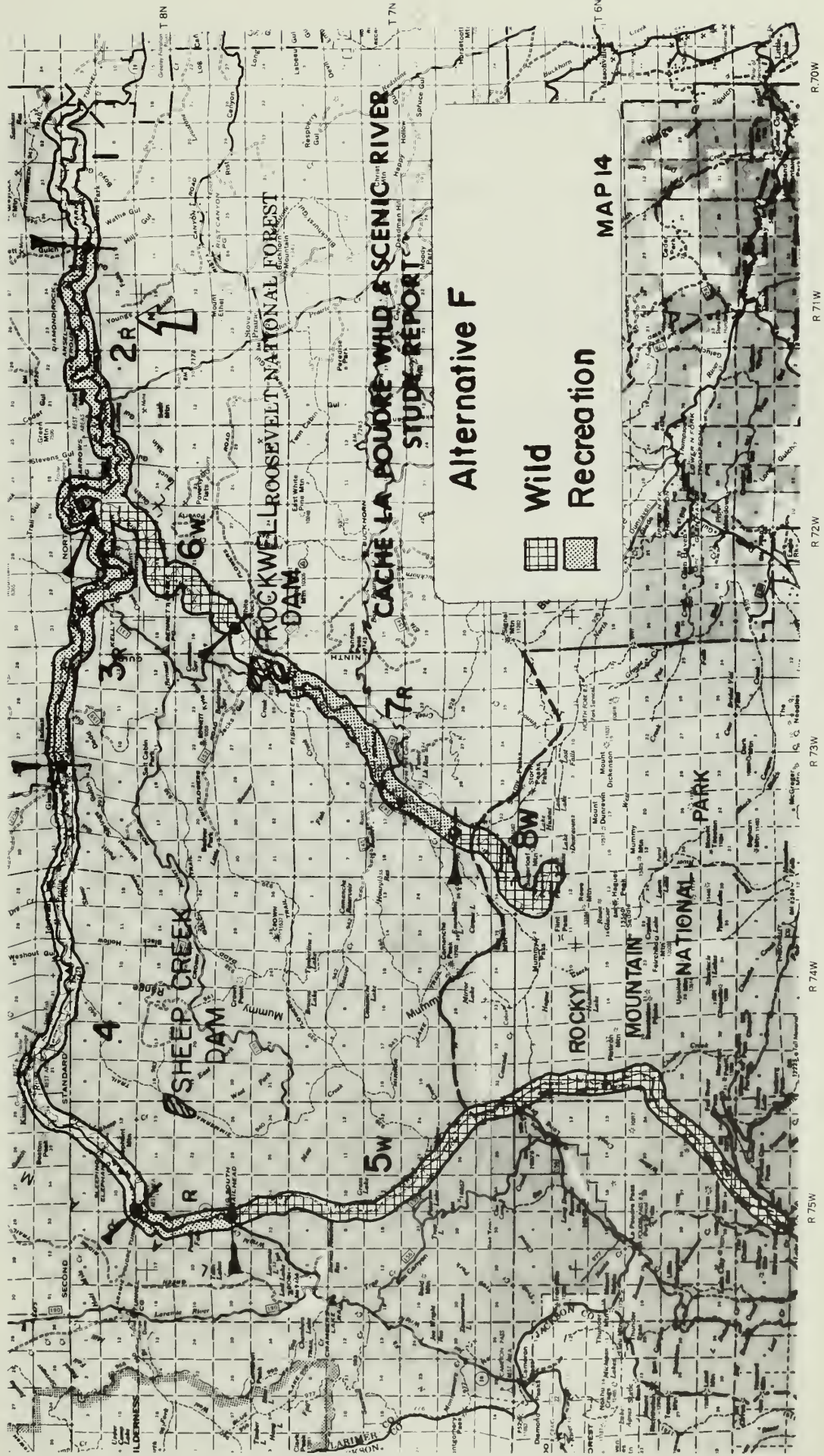
The FEIS, unable to use current water resource study results now available, recommended designation of the Poudre's upper reaches only. Through that recommendation, the opportunity to develop a viable water resource project on the lower portion of the River and private property considerations are protected. The availability of data from the Tudor study addresses the uncertainty about water resource development; private property considerations of designation are not resolved as readily.

B. Addendum Alternatives

Modification of alternatives presented in the FEIS resulted in two additional alternatives which alleviate problems and take advantage of opportunities in ways that contribute to the National Economic Development (NED) and Environmental Quality (EQ) objectives. One, Alternative G (described below), maximizes contributions to the NED objective. The other, Alternative F (described below), becomes the new preferred alternative as recommended by USDA, resulting from the Cache la Poudre Wild and Scenic River Study, and consideration of the results of the Tudor/State study.

Alternative F (Modified from FEIS Alternative E)

Partial designation of River, classifying most segments to highest level of eligibility and not classifying all of one segment and the majority of another (Map 14).



- Segments 2, 3, and 2 miles of 4 classified "recreational."
- Segments 5, 6, and 8 classified "wild."
- Segment 1 and 15 miles of 4 not classified.
- Segment 7 classified "recreational," with exception of 1.3 miles in Section 36, Township 7 North, Range 73 West, to be excluded from designation so as to allow for construction of Rockwell Reservoir.

The area would be managed to preserve or enhance the essentially primitive character of wild segments, protect the river and other resource values of recreational segments, and follow the "no action" (Alternative C in FEIS) direction for segments not classified.

Alternative G (Revised NED Alternative, Non-Federal Alternative)

Water development potentials maximized using findings of Tudor/State study; designation of River above Elkhorn site (Map 15).

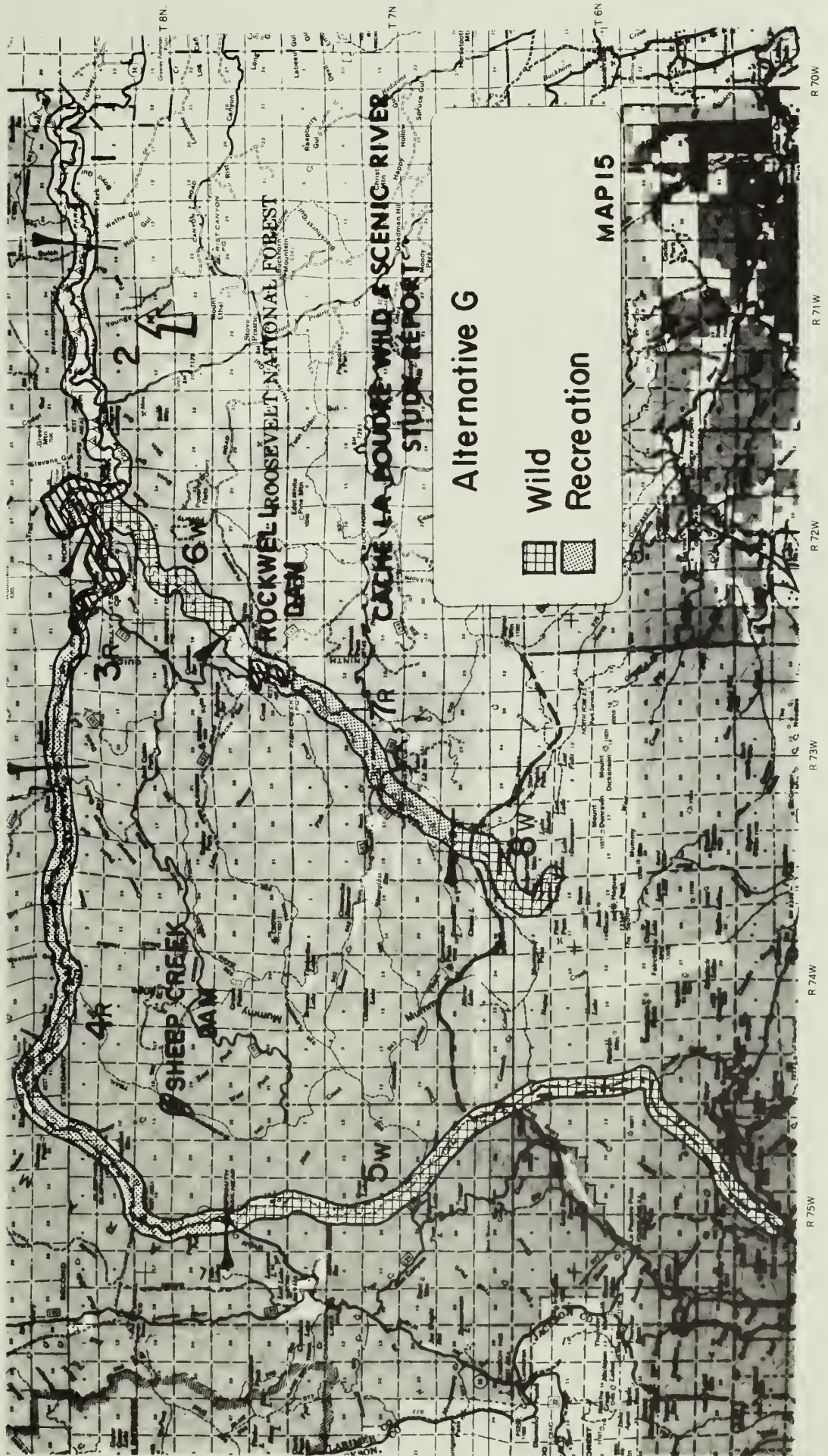
- Segments 1, 2, and 3 not designated.
- Most economically favored water storage project, Elkhorn, constructed on mainstem.
- Segments 4 and 7 classified recreation, with the Rockwell Reservoir site recommended for no designation.
- Segments 5, 6, and 8 classified "wild."

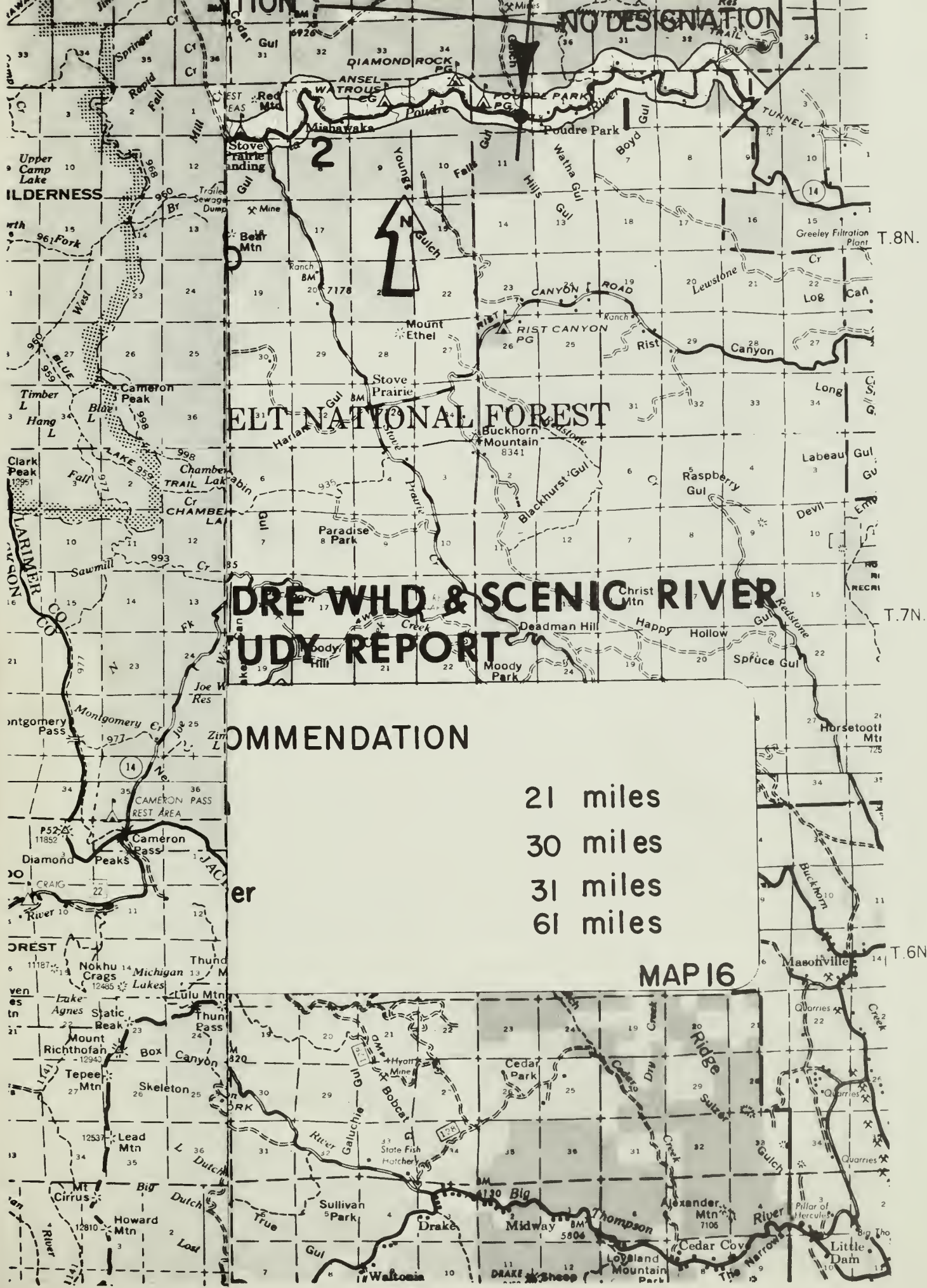
The non-designated mainstem area above the Elkhorn impoundment would be managed to preserve or enhance the essentially primitive character of wild segments and protect the River and other resource values of recreational segments. Reaches below the structure would be managed consistent with legislative and administrative guidance on an integrated, multi-resource basis. Contribution to the NED objective would be emphasized.

C. Recommended Action by USDA

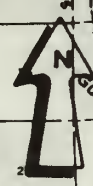
The USDA recommendation (Alternative F), resulting from seven years of analysis and study, is to designate 62 miles of the Cache la Poudre River as a component of the National Wild and Scenic Rivers System. Recommended classification of the River would be as follows: 32 miles (segments 2, 3, 2 miles of segment 4, and 7) as "recreational river" and 30 miles (segments 5, 6, and 8) as "wild river" (See Map 16).

Construction of the municipal water storage facility at Rockwell is anticipated, enabled by withdrawing lands necessary for construction and inundation from the study corridor. Twenty-one miles of river (the entirety of Segment 1 and 15 miles of Segment 4) would not be recommended for inclusion





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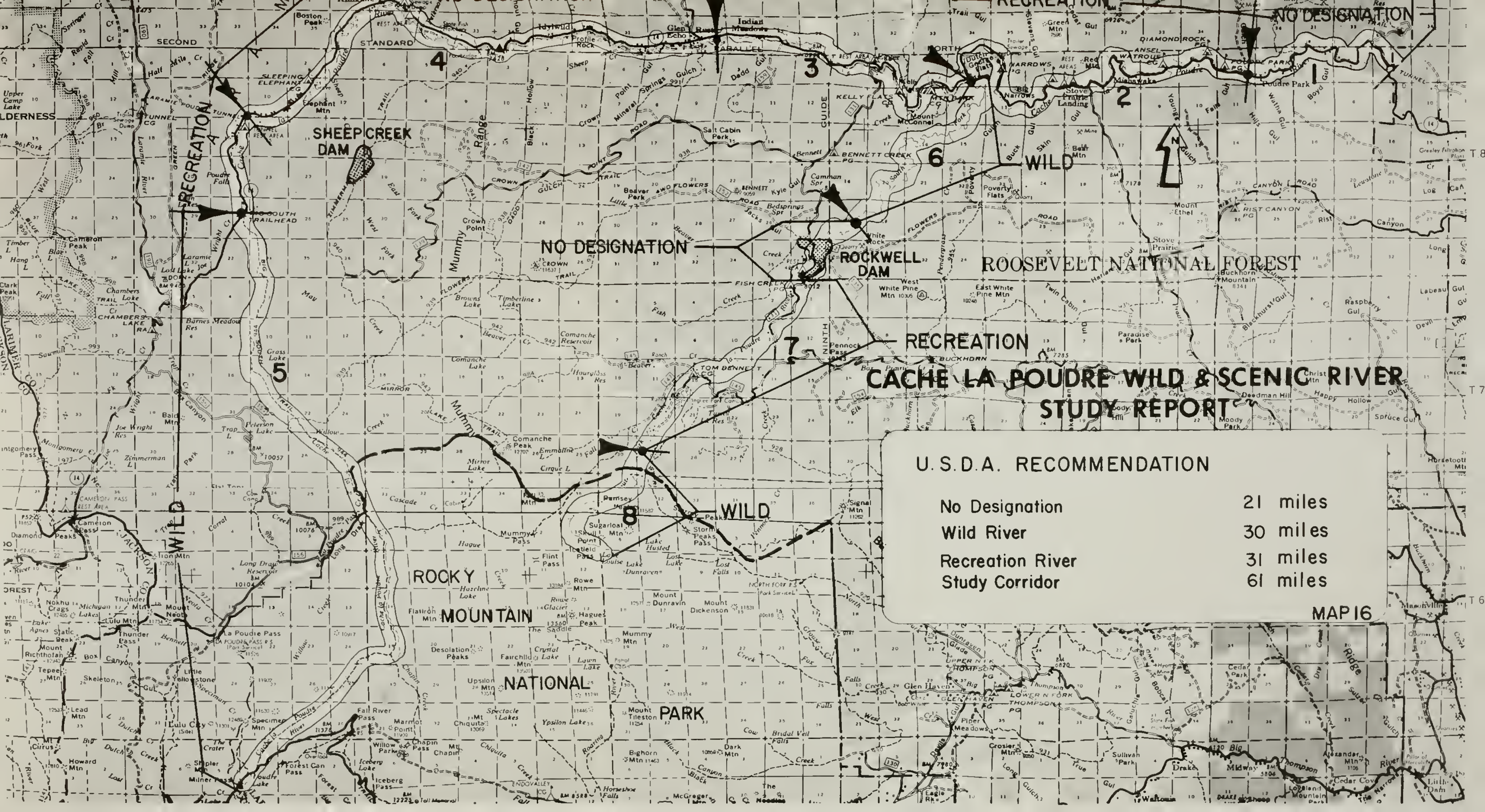
ELT NATIONAL FOREST

POUDRE WILD & SCENIC RIVER
STUDY REPORT

RECOMMENDATION

- 21 miles
- 30 miles
- 31 miles
- 61 miles

MAP 16



NO DESIGNATION

ROCKWELL DAM

ROOSEVELT NATIONAL FOREST

RECREATION
CACHE LA POUDRE WILD & SCENIC RIVER
STUDY REPORT

U. S. D. A. RECOMMENDATION

No Designation
Wild River
Recreation River
Study Corridor

21 miles
30 miles
31 miles
61 miles

MAP 16

ROCKY MOUNTAIN
NATIONAL PARK

in the system because of the non-Federal land ownership pattern. Major water resource developments are not foreseen for the main channel of the River in Segments 1 through 4.

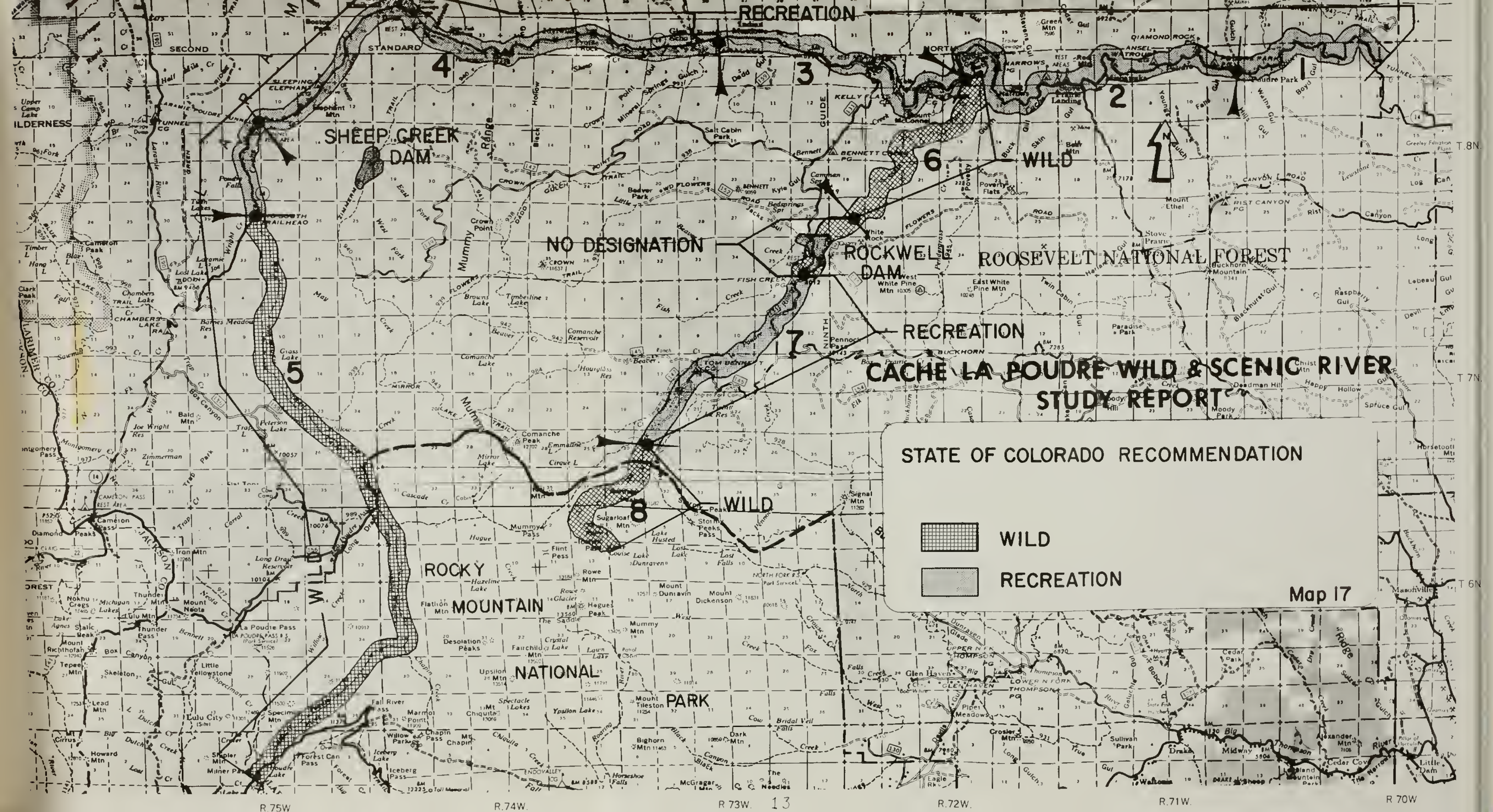
Coincidentally, the areas not recommended for designation are also those that were identified as probable locations for water resource development in past studies. Current information (see discussions in Chapters I and III) significantly reduces the feasibility of both the long-proposed Grey Mountain and Idylwilde projects. Proposed construction of water projects in these segments would require further analysis of their environmental impacts and compatibility with wild and scenic river values in adjacent areas of the river corridor. An actual application for a permit to use National Forest System lands for development is required before the Forest Service position on mainstem water projects is finalized.

D. Recommended Action by State of Colorado

The State of Colorado has carefully reviewed the Forest Service's Cache la Poudre Wild and Scenic River Environmental Impact Statement and Study Report and the recent Addendum. The State strongly supports designation of the upper reaches of the Cache la Poudre River as a wild and scenic river.

The State finds that the Cache la Poudre possesses the "outstandingly remarkable scenic, recreational, geologic, fish and wildlife" and other values that justify its protection in a free-flowing condition. It is one of the exceptional areas on the Front Range that provides white water rafting and kayaking, camping and picnicking, subarctic trout fishing, hiking, cross-country skiing, and excellent hunting. The State takes pride in the stretches of the River that provide wild trout and of the herds of deer, elk, and bighorn sheep which are in Poudre Canyon. Portions of the River run through the Cache la Poudre Wilderness and the first few miles of the South Fork are within Rocky Mountain National Park. It would be especially appropriate to designate the Cache la Poudre as Colorado's first wild and scenic river, perhaps the only wild and scenic river that will be designated east of the Continental Divide.

The State commends the thoughtfulness and thorough analysis of the Forest Service's Report and Addendum. However, the State disagrees with the recommended exclusions of portions of the River from designation that contain private lands. In the State's view, such exclusions are inconsistent with the purposes of the Wild and Scenic Rivers Act and may actually operate to the detriment of private property owners. The State recommends that all eight segments of the River be designated with Segments 5, 6, and 8 designated as "wild" and Segments 1 through 4 and 7 as "recreational" (see Map 17).



III. RATIONALE FOR RECOMMENDATIONS

A. USDA Recommendations

1. Budget Impacts

Constraints on the Federal budget are presumed to continue under future management direction. In such an economic climate, alternatives which minimize Federal expenditures and maximize returns to the treasury are highly favored. Alternative F compares favorably with the other alternatives in the National Economic Development (NED) analysis (See Chapter IV), offering a high benefit/cost ratio and a high positive annual difference from the "no action, without plans"^{1/} condition. This is achieved while simultaneously responding to the goals of the Wild and Scenic Rivers Act to preserve and protect eligible river segments. By eliminating 21 miles of river from designation, the preferred alternative significantly reduces potential scenic and access easement acquisition costs. The amount required is projected to be nearly as low as in FEIS/SR Alternative B.

In addition, designation will tend to reduce the construction of new Federal developed recreation facilities in classified segments consistent with the management emphasis described in FEIS/SR. The direct savings to the Treasury are augmented by an indirect benefit of encouraging private development of camping and picnicking facilities in non-designated enclaves, which are predominately privately-owned. This enhances private sector opportunities.

2. Adverse Affects on Private Lands

The Other Social Effects (OSE) Account cites many of the impacts of designation on private landowners (See Chapter IV). Trespass, vandalism, litter, and intrusions on the sense of privacy enjoyed by Canyon residents could all increase with designation of reaches containing a large concentration of privately-owned land. If, however, existing ownership patterns are recognized in making designation recommendations, it is possible to channel recreation use into designated segments and still allow for a recreation residence and service economy to prosper adjacent to designated reaches. By carefully drawing designation boundaries, the confusion between public and private ownership would be clarified, reducing accidental and unintended impacts on private land.

As important is the issue of private property ownership rights that many Canyon landowners felt would be jeopardized with designation. Early in the public involvement process associated with this study, numerous residents expressed concern over Federal management requirements on private lands. The concerns were great enough that the

^{1/} In the FEIS/SR, "no action, without plans," means the River is not recommended for designation, and that major water development projects are not constructed (Rockwell Reservoir is anticipated).

initial reaction of Canyon property owners to the Wild and Scenic River study on the Poudre was very negative. Support for designation did not become popular until the possibility of private property inundation by a reservoir became a real, and unacceptable, alternative to the public.

Under the recommended alternative, six miles of right-of-way acquisition across private land could be needed to provide connecting trail networks. The amount is only marginally greater than Alternative B (the smallest of the designation alternatives). At the same time, no scenic easement acquisitions greater than those of Alternative B are planned, due to the great reduction in private property enclaves. Scenic easements will not be necessary on the predominately Federal, State, or city-owned reaches of the designated segments.

In other States, inclusion of rivers in the National Wild and Scenic River System has been shown to typically increase annual recreation use of the rivers by about 15 percent. The preferred alternative might even have a positive effect on trespass, litter, and other private property impacts by focusing or channeling use away from privately-owned enclaves. The undesignated private reaches of the River in Segments 1 and 4 would receive significantly less use for boating and other high impact uses. Fishing, hiking, and driving for pleasure are still available in these segments.

3. Public Use and Access Effects

One of the purposes of wild and scenic river designation is to ensure public access to those rivers with "outstandingly remarkable" characteristics. In the study corridor, access to the Poudre is already provided in the publicly-owned segments administered by the Forest Service and the Park Service. Even in the privately-owned reaches of Segments 1 and 4, access is effectively unrestricted. This is due in part to the presence of Highway 14 and its corresponding right-of-way, which parallels the Poudre. Public fisherman parking areas and other access points are found at many points along the highway through all of Segments 1 through 4. At the same time, Federally-owned parcels are intermingled with the private ownership, providing additional undeveloped access.

The FEIS/SR projects continuation of a State-wide trend to fence private land, restricting access to rivers. (The State Attorney General has ruled this practice in violation of State law, but definitive judicial review has not occurred.) Since some legal precedent has approved fencing across a river when ownership includes both banks, this practice could severely infringe on boating, hiking, and other uses along the River. The locations where this practice would most likely be used, i.e., larger private land parcels, however, are also those with few opportunities for boating or kayaking. Because of long-term private ownership in Segments 1 and 4, traditional public use has, for the most part, concentrated on accessible public lands. (Trespass and other private land impacts do, unfortunately, still occur and are discussed above.)

By designating Segments 2, 3, part of 4, and 5 through 8, those areas of greatest interest and use will be preserved for future public use and enjoyment. A large amount of the non-Federally owned land in Segments 4 and 7 is owned by the State of Colorado (See Map 4 and Table A-6). In Segment 4, the lands include the State fish hatchery; and in Segment 7, the Pingree Park Campus of Colorado State University. The management philosophies at these locations are consistent with use and access of the recommended classification.

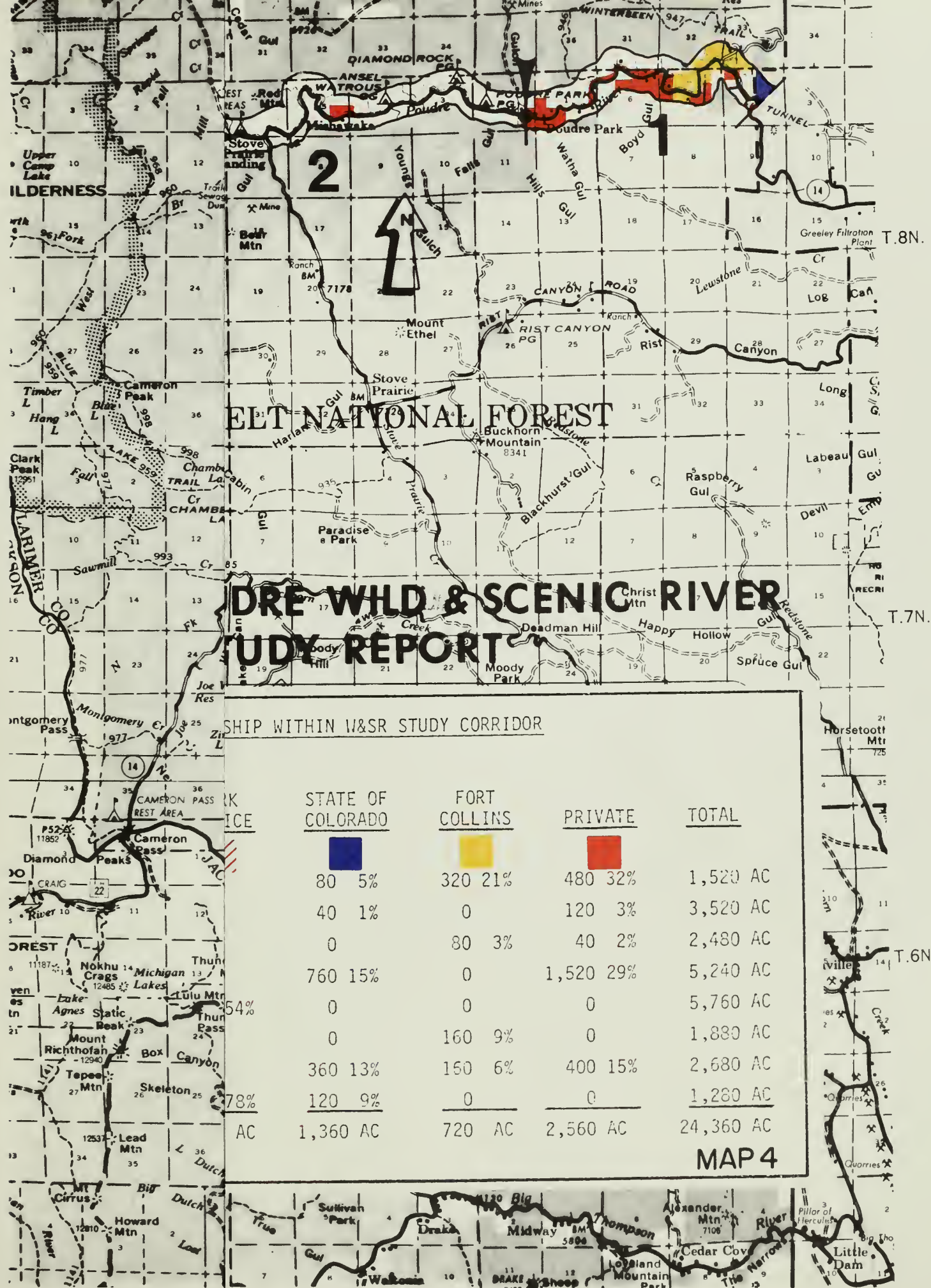
If fencing trends continue on privately-owned parcels, a final alternative remains to secure needed access to public lands within designated segments: rights-of-way. While not advocating a wholesale Federal right-of-way acquisition program, river access across scattered private parcels may be necessary to meet growing use requirements. Where possible, rights-of-way are obtained cooperatively, through willing donation or just compensation for use of the land. As a last resort, condemnation may be used to ensure access, followed by just compensation on designated segments of the River.

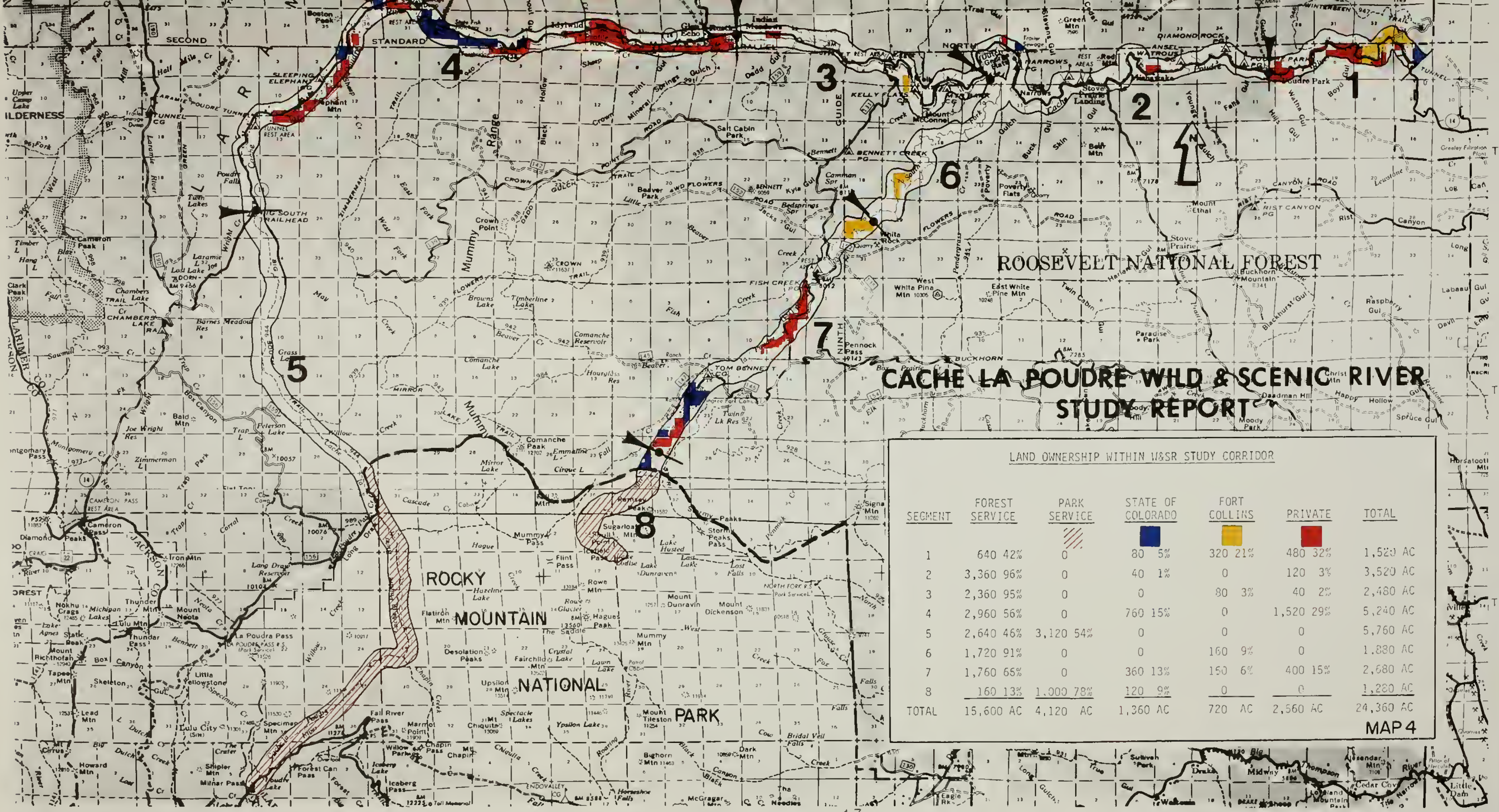
One resource-use question that is present in consideration of wild and scenic river designation concerns alternative recreation uses of the water resource. Proponents of water resource development stress the importance of flatwater recreation opportunities and the need to create new opportunities. While flatwater opportunities are an important part of the recreation matrix, their supply is much more plentiful than free-flowing rivers and whitewater recreation. The major development proposals for the Poudre River (except the Grey Mountain alternative) would eliminate existing free-flowing and whitewater river use opportunities through either inundation or regulation of flows to a point of unsuitability. In the perspective of relative supply and demand, elimination of the rare whitewater resource for additional flatwater opportunities is not warranted.

4. Water Resource Developments

Development of the Poudre's water resources versus preservation of them through designation as a wild and scenic river remains the center of controversy associated with this study. The provisions of the Wild and Scenic Rivers Act preclude development on any designated river, regardless of the classification (wild, scenic, or recreational). Low dams and diversion works do not preclude a river from designation in a recreational classification, but future emplacement of these features are discouraged.

There is general agreement among planners for development interests, landowners, and local citizens in the upper reaches of the Poudre that water resource development should not be undertaken. In H.B. 1102 (1983), the Colorado General Assembly excluded from future study ". . . consideration of water development projects which would be located upstream from Kinikinik (See Map 3, page 5) or upstream from the Rockwell Dam site (See Map 3, page 5)." This approximately corresponds with the area recommended for designation in the FEIS/SR, except for Segment 6, the Cache la Poudre Wilderness, which is below the site.





LAND OWNERSHIP WITHIN W&SR STUDY CORRIDOR						
SEGMENT	FOREST SERVICE	PARK SERVICE	STATE OF COLORADO	FORT COLLINS	PRIVATE	TOTAL
1	640 42%	0	80 5%	320 21%	480 32%	1,520 AC
2	3,360 96%	0	40 1%	0	120 3%	3,520 AC
3	2,360 95%	0	0	80 3%	40 2%	2,480 AC
4	2,960 56%	0	760 15%	0	1,520 29%	5,240 AC
5	2,640 46%	3,120 54%	0	0	0	5,760 AC
6	1,720 91%	0	0	160 9%	0	1,880 AC
7	1,760 65%	0	360 13%	150 6%	400 15%	2,680 AC
8	160 13%	1,000 78%	120 9%	0	0	1,280 AC
TOTAL	15,600 AC	4,120 AC	1,360 AC	720 AC	2,560 AC	24,360 AC

MAP 4

TABLE A-6

Landownership within W&SR Study Corridor Area

<u>Segment</u>	<u>Forest Service (FS)</u>	<u>Park Service (NPS)</u>	<u>State</u>	<u>City</u>	<u>Private</u>	<u>Total</u>
1	640	0	80	320	480	1,520
2	3,360	0	40	0	120	3,520
3	2,360	0	0	80	40	2,480
4	2,960	0	760	0	1,520	5,240
5	2,640	3,120	0	0	0	5,760
6	1,720	0	0	160	0	1,880
7	1,760	0	360	160	400	2,680
8	160	1,000	120	0	0	1,280
TOTAL	15,600	4,120	1,360	720	2,560	24,360

The areas downstream of these locations, mainly the mainstem Segments 1 through 4, remain contentious.

It is the view of the Forest Service, USDA, that the Tudor/State study, even though conducted at the reconnaissance level, contains persuasive evidence that further investigation of main channel development in Segments 1 through 4 is unnecessary. Results of the study show that a Grey Mountain dam and reservoir (or the combination of that feature and peaking power components of the Grey Mountain-Idylwilde Project) do not show a positive benefit/cost ratio under any of the funding methods evaluated (See Summary Table III-7 from the Tudor/State study). The Elkhorn project, or its peaking additions from New Seaman, does show a positive benefit/cost ratio of 1.10, but only at a 5 percent interest level that presumably would be part of the State funding package. The economic evaluation at 7½ percent interest is closer to the level required by the P&S and provides the most effective comparison with other alternatives in the Wild and Scenic River Study. At this level, the Elkhorn project is below unity for benefit/cost.

The Colorado Water Conservation Board has suggested that the results of the Tudor evaluation are encouraging enough to retain the options related to the potential of an Elkhorn project. After optimizing and further study at the project level, the agency feels that the Elkhorn project may show a positive benefit/cost ratio. Even if additional study (which the State is currently unwilling to fund) were to give Elkhorn an improved economic evaluation, the Forest Service considers the potential environmental impacts of such a project unacceptable. Elkhorn, as now envisioned, would include a dam at the Big Narrows of the Poudre, one of the most important scenic values of the entire Canyon. It would inundate 8.9 miles upstream, covering 1,390 acres of public land and 30 acres of private land. Among the public acres is critical winter range for big game (particularly bighorn sheep), over 200 acres of the Cache la Poudre Wilderness, and 53 percent of the developed recreation facilities in the Canyon. (Additional discussion of Elkhorn's impacts is found in Chapter IV of this Addendum. The Forest Service assesses these impacts as extremely adverse.)

The Rockwell Dam and Reservoir to be located between Segments 6 and 7, is foreseen in the forecast for the preferred alternative. The reservoir, as designed, will be a small municipal water storage feature, without the extreme release fluctuation characteristic of irrigation/hydropower projects envisioned for the main channel.

B. State of Colorado Recommendation

One of the competing concerns in formulating the State recommendation was the possibility of water resource development along the River. To accommodate that possibility, the Forest Service cooperated in making no recommendation in its final report as to Segments 1 through 4 and excepting the site of the proposed Rockwell Dam on the South Fork. The Legislature wisely decided to study all of the possibilities. A total of \$300,000 was

TABLE III-7

CACHE LA POUDE PROJECT
SUMMARY OF EVALUATION OF ALTERNATIVE PROJECTS PHASE II

Item	ALT 1 Grey Mountain only	ALT 8 Elkhorn only	ALT 2 Grey Mountain- Idlywilde	ALT 7 Elkhorn- New Seaman
BASE DATA:				
Storage Capacity	200,000 AF	196,000 AF	400,000 AF	396,000 AF
Yield of New Water	16,300 AF	14,400 AF	14,300 AF	13,100 AF
Installed Electric Capacity	12 MW	14 MW	118 MW	88 MW
Average Annual Generation	42,000,000 kWh	47,000,000 kWh	229,000,000 kWh	205,000,000 kWh
Capital Cost (Jan.1982 prices)	\$130,800,000	\$109,600,000	\$400,800,000	\$354,300,000
Annual OM & R Costs (Jan.1982 prices)	\$200,000	\$235,000	\$1,690,000	\$1,160,000
Projected On-Line Date	1994	1994	1998	1998
ECONOMIC EVALUATION:				
<u>Benefit-Cost Ratios for Conservation Alts. (7½% interest)</u>				
Conservation Only	.36	.44	N/A	N/A
Incremental Run-of-River Generation	3.89	3.65	3.39	3.87
Overall Conservation	.59	.73	N/A	N/A
<u>Net Benefits for Conservation Alts. (7½% interest)</u>				
Conservation Only	\$6,600,000	\$4,800,000	N/A	N/A
Overall Conservation (incl. run-of-river power)	\$4,600,000	\$2,600,000	N/A	N/A
<u>Breakeven Value of Peaking Power (7½% interest)</u>				
Total Annual	N/A	N/A	\$24,600,000	\$22,200,000
Per Kilowatt-Year	N/A	N/A	\$238	\$281
Per Kilowatt-Hour	N/A	N/A	135 mills	135 mills
<u>Sensitivity Analysis (5 & 10% interest)</u>				
<u>Overall Benefit-Cost Ratios for Conservation</u>				
At 5% Interest	.90	1.10	N/A	N/A
At 10% Interest	.43	.53	N/A	N/A
<u>Breakeven Value of Peaking power</u>				
At 5% Interest				
Per Kilo-watt-Year	N/A	N/A	\$157	\$185
Per Kilowatt-Hour	N/A	N/A	90 mills	89 mills
At 10% Interest				
Per Kilowatt-Year	N/A	N/A	\$325	\$366
Per Kilowatt-Hour	N/A	N/A	185 mills	186 mills
FINANCIAL EVALUATION:				
<u>State Funding Approach (5%, 40 years)</u>				
On-Line Investment Requirements	\$292,000,000	\$244,000,000	\$1,166,000,000	\$1,032,000,000
First Year On-Line Total Annual Costs	\$17,500,000	\$14,800,000	\$73,700,000	\$64,100,000
First Year Jan. 1982 Total Annual Costs	\$7,800,000	\$6,600,000	\$25,000,000	\$21,800,000
Cost Burden of Peaking Power (Jan. 1982 costs)	N/A	N/A	\$18,269,000	\$15,459,000
Per Kilowatt-Year	N/A	N/A	\$177	\$196
Per Kilowatt-Hour	N/A	N/A	100 mills	94 mills
<u>Revenue Bonding (12%, 30 years)</u>				
On-Line Investment Requirements	\$399,000,000	\$335,000,000	\$1,680,000,000	\$1,485,000,000
First Year On-Line Total Annual Costs	\$44,000,000	\$37,000,000	\$189,000,000	\$166,000,000
First Year Jan. 1982 Total Annual Costs	\$19,900,000	\$16,700,000	\$65,700,000	\$51,600,000
Cost Burden of Peaking Power (Jan. 1982 costs)	N/A	N/A	\$58,825,000	\$51,277,000
Per Kilowatt-Year	N/A	N/A	\$569	\$649
Per Kilowatt-Hour	N/A	N/A	323 mills	312 mills
PHYSICAL FACTORS EVALUATION:				
<u>Inundation Impacts</u>				
River	12.8 miles	8.9 miles	21.8 miles	19.3 miles
Highway	6.0 miles	7.0 miles	13.5 miles	7.0 miles
Areas, Total	1,670 acres	1,420 acres	3,370 acres	3,060 acres
(Private Lands)	(1,170 acres)	(30 acres)	(2,190 acres)	(690 acres)
(Public Lands)	(500 acres)	(1,390 acres)	(1,380 acres)	(2,370 acres)
(Designated Wilderness Areas)	(0 acres)	(213 acres)	(0 acres)	(213 acres)
Developed Recreationl Sites	1	7	6	7
Buildings	75	9	149	13
Other Major Improvements	Wtr Treat/Plant	None	Wtr Treat/Plant and Fish Hatchery	Wtr Treat/Plant
<u>River Impacted by Altered Streamflows (excluding inundated areas)</u>				
	2 miles	19 miles	30 miles	19 miles

Source: Cache la Poudre Project Study Reconnaissance Report. Prepared for: The Colorado Water Conservation Board, Colorado Department of Natural Resources, by Tudor Engineering Company, Denver, Colorado.

appropriated and spent by the Colorado Water Conservation Board for a study of numerous potential project configurations. Eight preliminary alternatives were evaluated and then the Colorado Water Conservation Board selected four for further evaluation. Although all eight alternatives were physically possible from the geological standpoint, none proved to be economically justifiable. The Board recommended further study, which would have explored different sized projects for feasibility. It is possible that smaller reservoirs might have been justified, but the Legislature declined to authorize further study. It appears that water needs in the area are being adequately met and will be in the foreseeable future.

Given the careful consideration of possibilities for water development, the State is now comfortable recommending designation that would preclude that development until Congress authorizes it. The State expects that if future needs arise for water development from the Poudre, Congress will respond. In the meantime, the full length of river in the study area deserves protection as a wild and scenic river.

The State believes that Alternative A, designation of the full 83 miles of the Cache la Poudre River study area as a wild and scenic river, would be an appropriate recognition of one of Colorado's most precious assets. However, the City of Fort Collins owns land and water rights on the South Fork of the River which it may wish to use for a storage facility that would be known as Rockwell Reservoir. If the City determines that the reservoir is a necessary and feasible ingredient in its water planning, the State would not object to exclusion of the 1.3 mile-long site from designation. This action would help protect a splendid example of Colorado's natural heritage. It is the hope of the State that the President will consider revision of USDA's recommendations to cover all segments of the River studied. This was indicated to be the preferred alternative in the Forest Service's final study, which apparently would have been recommended absent concerns regarding alternative uses of the Poudre's water resource. The State believes those conflicts to have been resolved to its satisfaction.

IV. IMPLEMENTATION EFFECTS

The effects of Alternatives F and G are displayed in this chapter, consistent with the P&S formats. To provide comparison with the FEIS/SR Alternatives A-E, all alternatives are displayed together. The tables for the various accounts are shown on the following pages.

A. National Economic Development (NED) Account

The summary NED account is displayed in Table A-1. The table was originally prepared for 1979. Data from the FEIS/SR have been indexed to reflect 1982 values.^{1/} Data taken from the Tudor/State study, form the

^{1/} To update 1979 dollars to 1982, the Council of Economic Advisors' Economic Report of the President, February 1983, was utilized. Table B-3, "Implicit Price Deflators for Gross National Product 1929-82," provides the necessary data. A ratio of 1979 GNP (163.42) to 1982 GNP (207.23) is calculated and used as a multiplier of 1979 dollar amounts in Table A-1 of the FEIS.

TABLE A-1
National Economic Development Account
Potential Average Annual Effects on National Income 1990-2040
(Figures given in 1982 dollars; WRC discount rate of 7.125 percent)

	Alternative A (EQ)	Alternative B	Alternative C (W/O Plans)	Alternative D (NED)	Alternative E	Alternative F	Alternative G c/
				Amount \$1,000			
A. Beneficial Effects^{e/}							
1. Hydropower	0	0	0	42,521	0	0	3,070
2. M&I Water Supply	0	914	914	3,089	0	914	3,060
3. Agricultural Irrigation	0	0	0	888	0	0	430
4. Recreation				1,268			
a. Developed	533	877	985	*	533	760	341
b. Dispersed	1,986	1,768	1,768	*	1,986	1,902	1,200
c. Other (fees)	82	176	241	*	82	122	59
5. Other	0	0	0	1,509	0	0	250
6. Total NED Benefits	2,601	3,735	3,908	49,275 a/	2,601	3,698	8,410
B. Adverse Effects^{e/}							
1. Construction	37	1,025	1,064	34,564	23	772	9,150
2. Land Acquisition	0	0	0	*	0	0	*
3. Easements	219	59	0	*	179	60	*
4. Rights-of-Way	5	1	0	*	3	3	*
5. Minerals	44	0	0	*	44		*
6. Operation, Maintenance, Reserve	619	861 b/	941 b/	5,871	619	735 b/	631
7. Total NED Costs	924	1,946	2,005 b/	40,435	868	1,520 b/	9,781
C. Total Effects^{e/}							
1. Total Beneficial Effects	2,601	3,735	3,908	49,275	2,601	3,698	8,410
2. Total Adverse Effects	-924	-1,946	-2,005	-40,435	-868	-1,520	-9,781
3. Net NED Effects	1,677	1,789	1,903	8,840	1,733	2,178	-1,371
D. Benefit/Cost Ratio	2.8	1.9	1.9	1.2	3.0	2.43	.88
E. Comparison to Without-Plans	-266	-114	0	+6,937	-170	+275	-3,274

*Amounts are not separated, but are aggregated into broader categories.

a/ Includes Fish and Wildlife and Flood Control benefits claimed in IECCO, Inc. study.

b/ Includes replacement of campground and picnicground facilities once during analysis period for new facilities and twice for existing facilities.

c/ Tudor study data (7.5 percent interest rate).

d/ Includes value of improved System Management, but does not include flood control benefits.

e/ Alternatives A, B, C, D, and E appear in the FEIS/SR. The 1979 dollars are converted to 1982 using data from the Council of Economic Advisors' Economic Report of the President, February 1983. A ratio of 1979 GNP to 1982 GNP is calculated as 207.23. The resulting multiplier is 1.268.

163.42

This is used to bring 1979 dollars to 1982. Data from the FEIS/SR are thus made comparable to the data in Alternatives F and G.

nucleus of Alternative G. Since it did not include beneficial effects for recreation, these amounts (and commensurate costs for operation, maintenance, and reserve) have been calculated to provide a more accurate display. The Tudor/State data are presented in 1982 dollars. The data for the Grey Mountain-Idylwilde project, developed by IECO, have not been replaced with information from the Tudor/State study. From a NED account standpoint, the Tudor/State data render the project economically unfeasible.

All calculations and evaluations have been made consistent with the descriptions in Chapter V of the FEIS/SR. The 1979 data have been updated to provide a comparison to 1982 values in the Tudor/State study.

B. Environmental Quality (EQ) Account

The summary EQ account is displayed in Table A-2. For most of the resources and attributes, the effects of Alternative F occur between FEIS/SR Alternatives B and E. Alternative G has effects similar to FEIS/SR Alternative D, but to a lesser extent, because fewer structural features are components of the project. As the display shows, however, the effects are serious and adverse.

Effects of Alternative G require some additional description. Visual Resource effects, particularly the "distinctive" class in the Big Narrows Area, are significant and permanent. Re-routing of Highway 14 for 7 miles would also have significant impacts on the northern ridge of the Canyon. Two cultural resource sites would be inundated; one historic and one prehistoric. Effects on the biological resource are all significant with respect to modifications of the natural riverine system, habitat impacts, and reductions in wild trout spawning areas. The principal effect on recreation resources, even after the addition of new flatwater recreation opportunities, is a net loss of recreation capacity due to the inundation of 53 percent of the Forest Service developed facilities in the Canyon.

The proposed storage at Elkhorn, as studies in the Tudor/State Report, would also inundate approximately 213 acres of the Cache la Poudre Wilderness. Consistent with the Wilderness Act of 1964, this action could not take place without Presidential approval. The values of the Wilderness resource have precedence until other direction is provided by the President or the Congress. A smaller Elkhorn reservoir could have less effect on Wilderness.

C. Regional Economic Development (RED) Account

The display of RED Account values, updated to 1982 dollars, appears in Table A-3. The amounts reflect changes from the predicted future condition in the "without plans" comparison. Predictions are still generalized, averaging annual effects during the planning period.

TABLE A-2
Environmental Quality Account
Potential Effects on EQ Resources and Attributes

	<u>Alternative A</u> (EQ)	<u>Alternative B</u>	<u>Alternative C</u> (W/O Plans)	<u>Alternative D</u> (NED)	<u>Alternative E</u>	<u>Alternative F</u>	<u>Alternative G</u>
<u>Water Resource</u>							
Freeflowing river (miles)	83 preserved & protected	39 preserved & protected	no miles protected	44 miles lost (15 inundated)	77 preserved & protected	62 preserved & protected (none inundated)	53 preserved & protected (19 inundated)
Water quality	least impairment	less impairment than C	less impairment than G	greatest impairment	less impairment than I	less impairment than B	less impairment than D
<u>Air Resource</u>							
Air quality	least impairment	less impairment than C	less impairment than G	greatest impairment	less impairment than F	less impairment than B	less impairment than D
<u>Visual Resource</u>							
Scenic quality	least impairment	less impairment than C	less impairment than G	greatest impairment	less impairment than F	less impairment than B	less impairment than D
<u>Cultural Resource</u>							
Prehistoric/historic sites	no impact	no impact	no impact	7 sites inundated	no impact	no impact	2 sites inundated
<u>Biological Resource</u>							
Natural riverine system	no modification	moderate modification	moderate modification	severe modification	no modification	moderate modification	severe modification
Habitat suitability for big game species (acres)	no impact	reduced on 5,920	reduced on 5,920	9,280 eliminated	reduced on 1,500	reduced on 5,160	2,016 eliminated
Wild trout spawning area	no impact	reduced 5%	reduced 5%	reduced 40%	reduced 2%	reduced 2%	reduced 27%

Table A-2 (continued)

	<u>Alternative A</u>	<u>Alternative B</u>	<u>Alternative C</u>	<u>Alternative D</u>	<u>Alternative E</u>	<u>Alternative F</u>	<u>Alternative G</u>
<u>Recreation Resource</u>							
Usable river (miles)	83	81	81	68	83	81	74
--Quality trout area	55	50	50	35*	51	50	40*
--Whitewater	37	37	37	24*	37	37	7*
Usable flatwater (Acres)	none	140	140	3,500	none	140	1,420*
Developed recreation (units)	288	488	588	588	288	388	234
<u>Wild & Scenic River Miles</u>							
--Wild river classification	30	30	0	0	30	30	30
--Recreation river classification	53	9	0	0	47	32	23
--Total designated	83	39	0	0	77	62	53
<u>Net EQ Effects</u>							
Overall plan effect	beneficial	beneficial	no effect	adverse	beneficial	beneficial	adverse

* Recreation experience opportunity and quality are subject to fluctuations in water flow/level as a result of project operations.

TABLE A-3
Regional Economic Development Account
Potential Average Annual Effects on Regional Economy 1990-2040

	Current Data	Alternatives					
		A	B	C	D	E	G
A. Gross Regional Product * (thousands of \$)	4,152,567	1,532	1,082	1,306	1,669	1,532	1,541
B. Income (thousands of \$) *	1,448,798	653	455	550	690	653	657
C. Employment (human-years) *	179,521	96	66	80	103	96	98
D. Value Added (thousands of \$) *	2,452,392	1,188	819	989	1,230	1,188	1,194
E. Comparison to Without Plans *		199	-170	0	241	199	205

* Alternatives A, B, C, D, and E appear in the FEIS/SR in 1979 dollars. These are converted to 1982 dollars using data from the Council of Economic Advisors' Economic Report of the President, February 1983. A ratio of 1979 GNP to 1982 GNP, taken from Table B-3 of the Report is calculated as: $\frac{207.23}{163.42}$.

The resulting multiplier is 1.268 in Table A-1. This is used to bring the 1979 dollars of Alternatives A, B, C, D, and E to 1982 figures. Data in the FEIS/SR is thus made comparable to Alternatives F and G.

D. Other Social Effects (OSE) Account

A summary of the OSE Account is found in Table A-4. The trends depicted for the new alternatives vary little from established patterns in the previous accounts. Alternative F resembles FEIS/SR Alternatives B and E, while Alternative G is similar to FEIS/SR Alternative D.

E. Evaluation of Alternatives

Table A-5 summarizes the evaluation of all seven alternatives in the study. The interrelationship reveals that Alternative F does a superior job of meeting the evaluation criteria. Through a combination of designated and undesignated reaches, without significant main channel water resource development, the alternative best meets the variety of criteria.

V. IMPLEMENTATION OF USDA RECOMMENDATION

A. USDA Recommendation

Alternative F is recommended for adoption by the United States Department of Agriculture. It recognizes the eligibility of the Poudre River for preservation and protection as a river of outstandingly remarkable characteristics: a recommended member of the National Wild and Scenic Rivers System.

The Tudor Engineering reconnaissance level study of the Poudre, completed for the Colorado Water Conservation Board, recognizes the real geologic and engineering potential of the Poudre for water resource development. But, to all but the most ardent development interests, it also displays the economic difficulties to be encountered by any development, even when hydropower is added to the equation. This Addendum (Chapter IV) shows the serious, irreversible effects on the physical and biological environments of the water resource development projects considered in the Tudor/State study.

The trade-off argues in favor of preservation and designation of portions of the Poudre as a Wild and Scenic River. There are other rivers, already ineligible for designation, that can and should be developed to provide management water storage, hydropower, recreation, and flood control. The Poudre itself, below the mouth of the Canyon or its North Fork, may offer development options. Other alternatives to meeting the water supply needs of municipalities and irrigated agriculture should be investigated and pursued in a way that creates less impact to existing resources. There are many locations along the front zone of Colorado for water resources development, but only one for possible designation as a Wild and Scenic River. The Poudre should be included in the National system.

The exclusion of private property enclaves in Segments 1 and 4 has been discussed elsewhere in this Addendum. The river resource and the rights of private property owners can be protected by recommending the mix of designated and undesignated reaches. Needs for access can be met through cooperative agreements with private landowners or, if necessary, condemnation. These requirements are very limited in nature.

a) Income	Slightly greater increases than Alt. C. Similar rural effect.	Increases slightly more than Alt. C, but less than Alt. A.	Net income increases with some second-half decrease in rural community.	High magnitude changes from construction workers and permanent project residents. Rural decreases postponed.	Greater increases than Alts. C, B, and A, but not as great as Alt. D.	Greater than Alt. E.	Similar to Alt. D except reduced impacts to permanent residents.
b) Employment	New tourist-related employment opportunities, approx. 15 % more than Alt. C.	Slightly less than Alt. A, but more than Alt. C.	Net increase of employment opportunity in all communities.	Construction and support services sector greatly expanded for short duration. Reservoir-based recreation services somewhat similar to Alt. A over long-run.	(Same as above.)	Greater opportunity than Alts. A, B, C, and E.	Similar to Alt. D. Less recreation employment associated with single reservoir, 90% active.
c) Population	Similar to Alt. C except that populations will be concentrated on developed enclaves in the Canyon.	Similar to Alt. C.	Total populations will increase, but rural share will decline.	Similar to Alt. A. Populations concentrated between inundations.	Similar to Alt. A except Segment 1 remains available for development.	Increased concentration in developed, undesignated enclaves. Rural share declines.	Similar to Alt. D. Segments 1 and 4 receive largest numbers. Rural declines slowed.
d) Fiscal	No net difference.	Similar to Alt. C.	Higher costs for law enforcement, search and rescue, etc., offset by tax base increases from valuation and population increases.	Greater valuation increases than Alt. C. create broader tax base, hence more fiscal stability.	No net difference from Alt. C.	No net difference from Alt. C.	No significant fiscal costs. Improved fiscal stability.
e) Quality of Life	Preserves existing lifestyle to the highest degree, though disruptions will occur in developed enclaves. Maintains Canyon recreation experience levels, including symbolism of the free-flowing river. Water use conflicts occur earlier than in Alt. A or C.	Similar to Alt C except there is uncertainty about future development. Maintains widest choice of future options.	Increased disruption of existing peace, quiet, and privacy for Canyon community. Gradual erosion of recreation experience over time, accessibility of river declines, conflicts with residents increase. Rural, municipal industrial water conflicts postponed for first half of period.	Greatest disruption of Canyon residential lifestyle. Recreation activities are changed along with experience levels. Rural/municipal water conflicts postponed for the longest period.	Similar to Alt. A except Segment 1 would have effects similar to Alt. B, i.e., uncertainty.	Similar to C except uncertainty about water resource development in Segments 1 and 4. Rural/municipal water conflicts postponed for first half.	Similar to Alt. D except fewer Canyon impacts because of low inundation.
II. Displacement	No displacement of present residents. Agriculture displacement occurs sooner than Alt. C.	Similar to Alt. C.	No displacement in Canyon or urban community. Water use conflicts lead to some agriculture displacement.	Inundations of 40 residences displaces 150 people. Agriculture displacement postponed for longest time.	(Same as above.)	Similar to Alt. C.	Inundation of 9 buildings displaces 30 people. 53% of Forest Service-developed recreation facilities in Canyon inundated.
III. Life, Health and Safety	Fire danger similar to Alt. C. Vulnerability to drought is greater than Alt. C.	Similar to Alt. C.	Increased fire danger and traffic problems in Canyon. Slightly less vulnerability to effects of drought.	Vulnerability to drought is reduced considerably over Alt. C. Structural failure/flood risk increased.	Similar to Alt. A.	Similar to Alt. A.	Similar to Alt. D.

TABLE A-5
Evaluation of Alternatives

	A	B	C	Alternatives D	E	F	G
A. Protect and/or enhance scenic, recreational, and historic values	H	M	ML	L	MH	MH	L
B. Increase the Forest Service share of dispersed public recreation	H	MH	MH	L	H	H	ML
C. Provide incentives for development of private recreation facilities	H	M	ML	H	H	H	H
D. Provide a mix of resource opportunities that contributes to local dependent industries	MH	M	ML	M	MH	MH	M
E. Give high priority to maintaining the free-flowing conditions of the Poudre River	H	M	ML	L	MH	MH	L
F. Ensure that adequate quantity and quality of water is available to meet on-site needs	H	M	ML	L	H	H	L
G. Respond to issues and concerns identified through public involvement	M	MH	L	ML	M	MH	ML
H. Minimum impacts on private rights	M	MH	H	L	M	H	L
I. National Economic Development Objective	ML	ML	ML	H	ML	M	L
J. Environmental Quality Objective	H	M	ML	L	MH	MH	L

Legend

Level of Satisfaction

H = High
MH = Moderately High
M = Moderate
ML = Moderately Low
L = Low

B. State of Colorado Recommendation

The State recommends adoption of Alternative A with provisions for Rockwell Reservoir, as described earlier. The designation of the entire 83 miles of the Cache la Poudre is most consistent with the purposes of the Wild and Scenic River Act. Such a designation will not be unduly expensive, nor does it preclude any presently feasible water resource development opportunities.

Designation of only portions of the River, in a discontinuous manner, is inappropriate and unnecessary. To except unlikely dam sites other than the Rockwell site at this point would interfere with the integrity of the Cache la Poudre as a wild and scenic river and complicate its management. Designation of all of the studied sections of the River will not only assure consistent protection of the entire area of the River studied, but also assurance to private property owners that, until further congressional action, their land will be protected from condemnation and inundation of dams and reservoirs.

The State is concerned with the private property rights of the many Colorado citizens who own land along the Poudre where they have permanent homes or seasonal residences. The Wild and Scenic Rivers Act contemplates that some designated rivers will pass through areas with development along the shorelines, but property owners have voiced concern about trespass and litter by those who visit the River. They also fear that their lands will be condemned for public use. Although the Act does not require a "taking" of private property, the Federal government is empowered to do so where 50 percent or more of the land along the river is in private ownership. There may be a need to purchase or condemn rights-of-way for a few access trails or development rights for scenic purposes, but it is preferable to have well-defined access trails through a few pieces of private land than it is to have segments of the River through private lands that are excluded from designation, which then can be overrun by unregulated trespassers. The property owner, under those circumstances, would be left to self-help, including fencing and force. It is the State's position that private property owners deserve, and would receive, protection for their rights if the River running through their property were designated and managed so as to channel public users around their land.

It is the State's understanding that the exclusion of private lands is intended to save Federal money. This is unjustified for a number of reasons. First, the savings would be minimal. Much of the River is flanked by an existing road, thus access through public land would be easily achieved. In the few places where private property would block necessary access, purchase of rights-of-way from private parties should not prove terribly expensive. Second, management of a river chopped into alternating designated and non-designated sections surely would have special costs of its own. Finally, and most important, designating a series of discontinuous segments of a river to be "wild and scenic" would frustrate public use and enjoyment and the type of management and protection mandated by the Act.

VI. MANAGEMENT OPTIONS FOR THE PREFERRED ALTERNATIVES

The following summarizes the management strategy and implications of the segment classifications of the Poudre as proposed in the preferred alternative. (A more extensive plan would be prepared if the river is designated by the Congress.) It is proposed that administration of lands within the corridor, including costs thereof, be conducted in accordance with existing management responsibilities of the Forest Service, National Park Service, Colorado Division of Wildlife, and Larimer County. Costs would be similar or proportional to existing levels. It is not estimated that local governments will incur additional significant costs related to management and administration of the River corridor.

A. Recreational River - Segments 2, 3, 7, and 2 miles of Segment 4 (USDA Recommendation), or Segments 1, 2, 3, 4, and 7 entirely (State Recommendation)

The management goal for this segment of the river is to preserve and protect those values for which the river was designated within the following policy guidelines.

1. Recreation

- a. Only one new developed recreation facility is projected for construction by the Forest Service. If additional facilities are required to absorb user impacts, the private sector will be encouraged to play an active part in ownership and management. Developments must be consistent with existing scenic and free-flowing values and all impacts mitigated.

Existing developed facilities will be maintained. Some small capacity sites may be eliminated to increase efficiency of management services and provide incentives for private sector participation.

- b. Dispersed recreation activities will be encouraged--Colorado Division of Wildlife to administer hunting and fishing and Larimer County to administer boating use of River.

2. Access

- a. Road improvements must be consistent with water and scenic quality. Bridges, if needed, must meet acceptable scenic compatibility. Access to utilities on existing rights-of-way are to be preserved.
- b. Trail access (right-of-way) to be purchased on approximately six miles of trail, as necessary, in the USDA Plan. Under the State Plan, eighteen miles, as necessary, would be purchased.

- c. Trailhead facilities and trails serving areas outside the corridor may be located inside the designated area if they are consistent with scenic values.

3. Minerals

Subject to existing provisions of the Mining Laws of 1872 and Mineral Leasing Act of 1920.

4. Vegetation and Timber

Timber harvest is consistent with "Recreational River" designation. It is estimated that 1 million board-feet of timber will be removed through selection cutting for sanitation and salvage by 2050. Timber sales will be administered by the Forest Service. Most will occur in Segment 7, along the South Fork of the River.

5. Utilities

Utility construction and/or rights-of-way will be consistent with scenic values of segment. Minimum impacts will be emphasized. Maintenance of existing facilities will be permitted.

6. Fish and Wildlife

Priority is given to protection of existing fish and wildlife values. Habitat enhancement through vegetative manipulation may occur where it meets visual quality objectives. Natural reproduction of wild trout is the management objective on much of the River. These spawning areas will be maintained and protected. Management of fish and wildlife is primarily the responsibility of the Colorado Division of Wildlife, with assistance from other State and Federal agencies.

7. Fire

Fire will be fought aggressively, consistent with management guidance.

8. Water

If a conflict between water quality and resource activities and use occurs, protection of water quality will take precedence.

9. Land Acquisition

Not planned. Exchanges will be considered where net value accrues to the public.

10. Easements

Scenic values of the segment will be protected through the acquisition of scenic easements as necessary on specific sites. Under the USDA Plan, maximum easement acquisition, if all private lands were affected, is estimated to be up to 487 acres. The State Plan would affect up to 1,810 acres of private land. However, easements will only be acquired in the event of actual threats to existing values from incompatible uses or developments.

B. Wild River - Segments 5, 6, and 8 (Both USDA and State Recommendation)

The management goal for these segments is to preserve and enhance the values for which the River was designated, within the following policy guidelines, complemented by established National Forest and National Park policy.

1. Recreation

- a. Developed recreation facilities, except for trailheads, will not be constructed. Primitive facilities may be constructed for resource protection, maintaining orientation to "... vestiges of primitive America."
- b. Dispersed recreation activities will be encouraged. Colorado Division of Wildlife is to administer hunting and fishing. Restrictions on bag limits, seasons, number of permits, methods of harvest, and other means may be needed to restrict harvest so that the carrying capacity of resource is not exceeded.

2. Access

- a. No new roads will be constructed since all "wild river" areas are within Wilderness or National Park.
- b. No additional trail access is anticipated. Existing trail systems are sufficient.
- c. Trailhead facilities and trails serving areas outside the corridor may be located in the designated area if they are consistent with scenic values and a primitive experience.

3. Minerals

Subject to valid, existing rights located outside Rocky Mountain National Park, mineral entry is withdrawn on lands within the designated corridor. Mineral lease applications will be recommended for denial.

4. Vegetation and Timber

Timber harvest is not permitted.

5. Utilities

Utility construction or rights-of-way will be permitted if consistent with scenic values of segments and existing policy. It is unlikely, however, that utility construction will be proposed in "wild" segments.

6. Fish and Wildlife

Priority will be given to protecting existing fish and wildlife values. Habitat enhancement through non-mechanized vegetative manipulation will be allowed, but only on National Forest lands. There will be an emphasis on greenback cutthroat trout (a threatened species) in coordination with Colorado Division of Wildlife. Fish and game management will be administered in National Forest portions by Colorado Division of Wildlife. Rocky Mountain National Park administers fish and wildlife within Park boundaries.

7. Fire

Fire will be fought in accordance with Forest Service and National Park Service policies. Emphasis will be on resource protection within limits of response capabilities.

8. Water

Modification of the waterway is prohibited. Water quality will be protected.

9. Land Acquisition

Not planned. Nearly 100 percent of segments already in public ownership.

10. Easements

Not planned. Nearly 100 percent of segments already in public ownership.

C. No Designation - Segment 1 and 15 miles of Segment 4 (USDA Plan)

The management goals for National Forest System lands within these segments is to provide effective multiple-use management consistent with applicable guidance. Specific management direction is provided in the Arapaho and Roosevelt National Forests Land and Resource Management Plan. The National Forest System lands in these segments would be managed in a multi-resource manner, integrating resource needs and opportunities. Recognition of existing patterns of resource use will guide management decisions.

STATE OF COLORADO

EXECUTIVE CHAMBERS

136 State Capitol
Denver, Colorado 80203
Phone (303) 839-2471

November 1, 1983



Richard D. Lamm,
Governor

Craig W. Rupp, Regional Forester
Rocky Mountain Region
United States Forest Service
P. O. Box 25127
Lakewood, Colorado 80225

Dear Mr. Rupp,

The State of Colorado has carefully reviewed the Forest Service's Cache la Poudre Wild and Scenic River Environmental Impact Statement and Study Report and the recent addendum. The state strongly supports designation of the upper reaches of the Cache la Poudre River as a wild and scenic river.

We believe that the Cache la Poudre possesses the "outstandingly remarkable scenic, recreational, geologic, fish and wildlife" and other values that justify its protection in a free-flowing condition. It is one of the exceptional areas on the front range that provides white water rafting and kayaking, camping and picnicking, superb trout fishing, hiking and cross-country skiing and excellent hunting. We are proud of the stretches of the river that provide wild trout and of the herds of deer, elk, and bighorn sheep which are in Poudre Canyon. Portions of the river run through the Cache la Poudre Wilderness and the first few miles of the South Fork are within Rocky Mountain National Park. It would be especially appropriate to designate the Cache la Poudre as Colorado's first wild and scenic river, perhaps the only wild and scenic river that will be designated east of the Continental Divide.

We commend the thoughtfulness and thorough analysis of the Forest Service's report and addendum. However, we must disagree with the recommended exclusions of portions of the river from designation that are in predominantly private ownership. In our view, such exclusions are inconsistent with the purposes of the Wild and Scenic Rivers Act and may actually operate to the detriment of private property owners. We recommend that all eight segments of the river be designated with segments 5, 6 and 8 designated as "wild" and segments 1-4 and 7 as "recreational."

One of the competing concerns in formulating our recommendation was the possibility of water resource development along the river. To accommodate that possibility the Forest Service cooperated in making no recommendation in its final report as to segments 1-4 and excepting the site of the proposed Rockwell Dam on the South Fork. Our legislature wisely decided to study all of the possibilities. Three hundred thousand dollars was appropriated and spent by the Colorado Water Conservation Board for a study of numerous potential project configurations. Eight preliminary alternatives were evaluated and then the Colorado Water Conservation Board selected four for further evaluation. Although all eight alternatives were physically possible from a geological standpoint, none proved to be economically justifiable. The Board recommended further study which would have explored different sized projects for feasibility. It is possible that smaller reservoirs might have been justified but the legislature declined to authorize further study. It appears that water needs in the area are being adequately met and will be in the foreseeable future.

Given the careful consideration of possibilities for water development I am now comfortable recommending designation that would preclude that development until Congress authorizes it. I expect that if future needs arise for water development from the Poudre, Congress will respond. In the meantime, the full length of river in the study area deserves protection as a wild and scenic river. I am aware, however, that the City of Fort Collins owns land and water rights on the South Fork of the river which it may wish to use for a storage facility that would be known as Rockwell Reservoir. If the City determines that the reservoir is a necessary and feasible ingredient in its water planning the state would not object to exclusion of the site from designation.

To except unlikely dam sites at this point would interfere with the integrity of the Cache la Poudre as a wild and scenic river and complicate its management. Designation of all of the studied sections of the river will not only assure consistent protection of the entire area of the River studied but also assurance to private property owners that until further congressional action their land will be protected from condemnation and inundation for dams and reservoirs.

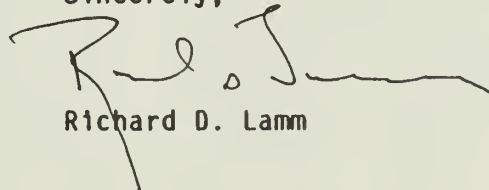
We are concerned with the private property rights of the many Colorado citizens who own land along the Poudre where they have permanent homes or seasonal residences. The Wild and Scenic Rivers Act contemplates that some designated rivers will pass through areas with development along the shorelines but property owners have voiced concern about trespass and litter by those who visit the River. They also fear that their lands will be condemned for public use. As I understand the Act, it does not require a taking of private property,

although the government is empowered to do so where 50% or more of the land along the river is in private ownership. There may be a need to purchase or condemn rights-of-way for a few access trails or development rights for scenic purposes but it is preferable to have well-defined access trails through a few pieces of private land than it is to have segments of the river through private lands that are excluded from designation which then can be overrun by unregulated trespassers. The property owner under those circumstances would be left to self-help, including fencing and force. We believe that private property owners deserve and would receive protection for their rights if the river running through their property were designated and managed so as to channel public users around their land.

I understand that the exclusion of private lands was intended to save federal money. This is unjustified for a number of reasons. First, the savings would be minimal. Much of the river is flanked by an existing road and access through public land would be easily achieved. In the few places where private property would block necessary access, purchase of rights-of-way from private parties should not prove terribly expensive. Second, management of a river chopped into alternating designated and non-designated sections surely will have special costs of its own. Finally, and most important, designating a series of discontinuous segments of a river to be "wild and scenic" would frustrate public use and enjoyment and the type of management and protection mandated by the Act.

We believe that designation of the full 83 miles of the Cache la Poudre River study area as a wild and scenic river will be an appropriate recognition of one of Colorado's most precious assets. It will help protect a splendid example of Colorado's natural heritage. We hope you will consider revision of your recommendations to cover all segments of the river studied. This was indicated to be the preferred alternative in your final study which apparently would have been recommended absent concerns regarding alternative uses of the Poudre's water resource. We believe those conflicts to have been resolved to our satisfaction.

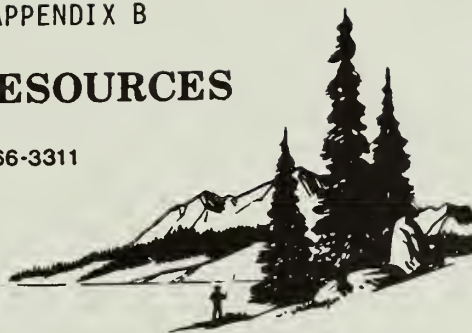
Sincerely,

A handwritten signature in dark ink, appearing to read "R. D. Lamm", with a long horizontal flourish extending to the right.

Richard D. Lamm

DEPARTMENT OF NATURAL RESOURCES

DAVID H. GETCHES, Executive Director
1313 Sherman St., Room 718, Denver, Colorado 80203 866-3311



Geological Survey
Board of Land Commissioners
Mined Land Reclamation
Division of Mines
Oil and Gas Conservation Commission
Division of Parks & Outdoor Recreation
Soil Conservation Board
Water Conservation Board
Division of Water Resources
Division of Wildlife

December 23, 1983

Craig W. Rupp, Regional Forester
Rocky Mountain Regional
United States Forest Service
P. O. Box 25127
Lakewood, Colorado 80225

Dear Mr. Rupp:

We appreciate the opportunity to comment on the Addendum to the Final Environmental Impact Statement and Study Report For the Cache la Poudre Wild and Scenic River proposal. The Addendum accurately presents the State of Colorado's recommendations on wild and scenic designation for the Cache la Poudre River as stated in Governor Richard D. Lamm's letter to you dated November 1, 1983. The Forest Service recognizes the importance of protecting and enhancing the rare and valuable white water resource in Colorado. Governor Lamm's recommendation that all 83 miles of the river study area be designated as wild and scenic is based on Colorado's concern for preservation of the river's values for recreation, fish and wildlife and scenic beauty.

Although the state and Forest Service appear to be pursuing the same goals and values, the USFS preferred alternative continues to be alternative F: designation of 62 miles of the river, 32 miles (segments 2, 3 and 7 and two miles of segment 4) as "recreational" and 30 miles (segments 5, 6 and 8) as "wild." The recommendation excludes the proposed Rockwell dam site as well as 21 miles (segment 1 and 15 miles of segment 4) "due to the non-federal (i.e., private) land ownership problem." The Addendum refers to the need for acquisition of 18 miles of trails on private property and the possible need for scenic easements on 1,810 acres of private land if Colorado's recommendation were followed. We would be interested in knowing the reasoning and calculations upon which these figures are based. They should be included in the Addendum. In any event, significant changes in the private land ownership situation along the river, particularly in the segments excluded from designation, seem to ameliorate any private land ownership "problem." We note that privately owned acreages in segment 1 have decreased from 76% to 30%. Privately owned land in segment 4 was

Craig W. Rupp, Regional Forester
December 23, 1983
Page Two

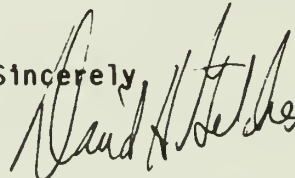
reduced from over 50% to 30% of the total land area. These reductions are apparently the result of sales of private property to public agencies, land trades, and reanalysis of current land status data. To the extent that private ownership of 50% or more of land in particular segments has driven the Forest Service recommendation to exclude those areas from designation, the recommendation should be re-evaluated.

If the estimates of possible requirements for scenic easement and trails are based on the current, reduced extent of private ownership in the river corridor (now less than about 10% of the total land in the study corridor), has any consideration been given to inducing private landowners to donate easements and rights of way? The state, particularly our Division of Wildlife, has had considerable success in obtaining the participation of private landowners in projects involving donation of scenic easements, development rights, and rights of way where the landowner perceives it to be in his or her interest. Federal income tax laws allowing for tax deductions for such donations and reduced local property taxes on land stripped of development rights serve as positive inducements. In addition, many landowners might well perceive the value of having foot traffic channeled over a trail rather than passing undirected across their lands.

Another point that escapes mention in the Addendum is the fact that the early public opposition to wild and scenic river designation of the Cache la Poudre River has largely dissipated. Public understanding of the consequences of wild and scenic designation plus the discussion of several large dams on the river which were rather threatening to many property owners have ended most public opposition. In fact, local landowner sentiment (to the limited extent it has been voiced to the state) has been virtually all in favor of designation.

We commend your full and fair characterization of the state's position on the Poudre wild and scenic designation and the thoughtful study that the wild and scenic designation proposal has received. We hope that in producing the final version of your Addendum you will take into account our comments regarding the reduced extent of private land in the area and the shift in landowner sentiment.

Sincerely,



DAVID H. GETCHES
Executive Director

DHG:car
cc: Governor Lamm

