

Appendix I
Comments Extracted from Letters

SUMMARY OF COMMENTS RECEIVED

1.0 Project Purpose and Need

1.1 Support

- 1.1.1 Responsible thing to do to plan for future drought years as this is a semiarid environment.
- 1.1.2 Project will assist in the long term resource management and planning.
- 1.1.3 Obligation to plan for the future as our forefathers did.
- 1.1.4 Provide water for future generations, it is a must project.
- 1.1.5 Understand the need for drought protection.
- 1.1.6 Project is prudent and necessary expansion (Halligan).
- 1.1.7 Planning for future water needs is important and not doing so is irresponsible.
- 1.1.8 Need it as Fort Collins will receive no water from Glade.
- 1.1.9 Survivor of depression and dust bowl and sees project as a must for future generations.
- 1.1.10 Minimal impact on existing aquatic life, Prebles mouse not affected or minimal and insignificant, no hydrologic issues should be involved, no depletion of consequences as storage will be released, no cultural impact, no land change as area is barren, no alternative – project should have been done 10 years ago. Glade is a bad dream.
- 1.1.11 Excellent project with efficient use of tax payer money to achieve goal of storage of water, applaud the regional partnership
- 1.1.12 Support as business man in Fort Collins
- 1.1.13 Earnestly support the project, recognize the need for additional water storage to provide for the reasonably projected needs.
- 1.1.14 Project will provide drought protection for the region and is an indispensable safeguard for insuring the needs of ELCO customers will be met.
- 1.1.15 Water is important for agriculture and the increasing population growth of the region.

- 1.1.16 Excellent project for developing long term storage capacity in an environmentally thoughtful way, efficiently uses taxpayer dollars.
- 1.1.17 Reflects a thoughtful analysis of how to minimize negative environmental impacts while ensuring drought protection.
- 1.1.18 Need new water storing facilities and can be done in a way that the environment can adapt.
- 1.1.19 Storage space is imperative and City Council passed a resolution to go forward after public hearing, debate, and considerable thought.
- 1.1.20 Storage is the key to adequate supply of water and 8 out of 10 residents supported idea.

1.2 Purpose and Need

- 1.2.1 It is logical to first decide if a project is needed and then measure the impacts to determine if the benefits outweigh the negative impacts.
- 1.2.2 Storage reservoirs should be last possible resort to meeting needs of municipal, industrial, and agricultural water users.
- 1.2.3 Do purpose and need justify the environmental burden and impacts of new storage in the watershed.
- 1.2.4 Add recreation (fishing) to purpose.
- 1.2.5 Question the ultimate storage and use.
- 1.2.6 Project need does not accurately reflect the impact of conservation.
- 1.2.7 Expansion should be coupled with conservation.
- 1.2.8 Citizens have shown they can conserve water, so estimates of use must include this ability and promote it for efficient use of taxpayer dollars.
- 1.2.9 If truly emergency drought protection, then proposed enlargements do not need to be so big.
- 1.2.10 No more than 18,000 ac/ft additional capacity for Halligan and 15-18,000 ac/ft additional capacity for Milton Seaman are needed (regardless of cost effective equation).
- 1.2.11 Short-sided to partner municipalities and water districts to plan projects larger than needs in order to justify EIS process expense and spread out the cost of the process.

- 1.2.12 Need for this much additional storage is questionable; perhaps enlarge Halligan to 15,000-18,000 ac/ft.
- 1.2.13 Only permit expansion as large as the unequivocally proven need for the project, if permitted at all.
- 1.2.14 Can Greeley really justify an \$87 million price tag? Is the need truly there?
- 1.2.15 Against funding projects with public money, cost should be borne by beneficiaries which are primarily Weld County residents.
- 1.2.16 Seaman will be filled with very Jr. water rights and funded by municipal tap fees. The new growth in population equals new demand which will now be supported by a very tenuous and low priority water source. Explain why this is a good idea.
- 1.2.17 Question need to store more water (Jr. water rights) to fuel growth.
- 1.2.18 Project failed to address real issue of proposed need of water - population expansion.
- 1.2.19 Projections of water usage based solely on anticipated population growth are not adequate. Projections should include current minimal use of conservation techniques as well as moderate and ambitious conservation by both agricultural and municipal users.
- 1.2.20 Water development will spur further growth of the North Front Range.
- 1.2.21 Fairly and independently evaluate the stated needs of the project partners through analysis that incorporates factors that influence demand – water conservation, economic growth projections, alternative water uses, and costs of growth.
- 1.2.22 Need was based upon long-term historical data on per-capita water usage and upon population growth forecasts. The need should take into consideration variances from these forecasts and a sensitivity analyses. Variances both plus and minus should be considered for the expansion size. The EIS should address the impact that a range of projected water needs would have on the expansions.
- 1.2.23 Coordinate population growth estimates to a percentage that, when combined as an aggregate, is reasonable according to regions population growth trends.

1.2.24 If need is in fact “flood control” then storage system needs to be constructed higher on the main stream Poudre River.

1.2.25 Clear description of purpose and need that includes the methodology used for eater demand analysis consistent for each participant.

1.3 Project Details

1.3.1 How much water will be pumped into Seaman? Where will pumping station and outflow be located?

1.3.2 Pumping water into Seaman will require energy. How will that energy be supplied? What are the greenhouse gas emissions for the pumping? What are mitigation measures for the increased greenhouse gases? How will such pumping comply with Amendment 37?

1.3.3 Design dams with multi-level outlet structure to reduce potential of fish loss during water releases.

1.3.4 Need design of pump station located on the mainstem Poudre, goal to limit the entrainment into the pump station.

1.3.5 Are there plans for conservation pools on Halligan to conserve fish if reservoir is drawn down to low levels?

2.0 Potential Alternatives

2.1 General

2.1.1 Prefer the most environmentally friendly choice for storage.

2.1.2 If denied permit, regional entities will be forced to plan together instead of separately.

2.1.3 No project impacts, includes the threat of taking additional agricultural land out of production.

2.1.4 How will the no action alternative be evaluated?

2.1.5 Covering a beautiful riparian ecosystem with another ugly reservoir is not a solution that shows creativity, vision or American ingenuity.

2.1.6 Could 1 in 25 rather than 1 in 50 be used?

2.1.7 Alternative storage should be considered such as downstream from Fort Collins (flat land storage).

2.1.8 Address population growth numbers rather than build more water storage to facilitate growth.

2.1.9 Urban planning should be used to direct people away from these areas.

2.1.10 How will the corps evaluate the no action alternative?

2.2 Conservation

2.2.1 Conservation should be brought to the forefront instead of expansion.

2.2.2 More conservation put into place.

2.2.3 Less storage needed if all participants aggressively pursued water conservation (tiered rates, water budgeting for the Tri-Districts and other conservation programs).

2.2.4 Reduce the demand by serious conservation which will result in “new water” far cheaper than new dams. EIS needs to deny dams or show data and analysis where the claims of conservation fail.

2.2.5 Water conservation, water rationing, and population control should be considered instead of the expansions.

2.2.6 Conservation tailored to our arid landscape, gravel pit storage, any combination of alternatives.

2.2.7 Study a variety of conservation programs including fixture retrofitting programs to reduce indoor water consumption, rebates for water saving appliances, systems that monitor precipitation in the area and centrally control sprinkler use to more efficiently irrigate lawns, and programs to reimburse homeowners who replace blue grass with more drought tolerant landscape plants.

2.2.8 Applicants can provide water needed though current water rights and conservation measures.

2.2.9 Evaluate conservation and efficiency measures to meet the projected needs.

2.2.10 Document the various water conservation mechanisms within the project service area and evaluate what additional potential for demand reduction is available. Provide a clear, qualitative understanding of current water uses and the alternatives available to reduce that use.

2.3 Improve and Use of Existing Reservoirs and Water Systems

2.3.1 Dredge existing lakes and reservoirs to improve their storage capacity.

2.3.2 Smaller dams, store less water and put more effort into conservation and education.

- 2.3.3 Fort Collins should consider smaller dams with other partners.
- 2.3.4 Permitting a series of smaller storage projects as opposed to one or two large ones has advantages.
- 2.3.5 Series of smaller storage projects coupled with heavy emphasis on additional water conservation strategies makes more sense.
- 2.3.6 Study the possibility of utilizing existing infrastructure associated with water rights, including pumping raw or treated water from existing reservoirs into water delivery systems.
- 2.3.7 Dredge existing agricultural reservoirs to increase storage capacity and utilize reverse osmosis to clean deteriorated water.
- 2.3.8 Update and improve delivery systems associate with irrigation providers, such as utilizing ditch liners.
- 2.3.9 More can be done to protect and conserve the existing water delivery and use in the basin (example NPIC ditch lining).
- 2.3.10 Potential for utilizing existing reservoirs associated with agricultural water rights purchased by municipalities should be investigated and environmental impacts presented.

2.4 Project Details

- 2.4.1 Seaman operation plans expanded to include all water users rather than just Greeley to allow CDOW and reservoir managers to predict fluctuation amounts and better assess fishery and recreational access impacts.
- 2.4.2 Necessary for high water line to cut through private property on Seaman Reservoir or can expansion be altered to avoid private property?
- 2.4.3 Dam capacities should be reduced to protect in stream flows for aquatic ecosystems, not built to provide water to Greeley.

3.0 Surface Water Resources

3.1 General

- 3.1.1 Guarantee that no water will be diverted from the main stem of the Poudre into reservoirs.
- 3.1.2 Do not want project to go because encourages more growth and diminish downstream water availability, which is already marginal.

- 3.1.3 What is the exact boundary for the expanded pool as it will come close to our property? Need to identify baseline in terms of 1929 datum to determine if property will be inundated.
- 3.1.4 Option agreement in place with Fort Collins regarding use of surface water on Halligan Reservoir should be followed.
- 3.1.5 How will project interrupt or enhance natural rhythms of the river?

3.2 Flow

- 3.2.1 Maintaining downstream flows and habitats should be a priority.
- 3.2.2 Review impacts of flow downstream of Gateway Park and through Fort Collins.
- 3.2.3 Effect on the net flow of the river through the confluence with South Platte needs to be evaluated.
- 3.2.4 Potential depletion of water flow in the North Fork of the Poudre, south of Halligan dam, needs to be determined.
- 3.2.5 Maintain present stream flows in Poudre River.
- 3.2.6 Discuss how stream flows could change by the alteration of the stream bed after dam construction and how that variance would be compared and altered given the baseline database.
- 3.2.7 Flows below Seaman Dam should never be less than flow into Halligan Reservoir.
- 3.2.8 Under no conditions should water be pumped out of the main stem of the Poudre River without maintaining 50-60 cfs required in the lower Poudre River for ecosystem and viable fish habitat.
- 3.2.9 Sufficient water flows for aquatic life and wildlife guaranteed in the river throughout the year.
- 3.2.10 Establish a minimum in stream flow necessary to support existing fish and invertebrate populations.
- 3.2.11 Allocate water to increase winter flows and peak flows to benefit fish and wildlife.
- 3.2.12 Enhancing winter stream flow will receive support from the environmental community and the recreational businesses that obtain their living from this recreational resource.

- 3.2.13 Effects of post-construction filling of each expanded reservoir on stream flow and associated habitats.
- 3.2.14 How will existing river flows change from both current conditions and the “natural” (those undepleted, unsupplemented, and unmanaged by activities of humans) Poudre River flow at the canyon mouth and in Fort Collins.
- 3.2.15 What are the native pre-historic flow regimes of the rivers (North Fork, Main Stem of Cache La Poudre)?
- 3.2.16 What threshold flow levels and flow regime will be used as baseline and what is the associated justification for those?
- 3.2.17 Consider the pre-historic flow regimes and the effects this project will have on the native flow regimes and ecological systems the rivers support.
- 3.2.18 What threshold flow levels and flow regime will be used as baseline? Justify this level.
- 3.2.19 Channel forming capability of the river must be maintained.
- 3.2.20 CDOW requests involvement in channel design and construction on the North Fork of the Poudre downstream of Seaman Reservoir. Proposed hydrology for downstream portion of the North Fork will be in order to assess the development of a potential tailrace fishery.
- 3.2.21 Boat recreation is not being considered as impact to stream flows, particularly to the filter plant area.

3.3 Operation and Release Issues

- 3.3.1 Give general assurances that the water management would be able to accommodate water flows to improve more consistent winter flows in North Fork and main stem of Poudre.
- 3.3.2 Operational guidelines and assurances that the operation and construction of the pump and pipe system to move water from Poudre into Seaman would benefit winter in-stream flows.
- 3.3.3 Effects of management of the reservoirs and associated water releases – how will flood type releases due to a downstream need be managed so as not to damage the stream banks and aquatic environments (example: Horsetooth Reservoir releasing “flood” that resulted in water flow in Fort Collins rising from 30 cfs to 1200 cfs).

- 3.3.4 Water releases in summer are damaging to ecosystem. Will these releases be managed to avoid such problems?
- 3.3.5 How will summer releases be managed to do the least environmental damage?
- 3.3.6 Operational constraints that incrementally reduce the base flow should be considered.
- 3.3.7 How will spring floods be maintained through the length of the affected reaches and downstream? Specifically, what flow rates will be provided, at what times, and for what duration?
- 3.3.8 Spring floods timed with phenologically significant biological events to maintain riparian corridors and gallery forests. How will this be maintained through length of the affected reaches and downstream? What flow rates will be provided and when and how long?
- 3.3.9 Use a “whole systems” approach when evaluating operational possibilities for restoring in-stream flows.
- 3.3.10 Increasing base flows to a pre-development level through the Nature Conservancy Phantom Canyon Preserve should be fully explored as part of the project operations and as project mitigation.
- 3.3.11 Examine potential for proposed projects to restore peak flow events through the Phantom Canyon Preserve, including reservoir design and operational possibilities.

3.4 Sediment Issues

- 3.4.1 Examine the likelihood of future sediment releases and consider imposing constraints that would require future sediment releases be made on a smaller and more frequent basis, preferably during the spring just prior to runoff.
- 3.4.2 There is a TMDL for sediment on the North Fork of the Cache La Poudre, which could be a significant issue.

3.5 Quality

- 3.5.1 Effects from the expansions on water quality and stream health of the Poudre River need to be evaluated.
- 3.5.2 What will be the health of the Poudre River that may remain in Fort Collins?
- 3.5.3 Provide predicted water temperature, mean daily and maximum daily, in the Poudre Basin downstream from the reservoirs in clearly documented electronic files, easily readable using standard PC tools, such as Excel.

3.5.4 What compensation of mitigation will applicants provide to downstream users to address the cumulative effects of increased water salinity?

3.5.5 Fluctuations in the shoreline of reservoirs will expose soil to erosion. What will be done to assess the nutrient (particularly phosphorus), sediment, and dissolved solids loads associated with such erosion, and the extent to which it will affect downstream water quality?

3.5.6 Effects on water quality in both Halligan and Seaman associated with public recreational and residential access to reservoirs (motor fuel, garbage, oil etc).

3.6 Description of Resource

3.6.1 Include description and location of hydrologic character of streams in their respective reaches.

3.6.2 Include description and location of stream flows identified by seasonal and possibly historic characteristics.

3.6.3 Base flow studies should be completed at a sufficient level of detail to provide meaningful information regarding the trade-offs between specific levels of base flow and amounts of aquatic habitat provided. Information should be applicable to rainbow and brown trout as well as native species and macroinvertebrates.

3.7 Modeling

3.7.1 Hydrology should be examined both longitudinally and laterally.

3.7.2 How will the hydrologic models incorporate evaporation, understanding the impacts of reservoir evaporation on the overall water balance in the Poudre basin and understanding the effect that reduced peak flows may have on net alluvial aquifer recharge?

3.7.3 Provide inputs and outputs from the hydrology model scenarios in clearly documented electronic files, easily readable using standard PC tools, such as Excel.

3.7.4 Present flow in cfs not af/month.

3.8 Construction

3.8.1 During construction, stream flow will be adequate to maintain fish and other aquatic life and sediment loading will be minimized.

3.8.2 Consider the incorporation of a multi-level outlet structure for temperature and water quality management purposes.

3.8.3 Effects of dam construction on possible interruptions in stream flow, water quality, and sediment need to be evaluated.

3.8.4 Silting has killed huge numbers of fish and habitat in two situations locally, 1990 Halligan dam repair and on the Big Thompson River in 2004 during bridge construction. Study these situations and avoid the construction pitfalls and provide plan in EIS to state how to avoid the silting during construction.

4.0 Groundwater Resources

4.1 General

4.1.1 Poudre is ultimate source of well water and well has had dry spells in winter months when North Fork of the Poudre is very low. What will this project do to our well water?

4.1.2 Potable water wells will not be polluted or the City of Fort Collins will provide potable water for all parties injured in perpetuity.

4.1.3 Spring flooding and native flow regimes provide recharge to the aquifers. What are the effects of this project on the recharge and will there be compensation?

5.0 Water Rights and Water Use

5.1 General

5.1.1 Look at changes in agricultural vs. residential use in the next 50 years to estimate the impact on water use.

5.1.2 Not having enough water has resulted in the value of water increasing at an astonishing rate.

5.1.3 What are the impacts to the ecosystem of converting water rights from agricultural to municipal, and the potential time frames of these changes.

6.0 Air Quality

6.1 General

6.1.1 Effects of large dust storms during dry years when water levels drop and barren soil remains.

6.1.2 Effect of construction truck traffic on dirt roads.

7.0 Soils

7.1 General

7.1.1 Effects of wind erosion on exposed soil resulting from fluctuating shoreline.

7.1.2 Silt builds up in dams. Flushing mitigates, but impacts aquatic life.

8.0 Ecosystem Level

8.1 General

- 8.1.1 Must consider how changes to flow extremes will alter the biologic community regarding the natural pulse of the river and the periodic droughts.
- 8.1.2 Effects of proposed projects on native flow regimes and the ecological system the river supports.
- 8.1.3 Thorough biological reviews (with 3 scenarios: Seaman alone, Halligan alone, Halligan and Seaman operating together) need to be made for tributaries of the North Fork above Halligan, between Seaman and Halligan, North Fork above Seaman as miles of stream will be inundated and may almost reach Eagle's Nest area.
- 8.1.4 Ecological effects of increased shoreline and loss of stream above each reservoir needs to be evaluated.
- 8.1.5 Flood plain of Seaman will impact Eagle's Nest Open Space and potentially the Nature Conservancy area below Halligan. Flood plain effects must be specifically identified and communicated to the public.
- 8.1.6 Construction process will impact the environment and is necessary that the impacts of construction be included.
- 8.1.7 Provide information on the baseline environmental condition (as opposed to the no action alternative). The baseline conditions should be today's environmental conditions for each resource analyzed.
- 8.1.8 Provide a clear description of direct impacts from project that gives a full understanding of what is happening to the ecosystem around this project. Information on the changes to the hydraulic regime of the North Fork and mainstem of the Cache La Poudre with these two expanded reservoirs. Compare to pre-dam conditions, if possible.

9.0 Vegetation

9.1 Construction and Native Species Issues

- 9.1.1 Effects of dam construction on vegetation need to be evaluated.
- 9.1.2 Restoration of native vegetation in areas disturbed by dam construction – native locally raised non-weed contaminated seed? What is the availability and cost of such seed?
- 9.1.3 Restoration of disturbed areas should be conducted with appropriate native species.
- 9.1.4 Mitigation measures need to be followed for reducing the spread of non-native plants during construction by construction equipment.

9.1.5 Construction crews should take precautions to not introduce invasive plant species.

9.1.6 Avoid decrease in indigenous species, usually interpreted as the naturally occurring assemblage, including valuable introduced species.

9.1.7 Avoid increase in abundance of nuisance species (e.g. carp, tamarisk).

9.1.8 Weed control management resulting from dam construction.

9.1.9 Effects and mitigation for invasive weeds need to be evaluated.

9.1.10 Containment of invasive weeds will be a problem.

9.2 Indirect Potential Impacts

9.2.1 Effects of increased grazing pressure from cows on side slopes and other habitat areas including drainages when they can no longer utilize the riparian corridor for forage need to be evaluated.

9.2.2 Potentially increase fire danger because of increased recreation, wild fire mitigation should be performed in areas of fuel that will propagate and sustain serious fire. Mitigation measures should be conducted every few years and performed by state or federal sources.

9.3 Description of Resource

9.3.1 Biological Assessment and Biological Evaluation Report is required by USFS - no synthetic data.

10.0 Wetlands

10.1 General

10.1.1 Unique habitat will be destroyed from sediment.

10.1.2 Effects of changes in downstream flow on wetland habitat need to be determined.

10.1.3 Effects on riparian areas which are important to wildlife, especially in winter need to be evaluated.

10.1.4 Inundated riparian habitat needs to be mitigated with clear consideration of past failures in similar compensatory mitigation.

10.1.5 Restoration of riparian areas below dams will need to be conducted.

10.2 Description of Resource

10.2.1 Include description and locations of aquatic and riparian vegetation.

11.0 Wildlife

11.1 General

- 11.1.1 Maintain adequate flow for wildlife is a priority.
- 11.1.2 Effects to aquatic and terrestrial wildlife and their habitats (especially migratory birds, fish, and sport fisheries) from 1) inundation of rivers, streams, riparian habitats, and upland areas; and 2) changes in current water flow regimes of rivers and stream, and fluctuations in exiting reservoir levels, for area waters affected directly by the project and for all habitats affected indirectly from related water utilization by the partners.
- 11.1.3 Effects on lion habitat and river crossing points need to be evaluated to determine if the proposed enlargements will effectively restrict their habitat.
- 11.1.4 Effects on the wildlife movement corridors across the east and west sides of the North Fork on the Poudre river, particularly the large resident elk herd that utilizes both east and west sides of the North Fork on the Poudre river south of Livermore Road and north of Highway 14 up the Poudre.
- 11.1.5 Inundations will submerge documented winter and overall elk and deer range. Provide overlay to quantify the amount of acreage to be lost = direct loss of habitat.
- 11.1.6 Effects of inundation on deer and elk populations regarding indirect loss of habitat due to inability to access portions of their ranges need to be addressed.
- 11.1.7 Effects on small pronghorn herd that uses the State Wildlife Area south and west of Halligan need to be considered.
- 11.1.8 Altered hunting access around Seaman Reservoir may result in the CDOW to less effectively manage the elk and deer herds and address wildlife disease or habitat impact through harvest.
- 11.1.9 Potential loss of big game due to weak ice during spring and fall crossings needs to be considered.
- 11.1.10 Effects on Ouzel, dipping birds, habitat need to be determined.
- 11.1.11 Effects on possible river otter in the North Fork and on Dale Creek need to be evaluated.
- 11.1.12 Effects on deer, elk, bighorn sheep, mountain lion and bear, beaver, coyotes, raccoon and other small mammals, as well as several avian species including heron, hawks, eagles, waterfowl, and shorebirds due to inundation of habitat associated with Halligan Reservoir.

- 11.1.13 Restoration of all wildlife habitats impacted by proposed enlargements.
- 11.1.14 Effects of recreation on wildlife habitat need to be assessed.
- 11.1.15 Fort Collins has put aside natural areas to provide homes for wildlife and restrictions on construction along rivers (300 feet back from river) for wildlife purposes.
- 11.1.16 EPA may have interest in wildlife issues including the Migratory Bird Treaty Act.

11.2 Construction

- 11.2.1 Effects of dam construction on wildlife need to be evaluated.
- 11.2.2 Effects of dam construction on terrestrial wildlife species need to be addressed.
- 11.2.3 Construction fence will be wildlife friendly.
- 11.2.4 Construction crews should take precautions not to introduce invasive animal species, or diseases.
- 11.2.5 Pets should not be permitted with construction crews to reduce introduction of animal diseases into wildlife population.
- 11.2.6 No hunting or fishing by workmen without written approval from private landowners.

11.3 Description of Resource

- 11.3.1 Include descriptions and locations of terrestrial and aviary wildlife.
- 11.3.2 Biological Assessment and Biological Evaluation Report is required by the USFS - no synthetic data.

12.0 Aquatic Resources

12.1 General

- 12.1.1 Sediment will destroy fishery downstream.
- 12.1.2 North Fork of Poudre will be destroyed as a fishery.
- 12.1.3 Avoid decrease in commercial or sport fisheries.
- 12.1.4 Effects on Watson Fish Rearing Unit on the lower Cache La Poudre River, especially during winter season, needs to be evaluated.

- 12.1.5 Effects on fisheries from the headwaters to the mouth at the South Platte River need to be determined.
- 12.1.6 Effects of changes in downstream flows on fish and water temperature need to be addressed.
- 12.1.7 Effects of stream flow through Fort Collins for healthy aquatic resources need to be evaluated.
- 12.1.8 Water levels around the Overland trail area drops too low currently to keep fish alive. What will this project do to those flows?
- 12.1.9 Avoid decrease in indigenous species, usually interpreted as the naturally occurring assemblage, including valuable introduced species.
- 12.1.10 Avoid major change in population composition, with emphasis on magnitude of changes in the aquatic community.
- 12.1.11 Avoid damage to critical aquatic organisms such as food chain organisms or habitat formers.
- 12.1.12 Avoid increase in abundance of nuisance species (e.g. carp, tamarisk).
- 12.1.13 Effects on fish populations, long term and short term need to be evaluated.
- 12.1.14 Spring flows adequate to maintain native fish habitat, improve spawning beds, and emulate native flows necessary to maintain native fish populations.
- 12.1.15 Effects to aquatic and terrestrial wildlife and their habitats (especially migratory birds, fish, and sport fisheries) from 1) inundation of rivers, streams, riparian habitats, and upland areas; and 2) changes in current water flow regimes of rivers and stream, and fluctuations in exiting reservoir levels, for areas waters affected directly by the project and for all habitats affected indirectly from related water utilization by the partners.
- 12.1.16 Effects of dam construction on fish and aquatic life need to be considered.
- 12.1.17 Effect of the project and the construction of the dam on the existing fish population, both short and long term, need to be assessed.
- 12.1.18 How will dams be managed to maintain native fish habitat, improve spawning beds, and emulate native flows necessary to maintain native fish populations?

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- 12.1.19 Mosquito habitat for reproduction along the margins of the reservoir may increase, what abatement plans and effect in the spread of West Nile Virus might occur as a result of the project?

12.2 Description of Resource

- 12.2.1 Include descriptions and locations of fish and macro invertebrate populations in their respective reaches.
- 12.2.2 Include description of fish habitat identified by reach in terms of spawning and rearing of young and winter holdings.
- 12.2.3 Compare and contrast the current condition with estimated post project condition.
- 12.2.4 Biological Assessment and Biological Evaluation Report is required by the USFS - no synthetic data.

13.0 Threatened and Endangered Species

13.1 General

- 13.1.1 Bald eagles sighted at Seaman during summer months when eagles breed. How will they be affected by recreation access to Seaman?
- 13.1.2 All threatened and endangered species will be protected in the work area, or mitigations for damage will be enforced.
- 13.1.3 Dam construction and altered flow regime effects on the of habitat for the four Federally Threatened species (greenback cutthroat trout, Ute ladies Tresses orchid, Prebles meadow jumping mouse, and Colorado butterfly plant) and potentially several other species of concern recognized by the State of Colorado.
- 13.1.4 Effects on Preble's meadow jumping mouse, its designated critical habitat, and the potential for incorporating conservation measures into the project that would contribute to the survival and recovery, need to be investigated.
- 13.1.5 Effects on and protection of federally-threatened and endangered species that may occur in the project area and could be impacted by one or more of its associated actions, including: the bald eagle (*Haliaeetus leucocephalus*), Ute ladies'-tresses orchid (*Spiranthes diluvialis*), Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*), greenback cutthroat trout (*Oncorhynchus clarki stomias*), and Mexican spotted owl (*Strix occidentalis lucida*) need to be evaluated.
- 13.1.6 Effects on the Platte River system and associated federally listed species to include; whooping crane (*Grus americana*), interior least tern (*Sterna antillarum*), piping plover (*Charadrius melodus*), pallid sturgeon

(*Scaphirhynchus albus*), bald eagle, western prairie fringed orchid (*Platanthers praeclara*) need to be considered.

13.1.7 Interested in outcome of discussions with US Fish and Wildlife Service regarding the Preble's meadow jumping mouse and other issues.

13.2 Description of Resource

13.2.1 Include description and locations of bald eagle nests.

13.2.2 Streams above Halligan might be populated by Colorado greenback cutthroat trout, thus thorough review of habitats in areas affected by both reservoirs must be required.

13.2.3 Endangered Greenback Cutthroat trout in Sheep creek and other streams feeding the North Fork on Poudre need to be documented.

13.2.4 Biological Assessment and Biological Report is required by USFS – no synthetic data.

14.0 Cultural and Paleontological Resources

14.1 General

14.1.1 Protection for archaeological resources; such as teepee rings, arrowheads, rock paintings, and more recent historic structures; such as old log cabins remains, etc. that will be inundated.

14.1.2 Effects on two prehistoric sites requiring data recovery excavations and one historic homestead requiring a HABS/HAER record or other form of data recovery need to be assessed.

14.1.3 Mitigate effects on sites with SHPO including USFS during consultation.

14.1.4 Effects to Standing Rock Sioux Tribe cultural resources and Tribal Cultural Properties through submersion or exposure through erosion need to be considered.

14.2 Description of Resource

14.2.1 Class 3 pedestrian cultural resource inventory will be required on inundated areas.

14.2.2 Standing Sioux Tribe requests a copy of the procedural plans for testing potential sites for eligibility to the National Register of Historic Places including how and where testing will be conducted.

14.2.3 Cheyenne River Sioux Tribe requests a copy of the Archaeological Resource Inventory when completed for review.

15.0 Land Use

15.1 General

- 15.1.1 Evaluate options to maintain continued access for educational and stewardship programs sponsored by the Nature Conservancy on lands around Halligan Reservoir in future, including prior to reservoir enlargement, during project construction and after enlargement is completed.
- 15.1.2 Coordinating water projects and land use planning can result in lesser impacts from growth to aquatic and other resources and should be analyzed. The use of smart growth land use principles can result in a reduction in habitat fragmentation and loss, a reduction in energy use and infrastructure costs, and a reduction in air quality impacts.

15.2 Utilities

- 15.2.1 Power line on south side of the existing reservoir will need to be relocated. The most direct relocation of the power line will cross through private property. Suggest that the route follow existing ranch roads and associated easements. Ask that the power line be buried to comply with Landowners Association prohibitions and not compromise the conservation value of the land.
- 15.2.2 All new power lines crossing Phantom Canyon Ranches will be placed underground.

15.3 Private Property Issues

- 15.3.1 How will project managers and the City of Greeley on site manager reduce the opportunities to trespass on private land?
- 15.3.2 Construction personnel will respect private property and no trespassing on conservation easements.
- 15.3.3 No change in the use of the reservoir on private lands will occur.

15.4 Conservation Easements

- 15.4.1 All exiting conservation easements will be respected.
- 15.4.2 Effects on conservation agreements with the Nature Conservancy need to be evaluated.
- 15.4.3 Direct and cumulative effects on existing and future conservation easements need investigation.
- 15.4.4 What level of compensation will the applicants provide or mitigation measures taken to preserve the conservation objective on the easements.

15.4.5 A total of 102,000 acres of conservation easements are in the region to protect wildlife habitat, agriculture land, and land for public recreation. What will be the direct and cumulative effects on these initiatives, when factored in the existing storage and diversion project in the watershed?

15.4.6 What direct and cumulative effects will the proposed project have on future conservation measures in the region? And what levels of compensation will the applicants provide and what mitigation measures will they take?

15.5 Government Land Issues

15.5.1 USFS needs proposal to request use of National Forest Service lands for the reservoir for two tier review.

15.5.2 Withdrawal of National Forest Service lands as governed by Section 204 of the Federal Land Policy and Management Act of 1976 and associated regulations in 43 CFR part 2300.

15.5.3 What is required, both State and Federal, for property loss associated with the Cherokee State Wildlife Area by Halligan expansion?

15.6 Ranching Operations

15.6.1 Effects on ranching operations surrounding Seaman Reservoir and their ability to access both sides of the reservoir for ranch operations need to be addressed.

15.6.2 Overall devaluation of property would be considered "taking" of private property.

15.6.3 Decreases in cows and increases in people typically results in net detrimental effects to the land.

15.6.4 An active grazing allotment will be inundated.

16.0 Recreation

16.1 General

16.1.1 Consider balanced solutions for compatible recreation at both reservoirs that protect water quality and respect private property rights.

16.1.2 How will the possibility of camping at the new dam effect local camping businesses (KOA campground at 287 and 14)?

16.1.3 Will cross country skiing be accessible around Halligan? Sr. Center schedules trips in Poudre area.

16.1.4 Should be built only if non-motorized boating, hiking and swimming is allowed to the immediately and surrounding geographic area.

- 16.1.5 How is it ever advantageous to the environment to increase recreation?
- 16.1.6 Sugaring the positives of increased recreational and camping opportunities to obtain a positive public comment should not influence the Corps to give a green light to project.
- 16.1.7 Effects of recreation access, such as trespassing, trash, bear problems, and fire problems need to be evaluated.
- 16.1.8 Effects of recreation on wildlife habitat need to be evaluated.
- 16.1.9 Effects on Livermore Fire Prot. Dist. in rescue capacity due to increased recreation on Halligan, increased traffic on Cherokee Park Road, and not prepared to handle ice or water rescue situations need to be considered.
- 16.1.10 Consider increased cell phone coverage or install emergency phones supported by land lines or radio.

16.2 Reservoir Access

- 16.2.1 Consider public access to Halligan for fishing (no vehicle access).
- 16.2.2 What would recreational access be?
- 16.2.3 Any public access to Halligan should be non-motorized.
- 16.2.4 Potential for increased trespassing on public property due to public access to North Fork needs to be considered.
- 16.2.5 Request not to allow unsupervised access to waterway, need patrol (full time park ranger) if public access to be granted.
- 16.2.6 Do NOT lease surface rights to the CDOW. They are not capable of managing recreation, thus decreasing water quality.
- 16.2.7 Object to Public Access.
- 16.2.8 Recreation will decrease the quality of water through boating commotion, oil, trash, and whatever else is left behind by thousands of people and pets.
- 16.2.9 Desires expanded access to reservoirs, walk-in fine with float-tube for fishing.
- 16.2.10 Public access to reservoirs and associated impacts (litter, noise, and trespass) would potentially reduce the conservation value of landowners around the reservoirs and their quality of life. Ask for no public access or at least to the portion east of section 32. If access must be granted, then request

no crafts with internal combustion engines and City to take measures to prevent trespass onto our property from the north (300 acres with north boundary section 33).

- 16.2.11 Project funded with public funds, thus sufficient public access to both Halligan and Seaman Reservoirs must be provided as part of overall program.
- 16.2.12 If recreational access is to be granted, then strict controls to prevent damage to the environment should be included.
- 16.2.13 Request no access to Seaman from Livermore road to reduce opportunity for trespassing and reduce the disturbance to wildlife.
- 16.2.14 Limit walk-in non-motorized recreation from Gateway Park to Seaman Reservoir.
- 16.2.15 No more than small motors would be allowed on boats to reduce surface water pollution from regular usage and spills.
- 16.2.16 City of Fort Collins will be responsible for stopping increased trespassing on private lands.
- 16.2.17 Will the reservoirs be opened to power boating? What will be impact on water quality from recreation and power boats?

16.3 Whitewater Recreation

- 16.3.1 Effects on whitewater rafting on the Cache la Poudre (specifically flow changes between May and August) need to be evaluated.
- 16.3.2 Effects on whitewater rafting on the North Fork and Poudre River, specific reaches of the river, direct and cumulative impact that the project will have upon the flow regimes necessary to maintain the high-quality recreation needs to be addressed.
- 16.3.3 How are native flow regimes utilized by whitewater recreation? How will whitewater recreation on specific reaches of the river be affected? How will flows be maintained to continue to provide high-quality whitewater recreation?

16.4 Fishing

- 16.4.1 Storage will benefit summer stream flows improving the fly fishing in Phantom Canyon and the lower Poudre.
- 16.4.2 Halligan expansion will result with steep shoreline grades impairing fishing access.

16.5 Downstream Flows

- 16.5.1 Effects of changes in downstream flows on recreation need to be considered.
- 16.5.2 Effect on stream flow for recreation opportunities through the city of Fort Collins need to be evaluated.
- 16.5.3 Effect on boating (river kayaking) experience on the Poudre below these expansions needs to be addressed.

16.6 Upstream Issues Related to Inundation

- 16.6.1 Effects on Cherokee State Wildlife area upstream of Halligan and direct loss of recreational opportunity on those lands due to inundation need to be evaluated.
- 16.6.2 Seaman inundation footprint will result in some direct loss of recreational opportunity due to inundation, as well as indirect loss of recreational opportunity due to the loss of access to the public land impacting CDOW ability to provide hunting recreation.

17.0 Visual Resources

17.1 General

- 17.1.1 Cut trees should be used for construction of aesthetically pleasing public facilities at Seaman.
- 17.1.2 River above Dale Creek is on the Nationwide Rivers Inventory as having “more than local or regional significance”.
- 17.1.3 Avoid affects to Dale Creek through Section 10(a)(2)(A) of the Federal Power Act.
- 17.1.4 Effects on the Poudre River Corridor associated with Fort Collins and the stated goals, objectives, and values desired by the city need to be evaluated.
- 17.1.5 Effects of proposed Seaman Dam on adjacent Management Areas pertaining to the Visual Quality Objectives of the Forest Plan need to be compared.
- 17.1.6 Cache La Poudre River is a National Wild and Scenic River. Information on possible impacts on this designation should be included.

18.0 Socioeconomics

18.1 Agriculture

- 18.1.1 Hate to see water taken from agriculture to produce more houses.

18.1.2 Project will reduce the sale of agricultural water which in turn creates dry waste land.

18.1.3 Effects from increased population growth resulting from new rights need to be considered.

18.2 Fort Collins

18.2.1 Economic benefit to Fort Collins of an upgraded trout habitat for fishing and more flow for rafting and kayaking through most of the year should not be overlooked within the city, not just in the Poudre/N. Poudre above the city. Changes in the irrigation diversion point should be considered. A rigorous economic study of this issue should be undertaken before making final allocations of water flow.

18.2.2 Poudre is a cultural and recreational mecca for Fort Collins citizens. Concerned that if no high flows make it into the city, then people will not visit the Poudre in this downtown area and the city will lose revenue due to this dewatering. Merchants could suffer, and then taxpayers absorb more cost for the city through property taxes.

18.2.3 How will future development in Fort Collins be affected by increase in storage capacity?

18.3 Local Businesses

18.3.1 Effects on recreational fishing industry and whitewater rafting businesses all the way from the headwaters to the South Platte River needs to be evaluated.

18.4 Land Values

18.4.1 Effects on value of land, housing and business structures and entities within one mile, 5 miles, 10 miles etc. of the expanded reservoir needs to be determined.

18.4.2 Effects to land value when no longer able to cross the North Fork to access the National Forest Service land needs to be evaluated.

18.4.3 Effects on small ranchers will need to be considered.

18.4.4 Effects on grazing allotment that will be inundated need to be evaluated.

18.4.5 Economic damage to ranching operations due to inundation and associated loss of access to both sides of Seaman Reservoir need to be evaluated.

18.5 Quality of Life

18.5.1 Combination of expansion and responsible storage is needed for the community of Fort Collins and foothills to remain a desirable place to live.

18.5.2 Proper planning and conservation efforts will result in developing a framework for long term quality of life in this region.

18.5.3 Never use water to control population, it does not work.

18.5.4 Any new dam expansion should incorporate hydroelectric generation to the full extent.

19.0 Transportation

19.1 General

19.1.1 The expansion should not include additional road expansion or widening in this ecologically sensitive area.

19.1.2 Minimize expansion of existing and constructing new roads.

19.1.3 Effects of new or modified access roads to the dam sites need to be considered.

19.1.4 Restore any roads modified to original width and reseed with native species.

19.1.5 Cities compensate the state and county agencies for the costs of building and maintaining new or existing facilities?

19.1.6 Where will 287 be moved?

19.2 Recreation Related Issues

19.2.1 Concerned about increased traffic along US 287 and CoRd 74E providing access to entries to new impoundments for recreational purposes.

19.2.2 Developing or allowing additional recreational opportunities via Gateway Park on Highway 14 will increase traffic on an already deadly, dangerous stretch of road.

19.2.3 Effects on existing or new road systems required to sustain increased level of use associated with recreation and development of project.

19.2.4 How many additional vehicular miles traveled per year would be associated with this project?

19.2.5 Effects on Forest Service roads and potential for additional access via National Forest Service lands need to be considered.

19.2.6 Additional access roads and bridges need to be considered to provide access to private property associated with ranching around Seaman Reservoir.

19.3 Construction Related Issues

19.3.1 Rock crusher for dam construction will utilize County Road 80C (aka Cherokee Park Road), will subsequent access to construction site by personnel, etc., use same road or will the Cities use existing ranch roads as stated in agreement dated 14 October 1987? Concern regarding potential condemnation proceedings to gain access via existing roadways or by a more direct overland route needs to be considered.

19.3.2 Effects from truck noise, traffic, dust and related highway safety when enlarging the dam needs to be addressed.

19.3.3 All vehicles during construction are to remain on existing roadways.

19.3.4 Halligan expansion will inundate existing parking lot and road providing easy access to river/reservoir. Relocation of parking lot and road ¼ mile from new shoreline will be costly to CDOW.

19.3.5 Road improvements for construction are beneficial for Livermore Fire Protection District.

20.0 Noise

20.1 General

20.1.1 Rock crushers are noisy. Mitigate noise by restricting operation of rock crusher between the hours of 0700 h (7:00 am) and 1900 h (7:00 pm) five days a week.

20.1.2 Excessive noise (rock crusher) levels during construction only to operate from 8am to 8pm.

20.1.3 Noise levels should be coordinated with private landowners, Colorado Division of Wildlife and the Nature Conservancy to reduce disturbance during periods of critical wildlife breeding.

20.1.4 Minimize noise pollution during construction.

20.1.5 Noise levels will increase due to construction truck traffic.

21.0 Dam Safety

21.1 General

21.1.1 Effect of a large dam failure needs to be considered.

21.1.2 Effects of flooding due to dam rupturing from earthquake or terrorist action need to be addressed.

22.0 Cumulative Impacts

22.1 Other Water Projects

- 22.1.1 Effects on water quality and quantity and timing with both Halligan/Seaman and NISP together need to be evaluated.
- 22.1.2 Effects of this project with NISP - combined storage is 7 to 8 times greater whereas the population may only double in 40 years – needs to be considered.
- 22.1.3 Reasonable and well thought out – Glade is of concern and not addressed.
- 22.1.4 Expansion needs to be taken into account along side of the Glade Reservoir project.
- 22.1.5 Halligan, Seaman and Glade are one colossal intrusion to the rural area.
- 22.1.6 Effect of the cumulative weight of Halligan and Seaman expansions and the creation of Glade and the potential for earthquakes. A thorough seismic engineering study should be conducted and dams built to withstand an earthquake of at least a magnitude of 7.25.
- 22.1.7 Glade is likely to result in a huge disruption in the flow of the river and the river's ability to maintain its health and integrity in order to satisfy levels of stated need among the participating municipalities and water districts.
- 22.1.8 Assess the impacts of all the reservoirs in the Cache La Poudre Basin regardless of their water source (East or West slope) and track water as far downstream as possible.
- 22.1.9 Cumulative impact of the exiting storage and diversion on the river system, and the cumulative impact of other proposed projects in the watershed in combination with this one.
- 22.1.10 Cumulative effect of basin projects on stream flow relative to pre-historic flow regimes.
- 22.1.11 Cumulative impacts analysis should include other water projects in the planning stages that may affect the Cache La Poudre River drainage, such as those projected under NISP.

22.2 Indirect Potential Impacts

- 22.2.1 Evaluate the growth that will be a by-product of increasing the water in terms of regional increases in traffic, pollution, need for infrastructure that may not be paid for by an increase in population.
- 22.2.2 How will Corps address *sustainability of resources, ecosystems, and human communities* in regards to urban runoff, sewage, and effluent in the rivers as cities consume more and more of the free flowing rivers?

22.2.3 Information on sustainable water management, taking into account consideration of all the growth expected to occur with this watershed. The concept of a sustainable water supply or water management policy should be defined as the maintenance and balance of both human and ecological needs.

22.2.4 Provide a full analysis of the indirect and cumulative impacts of these projects including the effects of growth in the Region that will be supplied by these new water sources. We recognize that constructing a water supply may or may not necessarily encourage growth, but the growth will occur and water must be supplied from somewhere and the growth will impact resources. The impacted resources should be analyzed for both the indirect and cumulative impacts of growth – indirect impacts should not be dismissed unless they are analyzed and the analysis shows no indirect impacts.

22.3 Data Issues

22.3.1 Corps must state all relevant assumptions and uncertainties in EIS associated with cumulative effects analysis.

22.3.2 Provide USFS with data to run RiverWare modeling software to evaluate cumulative effects on the watershed-level to assist in their decision making of this and other projects in the Cache La Poudre watershed.

22.3.3 Continuous coordination between various NEPA processes during the EIS development and data should not be overlooked or collected multiple times and should remain consistent.

23.0 Mitigation

23.1 General

23.1.1 Mitigation plan should be included in EIS to assess any environmental impact in the years that follow the project's completion. Plan should be able to adjust for unfavorable impact and mitigate if non reversible adverse changes occur.

23.1.2 How is it decided if the unavoidable adverse impacts are greater than the positive benefits of a project? What if the adverse impacts cannot be mitigated satisfactorily?

23.1.3 Explicit and appropriate mitigation for each alternative, with specific information on the responsible party for implementing the mitigation.

24.0 NEPA Process Comments

24.1 General

24.1.1 Final EIS can only be judged a success if:

- The affected environment has been fully described

- The magnitude and significance of environmental consequences have been carefully measured for all practicable alternatives, including options that may not be allowed under existing state laws (since those laws may be changed to benefit the environment);
- Cumulative effects have been avoided, minimized, or mitigated to the maximum extent possible;
- Perpetual monitoring is ensured such that operational rules specified in the permits are adhered to and that compensatory mitigation is truly effective, especially as reservoirs age and water quality potentially deteriorates; and
- There is an opportunity to adapt provisional permitting language prior to Seaman Reservoir's delayed enlargement

24.1.2 Make the EIS process as open and interactive as possible providing more opportunity for dialogue between public, the project participants, and consultants before the Draft EIS is completed.

24.1.3 Landowners of Phantom Canyon Ranches would like to be included and have access to meetings with various agencies.

24.1.4 All studies should receive competent scientific peer review not just public review.

24.1.5 NEPA merged with 404(b)(1) guideline requirements simultaneously assesses the requirements for both laws and ultimately save time and resources and a better project.

25.0 General Comments

25.1 General

25.1.1 Department Interior – lack of information to comment now, but consult with Mr. Joe Maurier, Deputy Director, Division of Parks and Outdoor Recreation, Colorado State Parks, 1313 Sherman Street, Room 618, Denver, Colorado 80203.

25.1.2 Concern of agriculture run off and use of herbicides, pesticides, healing of mother earth so that we give instead of take away from her. Elimination of chlorine and fluoride in tap water should be considered.