

Save the Poudre: Poudre Waterkeeper Comments on the Supplemental Draft Environmental Impact Statement for the Northern Integrated Supply Project, June 2015

September 3, 2015

Save the Poudre: Poudre Waterkeeper (STP) has prepared these comments and supporting materials for the US Army Corps of Engineers (Corps) in review of the Supplemental Draft Environmental Impact Statement (SDEIS) for the Northern Integrated Supply Project (NISP) released June 2015.

In general, STP finds that the SDEIS fails to meet the requirements of the National Environmental Policy Act (NEPA), the Clean Water Act (CWA) and the Endangered Species Act (ESA), under which the SDEIS was required.

STP presents these comments without reference to relevant materials that were requested through the Freedom of Information Act (FOIA) on July 19, 2015, but which were not provided by the Corps in a timely fashion. See “Freedom of Information Act Request,” attached here in Appendix A (A04). STP requested an extension of the comment period to accommodate this request but that extension was not granted. See “Request to extend the deadline for the public comment period for the NISP SDEIS,” attached here in Appendix A (A03). As this FOIA request was needed to trigger the disclosure of information that the Corps failed to properly disclose in the SDEIS, STP expects the Corps to give full consideration to any comments based on that material that supplement or revise these comments submitted in a timely fashion even if submitted after the close of the official comment period.

I. The SDEIS Fails to Meet the Requirements of NEPA and CWA

A. The SDEIS neither Considers a Full Range of Alternative nor Adequately Analyzes the Environmental Impacts of NISP

1. The SDEIS Fails to Objectively Consider the Benefits of Conservation for Reducing Projected Demand

The Corps appropriately retained an independent expert to review the project proponent’s demand projection. SDEIS at 1-14. This expert took exception with the proponent’s projections, stating “we are

concerned about the HE projections' implied increases in overall water requirements per capita for NISP participants, particularly in the 2030 through 2050 period." "Review of 2010-2011 'NISP Demand Projections from Harvey Economics and Recommendations for NISP Supplemental EIS'" (Demand Projection Review), attached here in Appendix E (E30), at 9. The expert subsequently proposes, and the Corps accepts in the SDEIS, two alternate demand curves, one of which is based on fixed rate "best guess" conservation scenario. Demand Projection Review at 9 ("The extent of future declines in water requirements per capita is very difficult to predict and somewhat speculative in nature").

The conservation scenario is, however, never given any weight in the analysis of the project's need and purpose. It is merely offered as a straw man argument that regardless of any efforts the demand for water more than justifies NSIP—the Corps assumes that because the projected water demands over the entire study period are still greater than the 40,000 acre-feet requested by the project proponent, there is still need for NISP. SDEIS at 1-15 ("Under any of the three demand scenarios, both NISP and additional supplies would be required to meet the NISP Participants' future water supply needs").

Further, the SDEIS asserts, without support, that "the timing of the future water supply needs can be delayed (but not avoided) through water conservation." SDEIS at 4-5. Such a statement is only true if the Corps assumes that the participants will continue infinitely increasing their water demands. The SDEIS clearly illustrates that the projected demand is reduced, not just delayed by the conservation scenario through the study period of this review. SDEIS at Figure 1-4. The Corps must not speculate about water demands beyond the range of their analysis. Within the time frame under consideration, the conservation scenario does reduce demand.

In fact, the SDEIS clearly demonstrates that even the limited conservation proposed under the conservation scenario reduces the projected long-term demand of the NISP participants by approximately 40,000 acre-feet – the desired firm yield from NISP. SDEIS at Figure 1-4. The projected increase in demand over 2010 is approximately 50,000 acre-feet, roughly equivalent to the unmet demand after NISP water is applied to the original demand projection. The Corps fails to objectively consider that reduced demand from the conservation scenario (or other conservation-based alternatives) may be met by the project participants through the means with which they anticipate meeting their surplus water needs after NISP is implemented.

STP rejects the SDEIS's demand projections as deeply flawed and unrepresentative of the demand likely to be experienced by the participants, as well as the assumption that these demands must be met, but if

it continues to use these projections in its review of NISP it must do so in an objective and consistent manner. The Corps must reconsider its analysis of need by specifically addressing the ability of the participants to meet the reduced needs projected under the conservation scenario and any other practicable conservation-based approaches that are identified in the SDEIS review through the means with which they intend to meet their water demands that will be unmet by NISP under the original projections. The Corps must not rely on assumptions of demand beyond its designated study period. If the Corps determines that the participants cannot meet the full projected need under a conservation approach, the Corps must consider and disclose the ability of the participants to partially meet the need and how NISP alternatives could be re-configured to meet the lesser need. The Corps must fully refute the practicability of any approach as described here that could be a LEDPA to NISP before permitting NISP.

2. The SDEIS Incorporates an Assumption that Water Supply Demands must be Met that Unreasonably Constrains the Range of Alternatives

The SDEIS is entirely premised on the assertion that increased water supplies are needed.

The project's purpose and need is stated as "[t]o provide the Project Participants with approximately 40,000 acre-feet of new reliable municipal water supply annually through a regional project coordinated by the District, which will meet a portion of the Participants' current and reasonably projected future additional water supply needs."

SDEIS at 1-3.

This "need" is based on estimates of water demand forecasts.

HE was originally commissioned by the Northern District in June 2004 to evaluate and prepare water demand forecasts for each of the NISP Participants (Participants), along with a discussion of conservation practices employed by these Participants. Separately, the Northern District staff prepared an evaluation of water supplies for each Participant. These two work elements were then combined to assess potential future water shortages relevant to a determination of purpose and need for NISP. This study was provided to the U.S. Army Corps of Engineers for its use in considering NISP purpose and need and in preparing Chapter One of the NISP Environmental Impact Statement (EIS).

“Water Supplies and Demands for Participants in the Northern Integrated Supply Project” (Demand Projection), attached here in Appendix E (E53), at 1.

The Corps’ fails, however, to establish that the “water demand forecasts” reflect an actual need. The SDEIS includes no discussion of the implications for the participants of not obtaining sufficient water supplies to meet the demand forecasts. On the contrary, the Corps considers such a scenario unconceivable and offers a purported “No Action Alternative” that undertakes the exact same action as the proposed action alternatives—development of 40,000 acre-feet of new water supply. SDEIS at 2-16.

By assuming that the water demand forecasts will be met one way or another and failing to consider and disclose the impacts of this not happening, the Corps fails to establish a level playing field for review of the action alternatives as required by NEPA and the Clean Water Act. The review in the SDEIS fails to consider and disclose any possible actions that might be undertaken by the participants to meet that shortfall. The Corps has inappropriately constrained the range of alternatives.

The Corps must reconsider its evaluation of the project’s purpose and need and must specifically consider and disclose its analysis of the actual need for the participants to meet the estimated water demands forecasts. Such an analysis must independently assess the participants’ potential responses to an unmet water demand shortfall and the likelihood that water scarcity, behavioral changes, and market forces would alleviate such a shortfall regardless of the participants’ actions.

Unless the Corps can affirmatively establish the compelling need for additional water supplies, the Corps must further consider and disclose a range of alternatives that the participants could undertake in response to water supply shortfalls. Such alternatives might include, but must not be limited to, development regulations and infrastructure improvements, conservation, water use efficiency improvements, traditional agricultural transfers, alternative agricultural transfers, and water reuse.

3. The SDEIS “Regional Project” Screen for Alternative Selection is Arbitrary and Capricious and Improperly Restricts the Range of Alternatives

In the SDEIS, the Corps’ continues its use of a “Regional Project” screen to determine the feasibility of alternatives. SDEIS at 2-3. The use of this screen is used to justify the elimination of any alternative that does not comprise a singular effort that meets the demanded firm yield in an integrated fashion.

“Evaluation of the ‘Healthy Rivers Alternative’ Proposed by STP Using the NISP Alternatives Screening

Criteria” (HRA Tech Report), attached here in Appendix E (E31), at 5 (“To advance, alternatives must be able to meet the Participant's water supply need with a regional project, eliminating the need for Participants to pursue separate solutions to meet their individual needs”). The Corps fails to define in clear and unambiguous language what this screening criterion is. *See, in general*, SDEIS at Section 1.2.3. The “regional project” criterion is also used by the Corps to justify a “cutoff threshold” screen that eliminates alternatives that fail to provide “30 percent of the firm yield request for concepts and 15 percent of required storage capacity for elements”). HRA Tech Report at 4 (“Concepts and elements that fall below the cutoff thresholds [...] are not considered because, below these levels, the regional nature of the project would be lost and would effectively operate as individual local water supplies”). STP objected to these 30%/15% thresholds in its comments on the DEIS (attached here in Appendix B (B13)) and incorporates those comments by reference, asserting that the thresholds are arbitrary and capricious as the Corps fails to provide meaningful support for their values or applications.

The Corps justifies the “regional project” screen by stating that “[t]he District is a regional water supply entity with responsibilities for water supply planning and management for the region and what it is proposing is a regional water supply project to meet the water supply needs of 15 Participants providing water to an area of about 945 square miles.” SDEIS at 2-3. STP does not dispute this characterization of the facts—the applicant is clearly Northern Colorado Water Conservancy District and the project participants are interchangeable components that have, and likely will continue to, change over time. SDEIS at S-1 (“The Town of Berthoud withdrew as a Participant in NISP in April 2008 as the DEIS was being released to the public. Frederick requested the project yield previously allocated to Berthoud”). STP does, however, dispute the conclusion that the Corps draws from this factual situation—that only a singular, large reservoir-based project can fulfill the proponent’s need. This assertion is arbitrary and capricious, contrary to fact, and the Corps’ must be seen as having improperly restricted the range of alternative available for consideration in the SDEIS.

The Corps can give great weight to the project proponent’s request, but the Corps must still exercise independent judgement when crafting the statement of purpose after considering both the proponent’s stated need and the public’s perspective. The Corps cannot simply adopt the project proponent’s purposes and it cannot construct the purpose so narrowly so as to unreasonably limit the range of alternatives available for consideration. Additionally, the Corps cannot assume that common needs require a common solution and must address the merits of differing approaches in the impact analysis rather than preemptively through the alternatives screening. *Colorado Environmental Coalition v.*

Dombeck, 185 F.3d 1162 (10th Cir. 1999), *Simmons v. Corps of Engineers*, 120 F.3d 664 (7th Cir. 1997) (the Corps has a “duty under NEPA to exercise a degree of skepticism in dealing with self-serving statements from a prime beneficiary of the project”).

The Corps, in deferring to the project proponent’s desires, fails to demonstrate why multiple small projects operated or coordinated by the project proponent and serving the participants in a regionally coordinated fashion does not constitute a “regional project.” Although a singular project may be simpler for the proponent, that is not a sufficient reason for the Corps to rule out a more diversified approach. The Corps fails to determine if the public good would best be served by the proponent’s preferred concept of by a distributed source approach to providing the demanded firm yield. The Corps also fails to provide any support for the particular “cutoff threshold” values (30 percent for concepts and 15 percent for elements) that are used in the screening analysis and fails to disclose how those values were determined.

The Corps must re-consider its alternative screening process by re-applying the “regional project” and cutoff threshold criterion after:

1. Clearly and unambiguously defining its “regional project” criterion;
2. Disclosing the analysis and supporting material for the development of this definition specifically addressing how the individual participants can be served by a variety of approaches;
3. Disclosing how the number and location of participants affects the possible configurations of a “regional project” and how changes in the participant makeup may change those possible configurations prior to, during, and after project implementation; and
4. Disclosing the analysis and supporting material for the development of any threshold values that derive from the “regional project” criterion.

4. The SDEIS 40,000 Acre-foot Screen for Alternative Selection is Arbitrary and Capricious and Improperly Restricts the Range of Alternatives

The SDEIS states that the purpose and need of the proposed project is “[t]o provide the Project Participants with approximately 40,000 acre-feet of new reliable municipal water supply annually[.]” SDEIS at 1-3. The Corps asserts that this “need” is justified by projected population growth in the

participants' service areas. SDEIS at 1-8. The Corps also asserts that "[t]he NISP Participants' water supply needs during the planning period (through 2060) is at least 40,000 acre-feet." SDEIS at 1-15.

The Corps uses these assertions of need to establish a threshold of 40,000 acre-feet under its "Purpose and Need Screening Category" for alternative screening and eliminates potential alternatives that do not provide this amount of firm yield. SDEIS at 2-3. The Corps' only support for this threshold is the statement that it "reviewed these 2011 demand projections in connection with the validity of the need (BBC 2011) and found that 40,000 acre-feet of firm annual yield is still valid for NISP." SDEIS at 2-3.

The Corps utterly fails to support these assertions that 40,000 acre-feet is a valid statement of need for this project. STP disputes the demand analysis that the Corps incorporates into the SDEIS for a number of reasons and asserts that the SDEIS dramatically overstates the need for additional firm yield within the participants' service areas. However, if the Corps insists on using this deeply flawed demand analysis, it must accurately and consistently apply the results.

The Corps' analyses project the "need" that the proponent and participants seek to meet with NISP as 84,000 acre-feet. SDEIS at 1-17. The Corps fails to provide any support for its use of the lesser 40,000 acre-feet figure other than that was the amount that the application requested. SDEIS at Table 1-1. The participants' desire for 40,000 acre-feet is alternately stated as their "firm yield goal" (SDEIS at Table 1-1), a "request" (SDEIS at 1-5), and "a portion of their projected demand" (SDEIS at 1-5).

The Corps can give great weight to the project proponent's request, but the Corps must still exercise independent judgement when crafting the statement of purpose after considering both the proponent's stated need and the public's perspective. The Corps cannot simply adopt the project proponent's purposes and it cannot give construct the purpose so narrowly so as to unreasonably limit the range of alternatives available for consideration. *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162 (10th Cir. 1999); *see also Simmons v. Corps of Engineers*, 120 F.3d 664 (7th Cir. 1997).

The Corps failed its duties by applying the 40,000 acre-feet figure, a value that was chosen arbitrarily and capriciously from a range of possible values that would have been equally valid in partially meeting what the SDEIS purports to document as the need of the participants. The Corps assertion that "[t]he NISP Participants' water supply needs during the planning period (through 2060) is at least 40,000 AF" (SDEIS at 1-15), could have as easily read "at least 5,000 AF" or "at least 60,000 AF." A review of the analysis in "Review of 2010-2011 NISP Demand Projections from Harvey Economics and

Recommendations for NISP Supplemental EIS” (referenced in the SDEIS as “BBC 2011” and attached here in Appendix E (E30)) as cited at SDEIS 2-3, could have equally found that “20,000 AF of firm annual yield is still valid for NISP” or “1,000 AF of firm yield is still valid for NISP.” While, the proponent is free to propose whatever yield they desire, there is absolutely no defensible reason for 40,000 acre-feet to have been considered the appropriate threshold value for the Corps analysis.

If the Corps chooses to adopt a purpose and need that only partially meets its projections of actual need, the Corps must independently and objectively balance the proponent’s desires with the public interest. By arbitrarily applying the 40,000 acre-foot figure to the alternative screening process, the Corps has unreasonably eliminated alternatives that may have contributed to meeting the participants’ needs in a meaningful fashion. *Natural Resources Defense Council v. Callaway*, 524 F.2d 79, 93 (2d Cir. 1975) (“The EIS must nevertheless consider such alternatives to the proposed action as may partially or completely meet the proposal's goal and it must evaluate their comparative merits”). The Corps developed and applies a “cutoff threshold” screen that eliminates alternatives that fail to provide “30 percent of the firm yield request for concepts and 15 percent of required storage capacity for elements” based on this arbitrary 40,000 acre-foot figure. HRA Tech Report at 4 (“Concepts and elements that fall below the cutoff thresholds [...] are not considered because, below these levels, the regional nature of the project would be lost and would effectively operate as individual local water supplies”). STP disputes these thresholds in principle (see Appendix B (B13)) as well as in their application. By using these “cutoffs,” the Corps has eliminated alternatives that failed to meet an arbitrary percentage of an arbitrary value.

As the NISP process currently stands, the Corps has failed to provide a meaningful and defensible purpose and need for the proposed project. Until this defect is remedied, the Corps cannot develop a competent range of alternatives for consideration under NEPA or the Clean Water Act.

The Corps must re-consider its development of the project purpose and need statement and the screening analysis that defines the range of alternatives. This reconsideration must:

1. Either consider and disclose a range of firm yields that meet the demand projections developed and endorsed by the Corps or reconsider the demand projections;
2. Disclose the analysis and supporting material for the development of any value or range of values for firm yield that is adopted as the project’s purpose and need;

3. Demonstrate that the firm yield value or range of values that the Corps adopts considers the public's perspective and potential benefits and impacts; and,
4. Disclose the analysis and supporting material for the development of any threshold values that are applied under the purpose and need screening category.

If the Corps proceeds with its use of 40,000 acre-feet against these claims, the Corps must quantitatively define what "approximately 40,000 AF" includes. SDEIS at 1-3. The Merriam-Webster Dictionary defines approximately as "nearly correct or exact", and defines "approximate" as "to be very nearly to but not exactly like (something)". It provides no quantitative definition of "approximately". The Corps must provide clear guidance about what it considers as "approximately 40,000 AF" before it applies this as a screening threshold.

5. The SDEIS Improperly Applies Historical Water Use Rates in the Demand Projections

The demand projections developed for the SDEIS, and used to support the project purpose and need, reflect an unsupported assumption that past water use is a valid indication of future use. With two exceptions, the demand projections describe future water use rates based on a fixed rate derived from historical rates. Demand Projection at A-5, B-6, D-6, E-7, F-6, G-6, H-5, I-6, J-6, K-6, L-5, M-7, N-6. In one instance, this is explicitly stated as "[w]ater usage is expected to track population growth." Demand Projection at J-6. One of the exceptions does not clearly state the method by which future water rates were determined. See Demand Projection at Appendix C. The other exception uses a split system, one figure based on historical use, the other not, but both are static moving forward. Demand Projection at O-8.

The Corps fails to provide any support for the assumption that average historical rates are appropriate indicators of future use. Rather, the demand projection analysis itself supports an entirely different case by documenting that water use rates change over time and in many of the participants' service areas are generally trending downward. Demand Projection at Exhibit A-3, Exhibit B-4, Exhibit C-3, Exhibit L-3, Exhibit N-3, Exhibit O-4. The six providers reflecting this consistently downward trend represent 15,300 acre-feet (38%) of the "new permitted firm yield from NISP sought by participants." Demand Projection at Table I-1. Another four providers, representing 12,200 acre-feet (30%) of the requested firm yield, have demand curves that peaked earlier in the 2000s and have subsequently declined. For all of these

10 providers, use of historic average water use rate overstates demand for Year 0 of the projection; i.e., the projection fails to accurately capture the starting point of a future demand curve.

The trends of water use change through time and a general decline in water consumption through the 2000s is also demonstrated by the average water use rates for the combined NISP participants. Demand Projection at Table III-1.

Overall, the data documented in the demand projection do not support the use of an historical average rate as a good predictor of future water use rates. The Corps fails to incorporate the principle of decoupling of population growth and water demand that is being witnessed throughout the western United States. See “Decoupling water use from growth: the New Mexico example,” attached here in Appendix E (E13). The Corps instead dismisses declines in water use as the low-hanging fruit of conservation efforts and assumes, without an analysis or meaningful supporting documentation, that future declines will be more difficult. The extent of the SDEIS discussion of this issue is:

“[reductions to date] also suggests that additional savings will be more difficult and costly to achieve as described below.

Typically, water providers and their customers are motivated to take the first steps in conservation programs that achieve the largest savings at the least incremental cost. The Participants have reduced use by implementing relatively inexpensive water-saving measures such as public education, watering restrictions, low-flow fixture requirements, and landscaping regulation for new construction (HE 2011).”

SDEIS at 1-11.

The Corps must re-consider its water demand projections and must utilize a demand projection model that incorporates trends and reasonable assumptions about future use. The token conservation scenario, which incorporates a fixed rate decline as a straw man for discussion, does not accurately capture such a demand projection.

6. The SDEIS Fails to Incorporate Current Water Supply Availability into Water Supply Need Projections

The SDEIS projects future water supplies by comparing projected demand with “current” supply. The SDEIS relies on estimates of the participants’ water supply holdings in 2010. Demand Projection at 31 (“Additional water needs of the Participants are determined by the difference between their projected future water demands and their firm annual water supplies or yields that were owned or controlled by the Participants in 2010”).

By relying on a 2010 water supply accounting, the Corps fails to accurately reflect the current situation in the SDEIS released in 2015. This is dramatically illustrated by the change in water supply held by the participants from 2005 to 2010:

“The supply evaluation in the [Demand Projection] indicates that NISP participants currently have supplies totaling about 59,400 acre-feet in terms of firm yield. This figure suggests that participants have continued to add to their portfolios of water supplies since the 2005 report, when their collective firm yield was estimated at about 48,000 acre-feet.”

Demand Projection Review at 6.

A similar growth in holdings from 2010 to the present would offset the projected “need” for NISP by over 10,000 acre-feet, reducing the “requested firm yield” by at least 25%. Importantly, it would negate the Corps dismissal of the Healthy Rivers Alternative on the grounds that it fell 5,000 acre-feet short of the Corps’ arbitrary 40,000 acre-foot screening threshold. SDEIS at 2-9. The Corps fails to properly consider the full range of alternatives due to its use of outdated data for water supply holdings.

The Corps must re-consider its water supply demand projections using the most current data available for the current water supply holdings of participants. The Corps must disclose its rationale for using data more than one year old. The Corps must also re-consider all analyses that were conducted in a manner that was dependent on the results of the water supply need projections, and must disclose and provide for meaningful public review of all revisions of the projections and dependent analyses.

7. The SDEIS Fails to Fully Consider Alternatives Incorporating Traditional Transfer Methods

Colorado has a long and successful history of providing water to growing municipalities by transferring water from farms to cities. This “Traditional Transfer Method” (TTM) is often pejoratively called “buy and dry” as towns and cities buy water from farmers to meet municipal needs. In fact, over the last

decade, water from approximately 400,000 acres of farms has been transferred from farms to cities in Colorado (see “Why Colorado's producers must adapt to a more tenuous water supply and how they're making it work,” attached here in Appendix E (E58)) – TTMs is often the easiest, fastest, and most practicable method for municipalities to get more water. In northern Colorado over the last 25 years, water from approximately 420,000 acres of farm has been transferred to cities via TTMs. Unpublished public testimony, Weld County Commissioner Sean Conway at Fort Collins City Council meeting, September 1, 2015. Further, the Colorado Water Plan indicates that Colorado farmers will transfer water from 500,000 – 700,000 acres of farms by the year 2050. “Colorado’s Water Plan, Second Draft” (July 2015) available at: <https://www.colorado.gov/pacific/sites/default/files/FINAL-2ndDraftClean-Appendices-2015%20Revised.pdf> and last viewed September 3, 2015, at 208. Moreover, the SDEIS states that communities within the NISP project area are using and will likely continue to use TTMs to get water to meet their needs in the future. SDEIS at 2-11, SDEIS at 5-13.

TTM transfers have occurred over the history of Colorado involving hundreds of thousands of acre feet of water with little or no federal or state environmental-regulatory action required (including under the Clean Water Act) because little or no environmental damage occurs. Moreover, these TTMs occur between a willing buyer and a willing seller, and often the sellers (farmers) reap substantial profits from the business transaction.

If none of the proposed action alternatives are approved in the Record of Decision, then the NISP participants and farmers in northern Colorado are likely to undertake a variety of TTMs to meet all of the NISP participants’ water needs including the 40,000 acre feet described in the Purpose and Need in the SDEIS. Such a no action alternative could move forward in multiple ways:

- The NISP participants may work together to develop a “regional project” somewhat like the one described in the SDEIS. The NISP participants cooperatively facilitate business interactions with farmers to buy water and have it transferred into a regional reservoir. STP believes that such a regional project would be most practicable if the water was diverted at the same head gates from which it is diverted now, and that the water must be piped or pumped to the regional reservoir, thus avoiding new environmental damage to the Cache la Poudre River. A regional project using TTMs without changes of diversion points would allow the participants to meet their water supply objectives in a less environmentally damaging fashion than any of the action

alternatives. The Corps' must not permit any of the action alternatives when this approach represents a Least Environmentally Damaging Practicable Alternative (LEDPA) for NISP.

- The NISP participants may also undertake a series of separate projects like those described in the No Action Alternative in the NISP Draft Environmental Impact Statement whereby NISP participants do not engage in a regional project, but rather go it alone or join together with fewer neighboring NISP participants. If this were to occur in a manner similar to that described in the 2008 DEIS "No Action Alternative," STP believes that that water coming from the Cache la Poudre River must be diverted at the same headgate from which it is diverted now, and that water must be piped or pumped to the separate municipalities' (or groups of municipalities') reservoir (or reservoirs), thus avoiding new environmental damage to the Cache la Poudre River. The Corps' must not permit any of the action alternatives when this approach represents a Least Environmentally Damaging Practicable Alternative (LEDPA) for NISP.

8. The SDEIS Fails to Incorporate the Firm Yield from the Windy Gap FIRMING Project into the Water Supply Need Projections

The SDEIS discloses that five NISP participants are also participants in the Windy Gap Project. SDEIS at 1-16, Table 1-7, 1-18. Firm yield from the Windy Gap project is currently considered to be zero. This is the primary rationale for pursuing the Windy Gap FIRMING Project, an action that is currently in the permitting process. See "Record of Decision Windy Gap FIRMING Project Final Environmental Impact Statement" (2014), available http://www.usbr.gov/gp/eca/wgfp_feis/wgfp_rod.pdf and last viewed September 3, 2015, at 6. Although the SDEIS does not explicitly state that the Windy Gap units held by the five NISP participants contribute no water to the estimates of the water supply holdings of these participants, this is a reasonable assumption.

The SDEIS calculates the water supply need projections by comparing the demand projections with current water supply estimates. SDEIS at 1-17. As the water supply estimates are held constant at 2010 levels during modeling, the Corps fails to incorporate the reasonable foreseeable gains in firm yield from the Windy Gap FIRMING Project into the projections of the water supply need.

STP opposes the Windy Gap FIRMING Project. That opposition, however, does not excuse the Corps from properly incorporating the impacts of the implementation of Windy Gap FIRMING Project into its analyses of NISP.

This failure to incorporate water supply gains from the Windy Gap Firming Project into the water supply need projections is inconsistent with how the SDEIS treats the project in its hydrologic modeling. SDEIS at 5-6 (“The CTP modeling of Future Conditions hydrology assumes that the Windy Gap Firming Project (WGFP) is successfully completed, and the projected WGFP yield is factored into the inputs developed for the Greeley System Model for Future Conditions model runs”).

The Corps must re-consider its water supply need projections using the anticipated firm yield from the Windy Gap Firming Project, a project that the SDEIS otherwise assumes will be completed. The Corps must disclose its rationale for using any projected firm yields that differ from those disclosed in the “Record of Decision Windy Gap Firming Project Final Environmental Impact Statement” (2014). The Corps must also re-consider all analyses that were conducted dependent on the results of the water supply need projections and disclose and provide for meaningful public of all revisions of the projections and dependent analyses.

9. The SDEIS Fails to Consider Water Pricing in the Demand Analysis

The SDEIS describes water pricing projections based on the estimated costs of each alternative. *See, e.g.*, SDEIS at 4-384 – 4-385 (Alternative 1), SDEIS at 4-387 – 4-388 (Alternative 2). These analyses appear to have been conducted after and independently of the demand analyses that inform the proposed project’s purpose and need. The SDEIS only discuss water price increases as a function of environmental impacts from the alternatives. *See*, SDEIS at 3-219 – 3-220, *in general*, SDEIS at Section 4.20.

One of the Corps’ consultants dismisses—entirely without support—the potential impact of water price increases on water use. Demand Projection at 35 (“Since almost all water costs along the Front Range of Colorado are increasing, it is unlikely that growth or water use will be affected significantly by increases in the cost of water for the Participants”). The SDEIS merely accepts the demand projections generated based on population growth projections and assumed water use. Demand Projection Review at 1 (“HE gathered or developed projections of future demographic growth for each participant, then combined projected growth in population (or accounts) with assumptions regarding water use per resident (or per account) specific to each participant”). The unspecified “Conservation Scenario,” presented as a token nod to unconstrained demand, does not quantitatively address water rate structures as tools for reducing demand and there is no documentation that the assumed prices would adequately capture the potential demand reductions from appropriate water rate structures. SDEIS at 1-14. The conservation scenario contemplates “future rate increases” but neither the Corps nor its expert attempt any

quantitative analysis of what those might be. Demand Projection Review at 9. On the contrary, the SDEIS discloses the opposite, demonstrating that water prices are expected to drop below pre-NISP levels by the end of the project. SDEIS at 4-388 (“the average cost of household water service would increase only slightly by 2020, to about \$560 per year (4% higher than in 2010) before declining to levels below 2010 in 2030 and 2040”).

This failure to consider water rate structures as a demand management tool is contrary to the well-established principle in water planning that municipal water prices directly affect water use. *See, e.g.,* “Pricing Structure” Appendix E (E32). The Corps failed to implement this basic principle into its demand forecast models, despite the recommendation of its other consultant, who takes a more informed view of the role of water prices on demand. Demand Projection Review at 9 (“We also believe the EIS should consider the possibility that water requirements per capita among the NISP participants will continue to decline to at least some degree due to [...], the likelihood of future rate increases to pay for new water supplies from the proposed NISP project and/or other sources”).

The disclosure that the alternatives would result in water price increases coupled with the failure to consider what impact those increases, in addition to other rate structures imposed with the intent of curtailing demand, is a fatal flaw in the Corps’ analysis. The Corps must reconsider its demand analysis and incorporate specific, quantitative review of the effects of various pricing structures on projected demand.

10. The SDEIS Confirms the Intention of the Project Proponent to Allow Participants to Sell Their Shares in NISP

In our comment letter on the DEIS (submitted September 12, 2008, and attached here in Appendix B (B13)), STP expressed concerns that the project was structured to allow participants to sell their shares in NISP to other parties. As the SDEIS does not respond to those concerns, we hereby incorporate them into these comments by reference.

11. The SDEIS Inappropriately Constrains the Range of Alternatives by Dropping the Healthy Rivers Alternative from Consideration

STP rejects the Corps’ use of a 40,000 acre-foot screening threshold. *See* “The SDEIS 40,000 Acre-foot Screen for Alternative Selection is Arbitrary and Capricious and Improperly Restricts the Range of

Alternatives.” STP also rejects the Corps’ use of unspecified water sources under the concept of operational flexibility in Alternative 2 to buttress the yield of that alternative when climatic conditions constrain the specified water sources. See “The SDEIS Fails to Analyze Any of the Environmental Impacts of the Requested Operational Flexibility.” If the Corps’ persists in using this threshold and applying unspecified supplemental water sources, it must do so in consistent fashion across all of the alternatives, including the No Action Alternative. Where options exist to approximately meet the desired firm yield (as Alternative 2 does with operational flexibility), the Corps must consider those options with an equivalent flexibility.

The SDEIS acknowledges that Alternative 2 would not meet its firm yield requirements during dry periods, during which project participants would be required to acquire additional water rights to be stored in the proposed Glade reservoir. SDEIS at 2-47. In its comments on the NISP DEIS, STP submitted comments on the historic flow regime and analyzed a reconstructed flow regime based on tree ring records from the Cache la Poudre watershed, and we are providing those comments again here. See Appendix B (B13). The tree ring record analysis reveals that it is likely, due to the junior priority of the Grey Mountain right, that there would be multiple several-year periods in the near future during which NISP would fall short of its firm yield water delivery requirements by at least 18,000 acre feet. The project would only be able to deliver less than 25,000 acre feet per year during those dry periods, assuming the senior water rights exchanged in the Galeton water trade would still remain in priority during such extended droughts. A 22,000 acre foot firm yield delivery is definitely not “approximately 40,000 acre feet” of firm yield.

Although the Healthy River Alternative was rejected by the Corps for failing to provide a full 40,000 acre-feet of firm yield (SDEIS at 2-9), the various water supply methods described in the Healthy Rivers Alternative could be flexibly augmented by 5,000 acre feet or more in a relatively straightforward way, including the following:

- 1) Traditional purchases of water rights stored in existing reservoirs. Where storage may be an issue, numerous alternative storage options have emerged, including groundwater storage and utilizing gravel pits, as described in the STP comments on the NISP DEIS. See Appendix B (B13).
- 2) Purchases of water rights from the Colorado-Big Thompson Project.
- 3) Increasing the firm yield portion of water yield through alternative agricultural transfers, such as rotational fallowing agreements, interruptible supply agreements, agricultural-municipal water

sharing agreements, water cooperatives, water banks, and Flex markets. These methods are described in the Colorado Water Plan, which cites a need to develop more than 50,000 acre-feet of supply through these methods. See "Colorado's Water Plan, Second Draft."

- 4) Pursuing conservation and water use efficiency more aggressively.
- 5) Utilizing reverse osmosis like the city of Aurora, CO is doing (as well as many other communities) to augment existing water supplies. Water secured through the South Platte Water Conservation Program or other downstream water rights could be treated through reverse osmosis to augment supplies within the region, as long as the brine waste is disposed of safely and securely. In cases where it can be demonstrated that water reuse will not affect return flows, a water reuse program may be utilized as supply for a reverse osmosis system.

The Corps inappropriately constrained the range of options by dropping the Healthy River Alternatives from further consideration while retaining Alternative 2 (as well as the other action alternatives). There is no support for the assertion that the Healthy Rivers Alternative fails the screening criteria while the others do not.

12. The SDEIS Fails to Consider the Full Range of Water Available for Transfer to Municipal Needs

The municipal and industrial water use policy cap, a policy on water use from the Colorado-Big Thompson system set by the Northern Colorado Water Conservancy District, is capricious and arbitrary and should not have been applied by the Corps to consideration of the Healthy Rivers Alternative. HRA Tech Report at 50-51. The cap is a limit on existing water supplies and storage infrastructure in the Colorado-Big Thompson system that could be utilized to meet current and future water needs. Such a policy unnecessarily limits water supplies that could be legally purchased and dedicated for municipal and industrial water uses like those desired by the NISP subscribers.

13. The SDEIS Fails to Consider a Meaningful Range of Alternatives, Again

The Corps has fundamentally failed its duty to provide the reviewer with a meaningful range of alternatives for consideration. All of the alternatives under consideration, including the No Action Alternative, are comprised of large reservoirs. If the Corps was correct in constructing the purpose and need, which it is assuredly not, the legal standard for "range of alternatives" requires contemplation of something other than minor variations of the preferred alternative. STP objects to this violation of the

intent of NEPA (40 C.F.R. 1500) and outlines specific issues with the Corps process that lead to this outcome throughout this document.

14. The SDEIS Fails to Establish the Reasonableness and Feasibility of the No Action Alternative

NEPA requires a No Action Alternative, a status quo scenario indicating what would happen if the permit was denied that functions as an environmental baseline facilitating a meaningful evaluation of project impacts. *Half Moon Bay Fisherman's Marketing Association v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988). The No Action Alternative must incorporate actions if they are "predictable" results of the permit denial. "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," Question 3, 46 Fed. Reg. 18,026, 18,027 (March 23, 1981). The development of a No Action Alternative should be a straightforward process that requires an understanding of current conditions.

The SDEIS and supporting documents disclose that the Corps undertook an elaborate process, driven by the project participants, to identify a No Action Alternative for NISP. SDEIS at 2-16, 2-19; "Northern Integrated Supply Project No Action Alternative Evaluation" (NAA Evaluation) attached here as Appendix E (E52) *generally*. The Corps sought to determine what the participants would do in lieu of NISP; unfortunately, they instead determined what the participants would like to do. The Corps utterly fails to establish that the No Action Alternative has described represent either a reasonable or feasible outcome of the denial of the NISP application, relying on speculative planning rather than an analysis of predictable actions..

The Corps contracted a process to develop the No Action Alternative that was similar to that undertaken during action alternative development. The result is similarly indistinguishable from an action item and only differs from the NISP by its purported lack of need for a Corps permit. The Cactus Hill Reservoir is a component of both the No Action Alternative and the no-Glade Reservoir action alternatives (Alternatives 3 and 4). SDEIS at Table 2-3. The Corps failed to independently develop the No Action Alternative and instead accepted what the participants proposed. SDEIS at 2-19. Consequently, the design of the project and the underlying assumptions reflect the participants' preferences and assertions rather than a rigorous review.

Key among these assumptions is the belief that the 15 participants would undertake a "regional project" meeting all of their needs concurrently. SDEIS at 2-16. Although the SDEIS provides justification for this

choice of approach, the Corps and its consultant fail to provide any indication of its reasonableness. NAA Evaluation at 7 – 9. That is, although the “regional project” approach might be desirable (it is clear that the participants have “expressed interest” in such a project and might even take the first steps “pursue” one), there is no support for the concept that the assertion that might actually be possible. The consultant report states that the region has “a history of successfully developing regional projects” but of the seven examples that it cites, five are Northern Colorado Water Conservancy District projects (including NISP which has yet to be *Seen* as successfully developed) and the other two, both filter plants, are operated by two and three entities respectively—exactly the small scale project that this No Action Alternative proposes to avoid. NAA Evaluation at 7. There is no evidence of a project on anywhere the scale and complexity of this one being undertaken without a central managing entity.

A basic tenant of NEPA is that an alternative must be non-speculative if it is to be considered reasonable. *Utahns for Better Transportation v. U.S. Department of Transportation*, 305 F.3d 1152, 1172 (10th Cir. 2002). Despite the elaborate alternative development process, the SDEIS discloses that the Corps actually has no idea what the participants might do in lieu of NISP.

“In the absence of NISP, the independent Participants must meet their future water demands and it is not possible to predict with certainty the actual future response of the Participants.”

SDEIS at 2-19.

Further, the SDEIS discloses that there is little certainty that the No Action Alternative could be implemented if the action items are all denied.

“It is not known with certainty if the Participants could acquire adequate agricultural water rights to meet a firm yield of future demands.

SDEIS at 2-19.

The SDEIS fails to document any ditch share acquisitions within even two orders of magnitude of that required to execute the No Action Alternative.

“It should be noted that the cost information presented in this discussion is primarily for transactions of small amounts of water. The highest transaction amount found was for slightly more than 200 acre-feet of water.”

NAA Evaluation at C2.

The SDEIS states that even if water were available to the participants, they would still face challenging and lengthy water court proceedings to acquire the change of diversions that are critical for the No Action Alternative as proposed. SDEIS at 3-26.

The SDEIS discloses that the proposed No Action Alternative would impact extensive wetlands. SDEIS at 4-217. Under the Corps regulations, the No Action Alternative occurs when the permit is denied and does not include activity which would require a Corps permit. The Corps fails to establish that the wetlands impacted by this alternative are non-jurisdictional.

The SDEIS fails to disclose that Cactus Hill Reservoir, an integral component of the No Action Alternative as well as Alternatives 3 and 4, is adjacent and down-gradient of a proposed uranium mine, the Centennial Uranium Project. See "Centennial Uranium Project," attached here in Appendix E (E07). Although progress on the mine has been limited over the last few years, the mine's proponents indicate that they intend on pursuing the project. Appendix E (E07) ("The Company has engaged an independent mining consultant to prepare development scenarios for the Centennial Uranium Project in order to maximize the value that can be extracted from this project").

Much of the complexity and environmental impact associated with the proposed No Action Alternative is associated with the desired approach of making the alternative a "regional project" that provides the same firm yield that is desired from the action alternatives. The Corps has improperly incorporated these assumptions as guiding principles in its acceptance of the proposed alternative. NEPA does not require that the No Action Alternative meet the stated purpose and need of the project and the Corps must reject these criteria as they reflect a desired outcome of the project participants rather than an objective assessment of the likely outcome of permit denial. See 40 C.F.R. 1502.14(d) (requiring a no action alternative but not indicating that it must meet the project's purpose and need). It is natural that the participants would want to get what they sought in the permit application but there is no assumed right that they will do so granted merely by proposing a large project.

The Corps fails to establish with any certainty that the No Action Alternative, if it were indeed pursued by the participants, could be implemented successfully. By proposing such a likely infeasible scenario as the No Action Alternative, the Corps has failed to meet the intent of NEPA to establish a meaningful

baseline for comparison with the action alternatives. It appears to be at best a “straw man” worse-case scenario set up to make the action alternatives look better when analyzed in the SDEIS.

The Corps must re-consider its development of the No Action Alternative. The Corps must undertake an independent process that objectively identifies what is likely to actually happen rather than what the participants would desire to happen. To do so, the Corps must consider existing practice and trends in water acquisition, and develop a scenario that is both likely and feasible. If the Corps retains the current No Action Alternative, it must refine the alternative by eliminating the proposed changes of diversion points. SDEIS at 2-21. The proposed diversion changes contribute significantly to the environmental impact and infeasibility of the alternative but are not essential to its function (the water could be piped from its current diversion points to the regional facilities). The Corps must establish that any wetlands potentially impacted by the alternative are either not jurisdictional or are otherwise exempt from a Corps permit; failing this, the Corps must reconsider the project to eliminate destruction of the identified wetlands. The Corps must also consider the potential impacts on the Cactus Hill reservoir and its stored water and operations from the proposed Centennial Uranium Project, as well as the impacts of the reservoir on the mine. The Corps must also consider No Action Alternative options that do not take the “regional project” approach and do not provide the desired firm yield but still partially meet the needs of the participants.

Critically, the project proponent itself has called into question the practicability of the Cactus Hill Reservoir that is the critical component of this alternative, allowing it to function as a “regional project.” SDEIS at Table 2-3, 2-19.

“While Cactus Hill was proposed as an alternative, additional studies through the EIS process have lead Northern Water to have serious concerns about the practicability of a Cactus Hill alternative[.]”

“Northern Water Response to City of Fort Collins Staff Comments,” attached here in Appendix E (E20).

The SDEIS fails to disclose these concerns and offers the reservoir as a viable option. If Cactus Hill is not a practicable action, the Corps must withdraw it from consideration and reconsider the No Action Alternative as wells as Alternatives 3 and 4. If Alternative 2, the preferred alternative, is the only “practicable” alternative considered under the SDEIS, the Corps has failed at even the most basic duties under NEPA and the CWA.

15. The SDEIS Alternative 2 is Speculative as it Fails to Meet the Stated 40,000 Acre-foot Firm Yield Threshold

The SDEIS acknowledges that the water rights associated with NISP are insufficient to fill Glade and Galeton Reservoirs and to keep them operational under all foreseeable conditions:

“Modeling indicates that there can be several years in a row of divertible flow followed by **as many as 8 years with no flow available**. Therefore, it is possible that divertible flows from the Poudre River may not be available under the Grey Mountain water right to fill Glade Reservoir at the start of NISP.”

SDEIS at 2-47, emphasis added.

“**The alternatives are not sized to meet full firm yield requirements during more severe droughts**, such as the recent drought of the early- through mid-2000s. For example, the most recent drought (2000–2005) was more severe than those experienced earlier in the modeled period. Based on model results, in severe droughts such as that of the early 2000s, it is anticipated that the NISP Participants—either as a group or individually—may pursue water supplies through any available options declared legal by the state.”

SDEIS at 2-48, emphasis added.

The draft operations plan is equally explicit:

"The project is not sized, however, to meet full firm yield requirements during more severe droughts such as the recent drought of the early- through mid-2000s. **The Grey Mountain water rights on the Poudre River would have very rarely been in priority during the early- to mid-2000s**. Moreover, the historically more frequent SPWCP water rights on the South Platte River would have been in priority much less than typical during the recent drought period (IY 2000-2005) and would therefore have yielded much less water during the drought compared to the long-term average (IY 1950-2005)."

“Final Draft Report, Northern Integrated Supply Project Supplemental Draft Environmental Impact Statement Operations Plan Report” (Operations Plan Report), attached here in Appendix E (E56) at 7-2.

"In [drought events such as those experienced in the 2000s which are likely to become more common with climate change] it is expected that NISP Participants would still require water supplies, even while curtailing their demands through aggressive drought-response measures. Additionally, because of the conservative nature of municipal water supply planning, it is unlikely that Participants would be willing to fully draw down their supply in Glade Reservoir or Cactus Hill Reservoir on the hope that supplies would be available the following year. This type of response to drought would be similar to actual operations of other major municipal water supply systems along the Front Range during the early 2000s drought"

Operations Plan Report at 7-3.

The SDEIS makes it clear that the proponent and the Corps have failed to successfully identify the necessary water sources to successfully implement NISP. Consequently, the SDEIS asks for "operational flexibility" for the initial fill and for anytime during droughts to operate NISP. That SDEIS states that operational flexibility is needed to allow the participants:

"The ability to use sources of water other than the Grey Mountain water right—such as the Participants' own C-BT water—for the initial fill of the Glade Reservoir.

- The ability to use out-of-priority storage to fill Galeton Reservoir when situations allow.
- The ability to enter into dry-year leasing or interruptible supply contracts with agricultural irrigation users to meet project water needs during droughts similar to that which occurred in the early 2000s.
- In addition to these three operational scenarios, which are discussed in the following sections, NISP Participants would have the ability to buy and sell their portion of NISP yield by contract."

SDEIS at 2-46 – 2-48.

Although the SDEIS for NISP proposes to use participants' already diverted Colorado-Big Thompson water and other sources for the initial fill and for anytime during droughts when operational flexibility is needed to store or deliver water for NISP, the Corps provides no explanation of how this would occur. Given the reasonable assumption that the participants are already using this Colorado-Big Thompson water—if they have surplus water then there is no need for NISP—this C-BT water is not actually

available. Further, in a drought, we would assume that there is no or little surplus C-BT water available from other sources to be purchased for NISP.

Operational flexibility is also invoked to allow the participants to acquire all water sources they can, even those that were previously eliminated from consideration as alternatives to meet the needs that NISP is designed to solve:

"Dry-year leasing and water banking were previously evaluated as water supply concepts for NISP (HDR 2007, Appendix R and Appendix S), but the concepts were both eliminated because they did not meet the firm yield screening criterion defined for the EIS alternatives evaluation. However, in severe droughts such as that of the early 2000s, it is anticipated that the NISP Participants—either as a group or individually—may pursue water supplies through any available options declared legal by the state."

Operations Plan Report at 7-3.

The SDEIS fails to explain how Alternative 2, which by the Corps' own analysis will be unable to achieve full operations with its designated water sources, fulfills the alternative screening threshold that requires each alternative to provide 40,000 acre-feet of annual firm yield. STP disputes the validity of this threshold, but if the Corps insists on applying it, the Corps must do so consistently and competently. The SDEIS also fails to explain why other alternatives that failed the firm yield threshold, such as the Healthy Rivers Alternative, were not modified to invoke operational flexibility in terms of speculative additional water acquisition to pass the screen. Finally, the SDEIS fails to establish that the participants have any surplus Colorado-Big Thompson water or other sources of available water to use for "operational flexibility."

The SDEIS, in the mitigation plan, discloses that there is a risk that oil and gas development at the Galeton Reservoir site could lead to contamination of reservoir water. SDEIS Appendix F at 56 ("Develop protocols that would be followed in the event that a leaking oil and gas well is discovered after reservoir filling"). Such contamination potential is also addressed in STP's comments on the Galeton Reservoir site oil and gas wells. The SDEIS fails to consider how such contamination would impact the overall project's ability, as implemented through Alternative 2, to provide the designated firm yield. The SDEIS also fails to consider how the costs associated with the removal of oil and gas wells and acquisition of mineral

rights impacts the feasibility of the development of Galeton Reservoir. See “The SDEIS Fails to Adequately Consider the Impacts of Oil and Gas Wells at Galeton Reservoir Site.”

The Corps also fails to consider and disclose how the inability of the project proponent to successfully execute the proposed water exchanges required for the SPWCP could impact the ability of all of the action alternatives, including Alternative 2, to provide the desired 40,000 acre-feet of firm yield. The loss of the water to be obtained through the SPWCP would undermine the feasibility of all of the action alternatives. The Corps must independently establish and disclose the likelihood of the success of these water exchanges before it can consider the ability of the action alternatives to meet the 40,000 acre-foot threshold.

The Corps must disclose the specific water sources that will be used by the project proponent under the concept of “operational flexibility,” including for initial infill and ongoing operations, and must independently consider and disclose all environmental impacts associated with use of those water sources, including but not limited to any sources from Colorado's west slope such as tributaries to the Colorado River. The Corps must specifically address the feasibility of the acquisition of water from each source, considering cost, logistics, impacts, and legal availability. The Corps must also specifically consider the time frame for acquisition and implementation of those water sources, including, but not limited to, the burden of seeking approval for water right changes through water court. STP has previously submitted comments on this subject and attaches and incorporates those comments here as “Analysis needed in the SDEIS, the WGFP FEIS, and the Moffat Collection System Project FEIS of impacts of the Northern Integrated Supply Project on the Upper Colorado River, including cumulative impacts” (letter from Gary Wockner to Chandler Peter, April 10, 2011), attached here in Appendix E (E33).

16. The SDEIS Alternative 2 is Speculative as There is No Reliably Available Undiverted Water in the Cache la Poudre

In an over-appropriated system like the Poudre (SDEIS at 3-28, average annual diversions are 101% of the flow measured at the canyon mouth), the possession of a water right is less important than the presence of physical water – the paper right is only meaningful if the water is actually there. Agricultural water rights along the Poudre are very senior while the conditional Grey Mountain right is very junior. “Water Administration in the Cache la Poudre River Basin Technical Memorandum” (SDEIS technical report) at 6. As described above, the SDEIS demonstrates that the junior priority of the conditional Grey Mountain right coupled with the small amounts of actually available “new water” in the Cache la Poudre

leave the project participants at significant risk of falling short of their alleged water supply needs. Similarly, the proposed No Action Alternative (Alternative 1) is described as including a new junior right that would yield 750 acre-feet—but only in the two wettest year in the historical record. SDEIS at 2-22. Presumably, the project participants would utilize new diversions to the full extent possible and we can only assume, as the SDEIS provides no proof to the opposite, that this poor yield represents the state of available water in the Poudre.

It is clear from the SDEIS' own analysis that new diversions from the Poudre, conducted under junior water rights, are incapable of supplying a meaningful amount of firm yield to address the proponent's stated needs. In order for a water provider to generate true firm yield, the provider must seek out water sources that can deliver reliable water under all climatic conditions. In an over-appropriated basin like the Cache la Poudre basin, water providers should be focusing on established senior rights, not conditional junior.

The SDEIS fails to address this reality or to adequately weight the consistency of water sources when evaluating each alternatives "firm yield." STP rejects the Corps use of a 40,000 acre-feet threshold for alternative selection, but if the Corps is going to apply such a screen, the Corps must revisit its process and eliminate components of alternatives, such as those of the action alternatives, that rely on new diversions from the Poudre and consequently do not contribute a significant portion of this firm yield threshold.

17. The SDEIS Alternative 2 Is Speculative As It Relies on Water Exchanges That May Not Be Feasible

All of the action alternatives, including Alternative 2, rely on the South Platte Water Conservation Project (SPWCP) for a significant portion of their water supply through exchanges with irrigation companies that require substitution of newly diverted South Platte water for the companies' existing Cache la Poudre diversions. SDEIS at 2-31. The SDEIS states that the South Platte diversions would provide an average of 28,400 acre-feet and a maximum of 63,500 acre-feet annually to NISP, while the Poudre River diversions under Alternative 2, for example, are stated as an average of 35,100 acre-feet and a maximum of 92,300 acre-feet annually. SDEIS at 2-31, Operations Plan Report at Table 3.1.

Unfortunately, the SDEIS fails to establish that these water exchanges are practicable. Although the Corps asserts that the water sources have been acquired (SDEIS at 2-48, "The District owns the water

rights with the necessary points of diversion and storage for Alternative 2”) this assertion fails to recognize that the proposed actions are not fully under the control of the project proponent and that the South Platte water controlled under those rights will not be directly conveyed to the participants:

“The District is presently negotiating with the Larimer-Weld and New Cache Canal companies regarding the compensatory measures that the ditch companies may require for allowing NISP to exchange on irrigation water delivered by the ditch companies. **These measures would address concerns expressed in discussions with the ditch companies related to the requested change in their historical ditch operations and their perceived receipt of lesser quality water. The specific measures** to be provided under agreements reached by Northern Water and the ditch companies **may include a range of options**, such as monetary compensation and/or the District providing the ditch companies water and storage from NISP or another facility. **The Corps will analyze effects associated with these measures and determine whether additional NEPA evaluation is needed.”**

SDEIS at 2-36, emphasis added.

Although the Corps discloses that an agreement with the irrigation companies is still pending, it fails to provide any details on those negotiations or acknowledge or consider the implications to the action alternatives if these negotiations were to fail and the exchange water for SPWCP were to not be available. The irrigation companies clearly have concerns about the quality of the water that would be available to them and consequently that water may not be acceptable regardless of the conditions proposed. SDEIS at 4-150 (“Elevated salinity and selenium concentrations in Galeton Reservoir releases to the canals are expected to result in a decrease in crop yields where the water is used for irrigation”). As the Corps has failed to fully disclose the risks of oil and gas contamination to Galeton Reservoir water (see “The SDEIS Fails to Adequately Consider the Impacts of Oil and Gas Wells at Galeton Reservoir Site”), the irrigation companies may not have a full understanding of consequences they may face from the exchange. Further, if the companies are the willing to accept the water, they may require conditions, monetary or otherwise, that either undermine the functionality of NISP or pose too great of a burden on the project proponent. As the Corps fails to disclose more than superficial information regarding the negotiations, however, the public is unable to provide meaningful review of the likelihood of the exchanges or the dependent alternatives.

NEPA requires that alternatives be feasible and not be speculative. *Utahns for Better Transportation v. U.S. Department of Transportation*, 305 F.3d 1152, 1172 (10th Cir. 2002). Without the SPWCP water, none of the action alternatives, including Alternative 2, can acquire more than half of its intended water and cannot be seen as feasible. The Corps must independently establish and disclose, rather than accept on faith, the likelihood of the project proponent's success in establishing and maintaining the needed water exchanges. The Corps must ensure that the irrigation companies are fully informed of the risks Galeton Reservoir water from potential oil and gas contamination. If the exchanges cannot be reasonably assured, the Corps must reject further consideration of these alternatives. The Corps must also consider the likelihood of, and independently review the environmental impacts of, the refusal of the irrigation companies to accept the water exchange and the subsequent possibility that the project proponent would outright purchase the water.

Further, the Corps must not pass off review of the environmental impacts of the "range of options" that may be imposed by the irrigation companies to an unspecified future date and review process while continuing with the review of the action alternatives. These conditions may have significant impact on the environment and the feasibility of the alternative. If the Corps does not have sufficient information to competently evaluate these alternatives, it must halt the review process pending availability of that information.

The SDEIS acknowledges that there is a risk to the ongoing implementation of the water exchanges from the anticipated conversion of agricultural water rights to municipal use. SDEIS at 2-38 ("The District assessed the risk of the purchase of shares in the two ditch companies by others and the subsequent conversion of agricultural water to municipal use"). The Corps fails, however, to disclose the extent of that risk. The SDEIS cites a document ("Brouwer, C. 2013[,] Risk Associated with the South Platte Water Conservation Project Exchange[,] Submitted to U.S. Army Corps of Engineers[,] January 10") as a source for that risk assessment but that document does not appear to have been made available with the SDEIS. The Corps instead states that "[a] variety of techniques are available to ensure long-term reliability of exchange operations[.]" SDEIS at 2-38. This list appears to outline potential mitigation concepts rather than describe specific implementation techniques and fails to disclose which, if any, of these are to be incorporated into the action items and what the outcome of such incorporation would be.

The Corps must analyze and disclose the risks to the proposed water exchanges posed by sales of shares of the irrigation companies to non-agricultural uses. Such an analysis must include both the likelihood and the magnitude of the impacts of such sales, and must independently establish the likelihood of the long-term success of the exchanges. If the “variety of techniques” identified above are to be incorporated into the action alternatives, the Corps must describe them in adequate detail for the public to provide meaningful review and must consider and disclose their impacts on the feasibility of the action alternatives.

18. The SDEIS Alternative 2 is Speculative as It Relies on Galeton Reservoir Which May Not Be Filled Legally

All of the action alternatives, including Alternative 2, rely on the SPWCP for a significant portion of their water supply through exchanges with irrigation companies that require substitution of newly diverted South Platte water for the companies’ existing Cache la Poudre diversions. SDEIS at 2-31. The South Platte water required for these exchanges would be stored in the proposed Galeton Reservoir. SDEIS at 2-31, 2-34.

The SDEIS states that it is likely that Galeton Reservoir will violate state water quality standards as soon as it is filled. SDEIS at 101, 102 (“Galeton Reservoir may need to be listed on the State’s 303(d) List and/or the Monitoring and Evaluation List for some of the constituents listed above (*e.g.*, nutrients, chlorophyll a, and pH), due to anticipated high concentrations”). The SDEIS attributes this poor water quality to the composition of the source water from the South Platte River and the reservoir itself. SDEIS at 4-101. The Conceptual Mitigation Plan fails to present any concrete mechanism to avoid these exceedances. *See, in general*, SDEIS Appendix F.

The Corps’ guidelines prohibit a discharge that causes or contributes to violations of any state water quality standards. *See* 40 C.F.R. 230.10(b)(1). The Corps cannot permit the construction and operation of Galeton Reservoir unless specific measures to avoid these exceedances are identified and mandated. The Corps must independently consider and disclose the feasibility of such measures and, if the exceedances cannot be successfully avoided, the Corps must strike the implementation of Galeton Reservoir from the action alternatives including Alternative 2.

19. The SDEIS Fails to Analyze Any of the Environmental Impacts of the Requested Operational Flexibility

The SDEIS acknowledges that the designated water sources are likely insufficient to meet the desired firm yield and invokes the concept of “operational flexibility” to disclose that the participants intend on using any water they can get their hands on to operate NISP. Unlike the DEIS, the SDEIS no longer explicitly proposes to use new Windy Gap, Laramie River, or Grand River Ditch water for the initial fill of Glade or Galeton, or for operational flexibility. However:

- Colorado-Big Thompson water is Colorado River water.
- The additional agricultural water that the SDEIS proposes to use for the initial fill or during drought could be from any source including Colorado River water that already is diverted through the C-BT, Windy Gap, Laramie River, or Grand River Ditch system.

The SDEIS for NISP proposes to use participants’ “surplus water” or to buy or lease water from farmers for the initial fill and for anytime during droughts when operation flexibility is needed to store or deliver water for NISP.

In its discussion of operational flexibility, the SDEIS explicitly acknowledges that, “[t]his type of temporary alternate source of water supply is not captured in the modeling for the SDEIS but would be operated in compliance with all state regulations in order to prevent injury to other water users.” Operations Plan Report at 7-4.

The SDEIS fails to analyze the impact on participants’ existing water supplies of using this Colorado-Big Thompson water or how any Colorado-Big Thompson water would be available for the initial fill or ongoing operation flexibility of NISP especially during droughts.

The SDEIS fails to analyze the environmental and socio-economic impacts to farms of buying and leasing water for the initial fill or for ongoing operational flexibility for NISP, which could be in the tens-of-thousands of acre feet per year during the initial fill, during droughts, or at any other time NISP needed water. The SDEIS fails to analyze the environmental or socio-economic on farms of using “out of priority” storage to fill Galeton Reservoir. The SDEIS also fails to analyze the environmental impacts to the South Platte River of using “out of priority” storage to fill Galeton Reservoir.

The SDEIS fails to offer or discuss the source of this water, the diversion point, or amount, and thus fails to analyze the environmental or economic impacts of diverting this water from any river, including the Cache la Poudre River when, for example, the diversion point or amount is upstream of a current diversion point, which would likely be necessary to fill or operate Glade Reservoir.

In summary, the SDEIS discloses that NISP may utilize entirely different water sources than are described in the alternatives discussion in the document but utterly fails to analyze any of the impacts associated with the use of those sources. It is difficult to conceive of a more naked disregard of the requirements of NEPA or of the Corps' duty to the public in the environmental process review.

The Corps must re-consider and disclose its environmental impact analysis of Alternative 2 including the impacts associated with differing water sources that may be incorporated under the concept of operational flexibility as described here. The Corps must specifically include analysis of wetlands dry up that may result from diversion of water sources. If water sources under consideration are located or impact resources outside of the NISP study area, the Corps must revise the study area to fully cover the associated impacts.

20. The SDEIS Improperly Considers the Proposed Augmentation Flows under Alternative 2

The SDEIS describes winter "augmentation flows" as a component of Alternative 2. SDEIS at 2-42. The SDEIS also presents these augmentation flows as a key part of the Conceptual Mitigation Plan. SDEIS Appendix F at 37-42. This duplication allows the Corps to in effect double count the benefits of the augmentation flows. The SDEIS cites several occasions where these augmentation flows have a direct effect on the impact analysis. *See, e.g.*, SDEIS at 4-55 ("With the proposed flow augmentation program in place under Alternative 2, flows would improve to greater than 10 cfs about 93% of the time"). As the SDEIS is written, the Corps has failed in its duty to clearly describe the impacts and potential mitigation of the project. The Corps must determine if the augmentation flows are a component of Alternative 2 or mitigation for Alternative 2 and correct its documentation to reflect this decision.

While the concept of increasing flows during the winter is admirable, Alternative 2 proposes to accomplish this with water diverted during the peak flow periods. STP maintains that the peak flows are critical to river health. STP would like to see flow improvements in the winter months but not at the cost of the peak flows.

These voluntary releases from Glade Reservoir do not contribute to meeting the project's purpose and need. The flows are intended "to improve Poudre River streamflows, primarily during winter months when flows are low and NISP would generally not be diverting, in Alternative 2." SDEIS at 2-42. The purpose and need of NISP is to provide "new reliable municipal water supply" to the project participants. If the Corps determines that the augmentation flows are a component of Alternative 2, the Corps must disclose the rationale for including the augmentation flows into Alternative 2 and how they are relevant to the project's purpose and need.

The augmentation flows do not appear to avoid, minimize, rectify, or reduce the impacts of Alternative 2. 40 C.F.R. 1508.20. On the contrary, it is reasonable to assume that the augmentation flows will increase the impacts of the project by increasing the amount of water diverted during peak flow periods. The SDEIS indicates that the 3,600 acre-feet pool to be designated in Glade Reservoir for these flows were not incorporated in the demand modeling (Draft Operations Plan at 1-1) but the Corps does not indicate if the diversions to fill this pool were considered in the impact analysis in any form. Although the project proponent proposes that these augmentation flows would be "recaptured and reused," the Corps fails to disclose if that reuse, and an effective double counting of the available water, was incorporated into the impact analysis. Draft Operations Plan at 1-1. Further, reuse of the augmentation flow water is not supported in the SDEIS as a necessarily feasible action. *See, e.g.*, SDEIS at 4-17 ("The exact method to return the water to Glade Reservoir will be determined between the SDEIS and the FEIS, but possible options include water exchanges").

The SDEIS states that the augmentation flows will not be maintained under all climatic conditions. SDEIS at 2-44, 4-17 ("Curtailment of streamflow augmentation releases may be required under extreme drought conditions when reservoir levels are low"). The SDEIS fails to disclose if that restriction is based on a lack of any active water storage within Glade Reservoir, the inability of Glade Reservoir storage to provide firm yield for project participants, or some other criteria. The Corps also fails to explain why the augmentation flow releases would have a lower priority than water supply provision, if that is the case, given that these flows are intended as mitigation for ongoing impacts. *See* SDEIS at 2-44. The Corps must quantitatively define the conditions (*e.g.* "extreme drought") under which mitigation requirements could not be met.

If the Corps determines that the augmentation flows are mitigation, the Corps must consider and disclose how the augmentation flows provide mitigation under NEPA and/or CWA. This analysis must

specify which impacts will be mitigated and the extent to which these flows will effectively mitigate those impacts. The analysis must also disclose the effect of the proposed mitigation if the augmentation flows are reduced or eliminated in unfavorable climatic conditions, and what the criteria for such reductions and/or eliminations would be. If the Corps determines that the augmentation flows are compensatory mitigation, the Corps must prepare and disclose an analysis documenting how the benefit of the augmentation flows outweigh the impacts that they cause.

The Corps must conduct an independent analysis of the project proponent's claims as to the legality and feasibility of the augmentation flows raised by the City of Fort Collins.

21. The SDEIS Fails to Adequately Consider the Difficulty of Arranging the Needed Water Exchanges

The viability of transferring 20kaf+ from Weld County up to a diversion point at the canyon remains in question, considering the extremely complicated legal process and the cost. In order to make this trade, the diversion point for more than 20,000 acre feet of water currently diverted at the Larimer Weld and New Cache canals would have to be moved upstream to the Glade Reservoir diversion point at the canyon mouth. Such large water diversion point changes are rare, and they can take more than a decade to work through water court, if ever. It is unusual for trades like this to be executed without executing additional water exchanges with other water providers. STP questions whether this water trade can be executed efficiently or cost-effectively.

No public records appear to be available indicating that the project applicant has secured agreements with the affected ditch companies to support the proposed water transfers.

22. The SDEIS Fails to Establish the Feasibility of Siting Glade Reservoir upon Karst Formations

In a December 7, 2012, letter to the Corps, STP called the presence of Karst formations at the Glade Reservoir site to the attention of the Corps and requested that the Corps assess the hazards associated with the karst and the potential impacts of this situation on the cost of implementing Alternative 2.

“Potential soil subsidence hazard at or near the proposed NISP Glade Reservoir dam site” (letter from John Bartholow and Gary Wockner to Chandler Peter, November 7, 2012), attached here in Appendix E

(E34). The Corps failed to adequately address this issue in the SDEIS, merely noting the presence of the karst soils and deferring analysis of the implications to a later date.

“The potential for karst features (solution cavities) in the Lower Ingleside Formation, which has been mapped in the lower right abutment area of the proposed Glade Reservoir Dam, **would be evaluated by future geotechnical studies** for the reservoir. Mitigation of solution cavities would be addressed in the final design, including a grouting program and other foundation treatment precautions.”

SDEIS at 4-189, emphasis added.

The Corps must complete its analysis of the situation, including the implications for reservoir design and operations and project cost, before it can determine the feasibility of Glade Reservoir and Alternative 2. The Corps must disclose this information to the public in a manner that will allow for meaningful public review.

23. The SDEIS Fails to Consider the Impacts of the Pipeline Serving Eaton, Severance, and Windsor

The SDEIS states that water provided to Eaton, Severance, and Windsor “would be [delivered] by direct pipeline connection from Glade Reservoir to the Soldier Canyon Filter Plant” under Alternative 2. SDEIS at 2-42. The Corps, however, fails to provide any information on that pipeline, including alignment, size, cost, and environmental impacts. *See, e.g.*, SDEIS at Table 2-4 (listing zero miles of pipeline for conveying treated or untreated water to participants under Alternative 2). The Corps must describe the pipeline and independently consider and disclose the environmental impacts of its construction and operation if Alternative 2 is to be considered for permitting.

24. The SDEIS Fails to Take a “Hard Look” at the Impacts of Meeting the Project Participants’ Full Needs

STP disputes the project purpose and need as identified in the SDEIS. However, if the Corps adopts their erroneous calculations of need, the Corps must incorporate that information into its review of the environmental impact of NISP. Specifically, the Corps must fully consider the projected needs in its cumulative impact analysis.

The Corps considers as Reasonably Foreseeable Future Actions those that would occur by 2050 and:

- The action would occur within the same geographic area where effects from the NISP alternatives are expected to occur (the cumulative effects study area is shown in Figure 5-1, and includes the District boundaries, outside of which, impacts from NISP are not expected to occur).
- The action would affect the same environmental resources as the NISP alternatives, and measurably contribute to the total resource impact.
- There is reasonable certainty as to the likelihood of the future action occurring; the future action is not speculative.
- There is sufficient information available to define the future action and conduct a meaningful analysis.

SDEIS at 5-2 – 5-3.

Clearly, future water supply development will meet the first two criteria. If the Corps is confident enough in its erroneous demand calculations to use them to inform the project's purpose and need, then the Corps must have "reasonable certainty" that the participants will undertake means to get their desired water. And, although it is difficult to know the exact source of water that will be used, the SDEIS establishes that there is no water available for new diversions from the Cache la Poudre.

The SDEIS documents demand curves showing that NISP will not curtail future demand. Compare Figure 1-3 and Figure 1-4 (Figure 1-4 illustrates NISP water online but not altering the demand curve); SDEIS 2-46 ("even conservation, which significantly reduces the demand curve should only be seen as delaying not avoiding demand"). The SDEIS is clear that the project proponent and participants will pursue all water legally available when they perceive a need. SDEIS at 2-48 ("in severe droughts such as that of the early 2000s, it is anticipated that the NISP Participants—either as a group or individually—may pursue water supplies through any available options declared legal by the state"). The SDEIS also explicitly states that participants continue and may continue to acquire agricultural water independent of NISP. SDEIS at 2-10, 2-11.

Consequently, the Corps must acknowledge that even if NISP is built participants will meet their water supply desires by acquiring agricultural water rights. The Corps must, for all action alternatives and the

No Action Alternative, give full consideration to the cumulative environmental impacts of the transfer agricultural water rights equivalent to the “surplus demand” identified.

25. The SDEIS Fails to Adequately Consider the Contribution of Peak Flows to the Health of the Cache la Poudre

The SDEIS completely fails to acknowledge the critical importance of peak flows in the Cache la Poudre River. These flows are of critical importance to the maintenance of a healthy ecosystem and water quality in virtually all Colorado Front Range rivers. See Appendix E (E35, E02, E26, E36, E29, E37, E04), Wohl 2001, Wohl 2014, Wohl 2004, Rosgen 1996. The body of peer-reviewed, scientific literature establishing this fundamental principal is vast and irrefutable. It extends far beyond the citations provided with these comments.

The NISP DEIS made the same critical, fundamental errors. The SDEIS does not appear to have been informed in any way by the public’s comments on the NISP DEIS with regards to the importance of peak flows within the native hydrograph of the Cache la Poudre River.

The deficiencies of this analysis apply to nearly the entire SDEIS. The incidents where it appears are simply too numerous to mention. The SDEIS and its supporting technical reports consistently and routinely fails to address the role of peak flows in critical areas, or argues against their importance using arguments that are specious, illogical, and contrary to known principals of ecology, biology, physics and water chemistry as they apply to aquatic systems.

For these reasons, the SDEIS’ complete failure to acknowledge the impact of these flows is a fatal flaw in the document, and violates the National Environmental Policy Act’s requirements for accurate and full disclosure of a proposed project’s impacts. The analysis is scientifically incompetent and it must be revised completely in a supplemental draft environmental impact statement.

STP discusses these deficiencies in the SDEIS in the appendix to this letter titled “NISP SDEIS Wetland and Riparian Review,” attached here in Appendix D (D04). The City of Fort Collins identifies these deficiencies in their analysis of the SDEIS, and we endorse those comments. John Bartholow addresses this issue in his comments on the SDEIS provided to the Corps on August 26, 2015 (untitled, attached here in Appendix E (E03)), and we endorse those comments. Dr. Leroy Poff and multiple other commenters address these issues in their comments to the Corps on the NISP DEIS.

Bartholow's paper on minimum restoration flows for the Cache la Poudre River ("Constructing an Interdisciplinary Flow Regime Recommendation," attached here in Appendix E (E04)) was submitted to the Corps as a comment on the NISP DEIS on May 8, 2011. No reference to that paper or his comments appears to have been made in the SDEIS, and so we are providing that letter again for the public record along with the subject citation ("Recommended flow regime for the Cache la Poudre River and NISP permit," attached here in Appendix E (E38)).

In addition to these issues, the SDEIS failed to disclose and address the economic and environmental impacts of the project on the users of water rights junior to the Grey Mountain right in the South Platte watershed. At a minimum, the Corps must address the economic and environmental impact of the loss of these flows within the watershed. STP addressed those issues in their submittal of comments on the NISP DEIS to the Corps on March 16, 2011 (at E39). STP provides that letter again for the public record along with the subject citation (at E05).

Section 2.5.6, page 2-44 of the SDEIS states the following: "Curtailment of streamflow augmentation releases may be required under extreme drought conditions when reservoir levels are low." What quantitative measure is proposed for what defines "extreme drought conditions"? Specifically, what reservoir volume would trigger a curtailment of augmentation flows for winter flow mitigation or mitigating water quality issues at water treatment plant outflows? Without such a proposed quantitative measure, the public cannot verify the veracity and practicability of proposed mitigation measures.

The Corps must develop and adopt a mitigation plan that incorporates the absolutely critical, fundamental, and inviolate importance of peak flows, as cited in this document, and which protects those flows. STP endorses the flow regime standards developed by Bartholow (2010) (at E38, E04) as the absolutely bare minimum flows required to keep the Cache la Poudre River healthy and functioning.

26. The SDEIS Fails to Establish the Validity of the Evaporation and Loss Rates Incorporated into Hydrologic Modeling

The SDEIS incorporates a very low evaporation for Glade Reservoir of 2.2-2.3%. SDEIS at Table 2-8 and Table 4-11, Draft Operations Plan at 3-30. The SDEIS uses a general loss rate of 5% for all alternatives. SDEIS at 2-52, 5-18. The SDEIS appears to incorporate higher rates for Alternatives 3 and 4 but fails to quantify what these rates might be. SDEIS at 4-77 ("Alternatives 3 and 4 would have greater net

diversions from both the Poudre River and the South Platte River compared to Alternative 2. This is due to the need to accommodate increased transit and storage losses (i.e., Seepage and evaporation) associated with Cactus Hill Reservoir, while still delivering full project firm yield to the Participants"). The SDEIS discloses that long-term average diversions for Alternative 2 are projected to be 43,300 acre-feet. This represents an 8.25% "surplus" for transit and storage losses over the 40,000 acre-feet firm yield demanded by the project.

The SDEIS fails to provide clear, quantitative support, based on local condition and proposed project design, for the loss rates incorporated into the analysis. The Corps must document its determination of rates incorporated into the modeling, must explain why they deviate from common practice if they do, and must disclose this information to the public in a manner that will allow for meaningful public review.

27. The SDEIS Fails to Present a Complete Water Quality Analysis

The SDEIS, at D-28, states the following (emphasis added):

"Alternative 2 is the Proposed Action and the District's Preferred Alternative. This alternative meets the overall project purpose, existing technology, and logistics criteria and, therefore, is practicable. However, until the Phase II water quality modeling has been completed it cannot be determined whether this alternative would result in greater impacts to the aquatic environment than the other alternatives analyzed in the SDEIS. Whether this alternative is the LEDPA as defined by the Guidelines is unknown at this time."

The Corps reports in the SDEIS, at S-13 that it plans to complete a Phase II water quality and water temperature analysis.

Failing to prepare numerical water quality and temperature models does not allow for complete public comment during the SDEIS. It is critical for the public to evaluate the methods and assumptions made in creating a numeric water quality model. The environmental impact of the proposed reservoirs cannot be fully understood without a complete analysis. The SDEIS is incomplete due to this oversight.

The Corps must complete the Phase II water quality and water temperature analysis and provide for meaningful public comment before issuing a Record of Decision on NISP through another supplemental draft environmental impact statement.

STP endorses the Fort Collins comments on the SDEIS referring to water quality modeling as they come to similar findings.

The Phase II water quality and water temperature analysis must address the following issues:

- The SDEIS indicates that the proposed Galeton reservoir, when initially filled, would immediately qualify for the state's 303(d) list for exceeding water quality standards. No mitigation or other measures are proposed to address this public health risk.
- All of the action alternatives will reduce flows significantly. This means less dilution, so pollution problems will be exacerbated at water treatment plant discharge points along the river. Diverting water doesn't immediately change pollutant concentrations. However, downstream of diversions, an existing pollutant input will cause the concentration to increase more dramatically, since there will be less water to dilute it. This will be a problem for all of the State of Colorado 303 list pollutants for the Poudre River. The proposed diversions will ultimately cause standard exceedances, which means the project should not be completed according to the 404(b)(1) Guidelines at 40 C.F.R. 230.10(b).
- The 404(b)(1) Guidelines at 40 C.F.R. 230.10(b) specify that no discharge of dredged or fill material may be permitted if it will cause or contribute to violations of any applicable State water quality standard.
- The WQCC also has designated a narrative temperature standard (CDPHE 2013): Temperature shall maintain a normal pattern of diel and seasonal fluctuations and spatial diversity with no abrupt changes and shall have no increase in temperature of a magnitude, rate, and duration deleterious to the resident aquatic life.
- Section 4.12.3.3.1 states that "There could be a minor to moderate increase in summer temperatures that, if unmitigated, could have an adverse impact on trout."
- Excerpts from the SDEIS confirm that current diversions create an "abrupt change" in water temperature. A new diversion will violate the narrative temperature standard. Section 3.3.2.5 states the following: "Overall, these inflows and outflows result in fluctuating river temperatures, with inflows providing both cooler and warmer water and outflows allowing greater warming of the river with reduced water depth." Later in the section it says this: "Downstream of the fossil Creek diversion, temperatures increase sharply due to reduced flow rates."

- Of the action alternatives, the SDEIS indicates that alternative 4 has the least overall impact on dissolved oxygen and water temperatures, and alternative 1 is likely to have the least overall impact on overall water quality. In the technical report titled “Stream Temperature and Dissolved Oxygen Analysis for NISP Supplemental Draft EIS” (Hydros) concluded the following “Of all the alternatives evaluated, Alternative 1 is predicted to have the least effect to the water quality of the Poudre River.” Unfortunately, the SDEIS treatment of water quality issues frequently uses double-negatives combined with obtuse and confusing language that has the appearance, at least, of attempting to conceal potential impacts of the project on water quality. Here is just one example of many, from section 4.3.9.2: “Generally, the anticipated adverse effects on stream temperature for Alternative 2 are expected to be less than those for Alternative 3 and greater than those for Alternative 4.” This says that alternative 4 would have less of an impact on water temperature than alternative 2. As a result, the analysis of least environmentally damaging alternatives (LEDPA) must acknowledge these realities clearly and directly.

28. The SDEIS Fails to Adequately Consider the Impacts of the Alternatives on Wetlands and Riparian Vegetation

Like its various analyses of the importance of peak flows, the SDEIS analysis of wetlands and riparian vegetation is fatally flawed. Much of the reason for deficiencies is related to the failure of the document to acknowledge the importance of peak flows, however there are multiple contributing factors that lead STP to overall reject the findings of the SDEIS analysis of wetlands and riparian vegetation, sections 3.9, 4.9, and 5.9, and the associated technical reports on the topic.

STP completed its own analysis of the impacts of potential water development in the Cache la Poudre Basin on wetlands and riparian vegetation. STP provided this analysis to the Corps on December 17, 2012 (“NISP’s impacts on riparian areas including wetlands along the Cache la Poudre River,” attached here in Appendix E (E24)). STP is inserting these documents into the public record again as we see no acknowledgement of that work in the body of the SDEIS or the supporting technical reports (“Wetlands Impacts caused by the Northern Integrated Supply Project,” attached here in Appendix E (E41)).

In section 3.9.5.1 the SDEIS explains they rejected the National Wetlands Inventory (NWI) maps (see “National Wetlands Inventory,” available at <http://www.fws.gov/wetlands/> and last viewed on August 30, 2015) for the Cache la Poudre Watershed because it uses the Cowardin Classification system,

whereas the Corps uses a different classification system. The Cowardin classification system is the most current classification system available and is accepted by the U.S. Fish and Wildlife Service in the National Wetlands Inventory. The Corps wetlands classification system has not been updated since 1987. There is an abundant number of suitable and well-documented cross-walk algorithms published to allow translating between the Cowardin and USACE Classification Systems (see, e.g., “Supplemental Guidance for the Classification of Wetlands for the Update of the National Wetland Inventory for Minnesota,” attached here in Appendix E (E42)). Instead, the SDEIS uses the Colorado Division of Wildlife (CDOW) (sic) riparian vegetation maps. The CDOW riparian vegetation maps are outdated and have a resolution of ½ acre, whereas the NWI imagery has a resolution of 1 meter, more than 2,000 times better resolution. The CDOW maps were developed from imagery collected well before the year 2000, whereas the NWI Inventory utilized the most current photograph imagery available in 2011. The NWI maps are more current, the resolution is better, accepted wetlands classification transfer functions are readily available. The NWI imagery indicates that the majority of wetland and riparian vegetation features have a resolution smaller than ½ acre. The decision to utilize the CDOW maps led to an analysis bias that incorrectly concluded a radically smaller impact on riparian vegetation than would have been concluded from using a more current classification method applied with more current, accurate, finely-scaled maps. The decision to utilize the CDOW riparian vegetation maps was capricious and arbitrary.

STP addresses the wetlands and riparian vegetation analysis in detail in reports titled “NISP SDEIS Wetland and Riparian Review” and “Supplemental Notes on the NISP DEIS and SDEIS analysis of Wetlands and Riparian Vegetation” (attached here in Appendix D (D04, D06)). The City of Fort Collins addresses wetland and riparian vegetation issues their comments on the SDEIS, which we endorse.

Before we summarize the details, we wish to address a larger issue indicating a clear bias by the Corps towards permitting large, damaging water projects and ignoring the cumulative impacts of those projects. This bias is perhaps most clear in the how the SDEIS analyzes wetlands and riparian vegetation. The SDEIS accepts a downward decline of these fundamental native ecosystems as inevitable and unstoppable in the face of past history and the long list of additional water diversions proposed for the Cache la Poudre Watershed. The background premise that there is no question that all of these projects will be permitted and their impacts will be felt throughout the watershed is fundamental to the structure of the SDEIS and its supporting technical reports. The documents systematically ignore the ecosystem services provided by wetlands and riparian vegetation and the long-term effects these systems have on water quality. Moreover, it seems to indicate that the Corps, as head agency charged

with managing and protecting our nation's waterways, is prepared to effectively abdicate its legally-defined role as impartial judge and simply accept the premise that any and all water project applications will be approved. That bias is in direct contradiction with the spirit and the intent of our nation's landmark environmental protection laws, including but not limited to the National Environmental Policy Act of 1969, the Federal Water Pollution Control Act Amendments of 1972, the Clean Water Act of 1977, the Water Quality Act of 1987, and the Endangered Species Act of 1973. These are the laws that the Corps is entrusted (and legally obligated) to uphold. It effectively kicks the can down the road into the legal system and shifts the burden of proof of environmental damage off of the backs of the project applicants, and onto the backs of the public. The Corps must instead shift the burden onto the project applicants, as the law clearly requires, to reveal the actual environmental damage attributable to projects, if built, and to demonstrate that the applicants have done everything that can reasonably be expected of them to minimize the consequences of a project if built. To date, the Corps has failed to do so.

Following is a summary of the details from our supporting technical review:

The SDEIS defines the resource trajectory of cottonwood forests as inevitably downward, effectively in a death spiral to a permanently degraded condition. This is contrary to evidence provided in our report on this issue and evidence provided by the city of Fort Collins. Evidence supporting the effectiveness of restorative and regenerative flows is abundantly clear (attached here in Appendix E (E02, E36, E26, E29)). In their analysis, the City of Fort Collins arrived at the same conclusion as us, and in a letter to the City of Fort Collins by the project applicant dated August 28, 2015, the Northern Colorado Water Conservancy District (Appendix E (E20)) indicated they agreed with this assessment.

The SDEIS and supporting technical reports dismiss the importance of native vegetation regeneration following 2013 floods, despite clear and unequivocal evidence to the contrary. Riparian cottonwood forests are the most common and most valuable riparian vegetation type in the Cache la Poudre watershed and it must be protected. Additionally, the SDEIS makes claims completely unsupported by the literature that pond shores are effectively replacement habitat for riparian cottonwood forests.

The SDEIS omits any discussion on restoration potential with environmental flows. Improved wetland and riparian habitat on similar rivers shows that degraded conditions can be reversed with flow management.

The SDEIS attempts to claim that wetland functions are achieved equally through open water (man-made ponds) compared with riverine wetland functions. With regards to water quality and habitat functions, open water is simply no replacement for riverine wetlands.

The document does not address the synergistic effects of climate change combined with the project's impacts on potential long-term environmental degradation in the watershed associated with loss of peak flows.

The SDEIS analysis depends upon return flows and agricultural nutrient mitigation to partially limit the negative effects of alternative 2. This is irresponsible, considering that the project applicant has no influence over the availability, timing, placement, and amount of return flows in mitigating project impacts.

Changing the hydrology of the floodplain could endanger nutrient cycling that mitigates non-point source pollution.

STP requested information on the irrigation-associated wetlands affected by the No Action Alternative. Appendix A (A04). STP did not receive that locational information before the close of the comment period, and therefore reserves the right to comment on the SDEIS regarding the location and extent of action wetlands losses associated with the No Action Alternative.

In addition to STP's analysis of the wetlands and riparian vegetation analyses, we reviewed the technical report treatment of the data on groundwater and surface water support for riverine vegetation in the watershed. The technical reports for the SDEIS rely on six groundwater monitoring transects, one transect located in each section of the river. From this analysis the SDEIS concluded that the Cache la Poudre River is a "gaining" river throughout its entire reach, and that nearly all riverine wetlands within the watershed are supported almost solely by irrigation return flows, with little or no support from peak flows from the Cache la Poudre River. The well locations and transects used to derive these findings are not a representative sample of the groundwater conditions within the watershed. STP conducted a stratified random sample of points in the riverbed center at one mile intervals from the canyon mouth to the confluence with the South Platte River. STP measured the proximity from river center at each of the 53 points to a nearby water impoundment, irrigation ditch or irrigated farm field or pasture. Five of the six transects sampled for the technical reports run directly towards and terminate adjacent to a water impoundment, or they run directly through a wetlands complex with a high water table. The

conditions at these limited, unrepresentative samples lead to the incorrect, unbalanced and statistically indefensible conclusion about the role return flows play in supporting wetlands and riparian vegetation in the watershed. According to our stratified sample analysis, the likelihood that the transects sampled for the NISP SDIES represents the groundwater conditions in the watershed are less than 10%. In all likelihood, the Cache la Poudre River is a “gaining river” and a “losing river” at intervals throughout its reach, and to use the findings from the groundwater transects to claim that peak flows have little or no role in maintaining wetlands and riparian vegetation violates scientific convention and is wholly indefensible.

The technical reports on wetlands and riparian areas indicate that wetland loss resulting from Alternative 2 would be 10 acres. Frankly, this is an irrationally low number, considering that STP’s analysis indicates that at least 1,700 acres of riparian habitat, including 700 acres of wetlands would be negatively affected, and considering the consistent bias present in the analysis towards valuing the habitat value and fragility of irrigation-associated wetlands compared with riverine wetlands. Be that as it may, we were surprised to see that the SDEIS reported the loss as 9 acres of riverine wetlands, not the 10 acres reported in the technical reports. There does not appear to be any evidence of a rounding error. It leads us to wonder if this change is simply an error, or is another artifact of analysis bias, somehow related to the fact that the SDEIS threshold between classifying an affect as being minor and major is set at 10 acres.

The screening criterion for impacts on wetlands was set at 60 acres. As with the DEIS, no basis for this threshold was provided, and no explanation was provided in response to comments questioning this threshold value in the NISP DEIS. What is the basis for this threshold? It is capricious and arbitrary.

The DEIS and SDEIS have ignored a significant component of the terrestrial and aquatic biota, viz. bryophytes (mosses, liverworts and hornworts), fungi and lichenized fungi (lichens).

There is no assessment of the effects on the ecology of the vegetation and wetlands that will be affected. Effects are couched solely in terms of degree of effect (major, moderate, etc.) and area affected permanently or temporarily. Thus there is no connection made between the loss of grassland habitat and the effects this might have on fauna.

The Technical Report Supplement downplays the potential loss of thousands of acres of grasslands as ‘negligible’ in regional terms, yet the incremental loss of habitat is clearly of concern to the Corps (as demonstrated by the withdrawal of NWP 26 in 2000).

‘Temporary effects’ are treated in the DEIS and SDEIS as if they are always short-term effects that are expected to be ameliorated within approximately 5 years, when in fact they may occur over decades.

The DEIS and SDEIS are silent on the practicality of complete restoration of disturbed vegetation and wetlands, and say nothing about how restoration is to be monitored and its success assessed.

Because the definition of wetlands has a regulatory purpose, some habitats that may be defined as wetlands in an ecological sense (*e.g.* using the FWS guidelines) may not be included in the delineation of wetlands.

Baseline data is referred to the existing naturalized condition, rather than potential or desirable condition. This precludes the consideration of opportunities to rehabilitate degraded habitats and reverse historical declines. It has also led to a chain of ‘could do’ statements in the SDEIS about what might be possible in terms of mitigation strategies after the completion of the project, instead of a consideration of mitigation and adaptive management as a fundamental part of the project proposal.

Edge effects and cumulative (*i.e.* knock-on) effects of habitat loss and degradation are not taken into account. Instead, the effect on a vegetation community or wetland is considered to be localized to that community or wetland and assumes that there will be no further effect on any other community of wetland.

The Corps must re-consider its wetlands and riparian vegetation analysis in compliance with these comments. The new analysis must be disclosed in a manner that provides for meaningful public review before the Corps makes any decisions on this project.

29. The SDEIS Fails to Adequately Consider Farmland Loss under the Alternatives

The SDEIS projects that 64,200 acres of irrigated farmland would no longer be irrigated under Alternative 1. The analysis begins in SDEIS section 2.4.2 and there are at least 46 references to this figure of 64,200 acres that follow. There is relatively little in the SDEIS analysis of this issue of farmland loss that has substantively changed from that in the DEIS, and we believe the analysis done for the DEIS

still applies (“A Review of the Likely Agricultural Impacts from the Northern Integrated Supply Project,” attached here in Appendix B (B03)). A subsequent document, also previously provided to the Corps, (“The Farm Facts about NISP,” attached here in Appendix C (C25)) applies as well, with the following additions to these documents:

1. The SDEIS projects that under operational flexibility for alternative 2 during dry years and for the initial fill of Glade Reservoir, an unspecified amount of additional agricultural water rights would be acquired by purchase or lease, and would be used to meet the project’s firm yield delivery requirements. Yet, no projections are provided in the SDEIS of the irrigated farmland losses associated with either this initial fill or agricultural water transfers to NISP during the dry periods when the project could not meet its firm yield requirements. It does not appear to be clearly stated that the planned “operational flexibility” would extend to all of the project alternatives except for the “No Action Alternative”, however we assume that it would considering the same weather-related streamflow limitations would apply to the Alternatives 2-4, and therefore it would be necessary to analyze the irrigated farmland loss projections to Alternatives 2-4.
2. The SDEIS analysis of the impacts of applying saline water to salt-affected soils in the Poudre and South Platte watersheds continues to be qualitative, as was the similar analysis in the DEIS analysis. No substantive quantitative analysis was done. This is a flaw in the SDEIS that must be corrected. The SDEIS fails to inform the public adequately about the actual impacts of the project on crop production and cropland soils.
3. The SDEIS ruled out rotational fallowing as a substantive alternative to permanent “buy and dry” and farmland loss. The SDEIS states that it is not a “proven technology” or method, despite the fact that hundreds of thousands of acre feet annually are being shared between municipal water users in Southern California and several California irrigation districts through this method. Rotational fallowing programs are being developed in at least two locations in Colorado – one in the Arkansas Valley, and another in the Cache la Poudre Basin. Rotational fallowing programs are a reasonably foreseeable future action in the Cache la Poudre River basin, have been proposed and discussed in lengthy detail in “Colorado’s Water Plan (Draft 2, July 2015),” and will likely become one of the major sources of water for growing communities in Colorado. The SDEIS’ failure to consider

rotational fallowing programs is a serious flaw that must be corrected in order to comply with NEPA and the CWA.

The Corps must address these concerns in a re-consideration of its analysis of farmland loss. The new analysis must be provided for meaningful public review prior to any decision making on this project.

30. The SDEIS Fails to Adequately Consider the Impacts on Air Quality from the Alternatives

The SDEIS noise impact analysis fails to address the cumulative impacts to those living to the east of the Hogback ridge, where Highway 287 would be moved if the project were permitted and built. The ridge provides a natural noise barrier for those who reside on the east side of the Hogback ridge. Without this barrier, these residents will be exposed not only to construction noise during the initial phase of the project, but also to non-dampened highway noise after the project is completed. With no major topographic features between the new Highway 287 and Interstate 25, this area will be flanked by two major highways, and the residents left to live with the noise and air pollution that accompanies them.

The EPA mobile emissions model for both on-road and non-road sources was officially changed during 2014 to now be MOVES2014 from MOVES2010. The work done in the SDEIS is both out of date and does not apparently use the official EPA mobile emissions model used in air quality modeling for both NEPA conformity and attainment planning. It is important that the project comprehensively estimate all direct and indirect mobile emissions associated with the life of the project using this new tool, and not rely upon: "Emission load factors were developed based on Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling, EPA-420-P-04-005 and AP-42 (EPA 2004)." The combined direct (on-site) and indirect (off-site but directly caused by the project including the highway and road re-locations) emissions will be much larger than presented in the SDEIS.

On August 27, 2015, the EPA published a proposed rule in the Federal Register: "Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Several Areas Classified as Marginal for the 2008 Ozone National Ambient Air Quality Standards" (available at: <http://www.gpo.gov/fdsys/pkg/FR-2015-08-27/html/2015-21196.htm> and last viewed September 3, 2015). The current Denver/Northern Front Range ozone nonattainment area will be "bumped up" to Moderate nonattainment status, requiring a new nonattainment plan and adding additional control requirements. This plan must demonstrate attainment or reasonable further progress toward attaining

the 2008 Ozone standard of 75 ppb by 2017. Any additional NO_x emissions in 2017 or later will contribute to forming additional ozone and the potential for continuing nonattainment, and must be addressed in the SDEIS. The project must not contribute to continuing nonattainment, or prevent attainment by the statutory deadline.

In December of 2014 EPA proposed a revision to the current Ozone standard, to lower the level to somewhere in the range of 65 to 70 ppb. By federal court order, the EPA must decide to keep the standard at 75 or change it to a lower number in the 65 to 70 ppb range by October 1, 2015. This means that in the autumn of 2017, the area around the proposed Glade and Galeton reservoirs will continue to be nonattainment or may have to achieve a more stringent standard. The NISP project will be required to produce a plan to achieve nonattainment status for their activities, due in late 2020 or early 2021. Any additional NO_x emissions in 2017 or later will contribute to forming additional ozone and the potential for continuing nonattainment. The project must not contribute to continuing nonattainment, or prevent attainment of the “2015 Ozone standard” by the statutory deadline.

The Corps must re-consider its air quality analysis and disclose its results in a manner that provides for meaningful public review prior to any decision making on NISP.

31. The SDEIS Fails to Adequately Consider the Impacts on Recreation from the Alternatives

In sections 3.16.7.2, 4.20.3.3.1 and 5.20.2.3, the SDEIS claims annual value of recreation at Glade Reservoir, at full development, to be approximately \$13.2 million dollars. There are numerous fatal flaws associated with this estimate, which are detailed in the attached report titled “Review and Analysis of Effects on Recreation-related Economy: NISP SDEIS,” attached here in Appendix D (D05). These issues are summarized as follows:

Using visitor data from lakes in surrounding States, a linear regression model with one dependent variable (surface area of reservoir) was used to estimate annual visitor days for Glade Reservoir, thus not accounting for substitute sites, travel time, or other significant variables. No statistical analysis was offered to verify the utility of the model, and none of the raw data from the study sites used to drive the model were made available. The model could be completely wrong, or it could have no statistical significance, and the public would have no way of knowing if that was the case and therefore could not verify whether the analysis was sound.

Furthermore, the SDEIS made fundamentally incorrect theoretical assumptions that led to inaccurate results.

The SDEIS assumes that changes in the flow levels of the Poudre River resulting in changes to aesthetic quality will have negligible or minor impacts on the recreational value of natural areas and SWAs along the Poudre River. Aesthetic quality is a determinant of demand for recreation, having a positive relationship with demand. Therefore, assuming that a change in aesthetic quality does not affect recreational quality results in understated negative impacts of Alternative 2. No existing studies, communications, new data or new analyses were offered to back up the assumption that changing flow levels would have minor impacts on the recreational value of these areas.

The SDEIS fails to account for the loss in recreation benefits caused by Alternative 2 with respect to the potential whitewater park. Although the SDEIS estimates that Alternative 2 would negatively impact boating on the Poudre River and decrease economic benefits \$241,000 annually, it fails to update the economic value to 2011 dollars, and it fails to estimate the additional decrease in economic benefits associated with the potential whitewater park, ranging from a loss of \$615,000 to \$1,438,000 annually.

Finally this – the economic analysis projects the economic benefits would begin accruing at maximum value (\$13.2 million) once the reservoir is filled and park resources are developed, however it provides no benefit-cost analysis to calculate the net present value of that economic activity, and it does not take into account the economic costs to the citizens of Larimer County involved with developing, maintaining and operating the park infrastructure.

In the end, the projected economic benefit of \$13.2 million cannot be verified by the public, it fails to account for critical factors (such as cost and net present value) that any astute business person or economic development professional conducting a due diligence analysis would demand, and it is based on highly questionable assumptions that recreation at the reservoir, once complete, would operate at capacity immediately after construction is complete, when no basis for that assumption is provided.

The Corps must re-consider its recreation economics analysis and disclose the results in a manner that provides for meaningful public review prior to any decision making on NISP.

32. The SDEIS Fails to Adequately Consider the Impacts on Threatened & Endangered Species from the Alternatives

Economic growth and development, when un-tempered by adequate conservation measures, is a leading cause of the decline and extinction of threatened and endangered species. Baur and Irvin 2010. Fortunately, Congress enacted the Endangered Species Act in 1973 to conserve and protect such imperiled plants and animals. By law, an environmental impact statement (EIS) must thoroughly and honestly consider any potential impacts to federally-listed threatened and endangered species. 40 C.F.R. 1508.8, 40 C.F.R. 1508.25. The NISP DEIS and SDEIS fail to do this regarding the Preble's meadow jumping mouse (PMJM), a federally-listed threatened species. Thus the DEIS and SDEIS fail to meet the minimum legal requirements for an adequate EIS.

The NISP DEIS and SDEIS fail to provide adequate disclosure regarding mitigation measures for the PMJM, should any of the four alternatives analyzed in detail be pursued. They thus fail to provide necessary information for an informed judgment about whether pursuing NISP (or the other alternatives discussed) would violate the Endangered Species Act in this particular.

The DEIS and SDEIS also fail to properly consider viable alternative water supply proposals that not only would not adversely affect this small rodent, but that could actually benefit it by creating new mouse habitat and enhancing degraded habitat: specifically, the "Healthy Rivers Alternative" developed by Save the Poudre (2008) and "A Better Future for the Poudre River" developed by Western Resource Advocates (2012). Because the DEIS and SDEIS systematically ignore viable alternatives to an unnecessary "taking" of this threatened species, the building of NISP (or pursuit of the other three alternatives analyzed) would, in our opinion, constitute a clear violation of the Endangered Species Act.

Previous comments from Save the Poudre (Appendix B (B02)) on the DEIS's inadequate treatment of the PMJM were written by Robert Schorr, a scientific expert on the mouse. Those comments were based on a thorough review of the scientific literature and addressed critical problems with the proposed mitigation in the DEIS. None of our earlier concerns have been addressed in this SDEIS. Hence we reiterate our previous comments (Appendix B (B02)) in their entirety, including the "Addendum: further comments based on the 'Revised Proposed Rule to Amend the Listing for the Preble's Meadow Jumping Mouse.'" STP reinserts those comments into the record here (*see attached*) and provide additional comments in the document titled "STP Comments on NISP SDEIS Treatment of the Threatened Preble's Meadow Jumping Mouse" (attached here in Appendix D (D02)).

The proponent admits (SDEIS at S-1) that the project, if built, will also harm four threatened and endangered species of Central Nebraska: the whooping crane (*Grus americana*), the least tern (*Sterna*

antillarum athalassos), the piping plover (*Charadrius melodus*) and the pallid sturgeon (*Scaphirhynchus albus*) (hereafter “the Nebraska target species”). In their “Biological Opinion” on NISP, received by the U.S. Army Corps of Engineers October 5, 2007, the U.S. Fish and Wildlife Service concurs, stating that the water depletions associated with NISP are likely to reduce flows on the Platte River through Nebraska and that therefore NISP will adversely affect the Nebraska target species. DEIS page 21.

According to USFWS, the continued existence and recovery of these four threatened and endangered species depends on protecting and restoring water flows to the central and lower Platte River ecosystems. The survival of these species cannot be ensured without significant changes made to improve current environmental conditions. Committee on Endangered and Threatened Species in the Platte River Basin 2004; USFWS 2006a at 11). If built, NISP will instead degrade current environmental conditions, causing water depletions and decreasing peak flows along the Platte River in central Nebraska. For this reason, the U.S. Army Corps of Engineers must deny a permit for NISP under the Clean Water Act.

By law, an environmental impact statement (EIS) must thoroughly consider proposed projects’ potential impacts on federally-listed threatened and endangered species. 40 C.F.R. 1505.8, 40 C.F.R. 1508.25. The DEIS and SDEIS fail to do so regarding the Nebraska target species, as documented below and in the Save the Poudre Coalition’s earlier (2008a) comments. Thus the DEIS and SDEIS fail to meet the minimum legal requirements for an adequate EIS under NEPA.

By law, an EIS also must consider reasonable alternatives to projects that have the potential to harm threatened and endangered species. Despite the development of two such alternatives to NISP—the “Healthy Rivers Alternative” developed by the Save the Poudre Coalition (attached here in Appendix B (B07)) and “A Better Future for the Poudre River” developed by Western Resource Advocates (attached here at E51)—both the DEIS and SDEIS fail to seriously consider these and other alternative supply possibilities that could meet the water needs of affected communities while securing increased flows for the Nebraska target species, or at least not further harming them. In this way, too, the DEIS and SDEIS fail to meet the minimum legal requirements for an adequate EIS under NEPA.

These comments are explained in more detail in an attachment titled “STP Comments on NISP SDEIS Treatment of Threatened and Endangered Species in Nebraska” (attached here in Appendix D (D03)).

33. The SDEIS Fails to Adequately Consider the Impacts on Greenhouse Gas Emissions and Climate Change from Project Operations and

The SDEIS acknowledges that its analysis of greenhouse gas emissions is incomplete. The SDEIS analyzes the emissions from pumping water for the project, however it fails to address the direct emissions from reservoir construction, including fuels burned in construction equipment, emissions from the mining, manufacture, and transport of the cement, rock and aggregate materials used in reservoir construction. It does not take into account emissions from decaying vegetation and the decomposition of carbon in wetlands soils affected by the altered flow regime resulting from the project.

To address this deficiency, the Corps must prepare a supplemental draft environmental impact statement with a public comment period adequate for public review.

The total yearly emissions for NISP as proposed in the project's Draft Environmental Impact Statement would be at least 43,751 – 84,236 metric tons CO₂-equivalent per year, depending on the action alternative chosen. These include energy required to pump water as well as CO₂ emissions from soils and decaying vegetation associated with degraded wetlands and riparian vegetation. This estimate is highly conservative, as it does not include methane, carbon dioxide and nitrous oxide emissions directly from the reservoir surface and footprint, spillway or outlet, all of which have been shown to be significant source of emissions from reservoir operations worldwide.

In addition to these yearly emissions, the total emissions produced during the construction of the project would be at least 218,000 metric tons CO₂-equivalents. These legacy emissions or "embodied emissions" for the project would represent at least 5 metric tons CO₂-equivalents per acre-foot of water proposed to be delivered under the project, with at least 1 metric ton CO₂-equivalents per acre foot of water proposed to be delivered each year. These are major greenhouse gas emissions at a time when we should be doing absolutely everything we can do to reduce greenhouse gas emissions in every aspect of our lives. STP provides a detailed analysis of the likely Greenhouse Gas Emissions from alternative 2 of the NISP project as "NISP SDEIS Comments on Greenhouse Gas Emissions from Project Operations and Construction" (attached here in Appendix D (D01)).

34. The SDEIS Fails to Adequately Consider the Impacts of Oil and Gas Wells at Galeton Reservoir Site

STP presented relevant information to the Corps in letters dated March 8, 2011 (“Oil and gas development under and near the proposed Northern Integrated Supply Project’s Galeton Reservoir and required analysis under NEPA”, attached here in Appendix E (E43)) and November 18, 2012 (*untitled*, attached here in Appendix E (E44)). All information included and requested analyses noted in those letters are hereby incorporated into these comments.

In an improvement to the DEIS, the SDEIS acknowledges the presence of current and historic oil and gas wells at the Galeton Reservoir site (*See, e.g.*, sections 2.5.8, 3.6.2.2, and 3.21.2.2). This information is primarily attributed to the document “Oil and Gas Development at the Proposed Galeton Reservoir Site Technical Memorandum” (January 2012). SDEIS at 3-4, 4-9. This analysis was apparently supplemented by a review of Colorado Oil and Gas Conservation Commission (COGCC) records in 2013 and 2014. SDEIS at 2-46, 3-226.

The SDEIS cites various and conflicting figures for the number of wells impacted by the proposed Galeton Reservoir that were apparently derived from inventories at different dates and for different geographic scopes. SDEIS at 2-46 (“Sixteen wells are within the reservoir footprint and three wells are within 500 feet of the footprint”), SDEIS at 3-91 (“39 producing wells and an additional 33 proposed wells on and within 0.5 mile of the proposed Galeton Reservoir site”), SDEIS at 3-226 (“31 producing oil and gas wells, 8 shut-in wells, and 11 plugged and abandoned wells are in the proposed Galeton Reservoir study area”). Note that STP was unable to find any competent definition of the “Galeton Reservoir study area” in either the DEIS or SDEIS.

The SDEIS states that the past and current wells have had satisfactory and unsatisfactory inspections, including multiple crude oil spills on the ground that have been cleaned up to COGCC standards. SDEIS at 3-226. The SDEIS discusses the wells from the perspective of potential hazardous materials resulting from drilling and operation-related spills, and concludes from a review of COGCC records—but no on-the-ground survey—that no risk exists. SDEIS at 3-226, 3-227. No other discussion of the impact of the presence of these wells is presented except the unsupported statement that “[t]he District anticipates that all of the wells would be abandoned by the operator before Galeton Reservoir was built. The District would relocate any well that would interfere with reservoir operations.” SDEIS at 2-46.

The Conceptual Mitigation Plan also gives scant notice to the oil and gas wells, relying on a discussion of “a plan” and “protocols” to be developed to deal with potential issues with mechanical integrity of well bores, excavation, leaks and groundwater levels but committing to no mitigation activities. SDEIS Appendix F at 55-57. Rather than providing any transparency concerning the actual properties of and risks from the wells, the Corp makes the unsupported statement that “Northern Water has cooperated with and reviewed plans by the well operators to ensure that the operator’s oil and gas development plans are consistent with the construction of Galeton Reservoir. Northern Water will remain in contact and coordinate with the operator as these activities progress.” SDEIS Appendix F at 55.

The SDEIS explicitly identifies the analysis of oil and gas development at the Galeton site as one of the incomplete elements of the document that must be updated before the FEIS is issued. SDEIS at S-12, S-13 (“Before FEIS issuance, the Corps anticipates the District will complete the following activities”, “Update the description and potential effect of oil and gas well drilling activities at the Galeton Reservoir site”, “Perform additional hydrological assessments at the proposed Galeton Reservoir site to determine if fluctuating reservoir levels at Galeton Reservoir have the potential to mobilize any future contaminant plumes from oil and gas development in the area”), SDEIS at 3-91 (“Information on oil and gas well drilling activities at Galeton will be updated for the FEIS”). The SDEIS must therefore be seen as failing to take a “hard look” at the impacts of oil and gas wells at the Galeton Reservoir site.

The Corps must present a complete analysis with adequate public comment opportunity prior to completing the Final EIS. Although the comments here are directed at Alternative 2 and the proposed Galeton Reservoir, a similar analysis must also be conducted for the proposed Cactus Hill Reservoir.

A complete analysis of oil and gas development activity at the Galeton Reservoir site will include, but not be limited to:

Current Inventory of Existing Wells and Historic Well Sites

As discussed above, the SDEIS fails to provide a consistent inventory of the number of existing oil and gas wells and historic well sites that would be impacted by the proposed Galeton Reservoir. Current, geographically-attributed data is updated daily and readily available from COGCC. See <http://cogcc.state.co.us/data2.html#/downloads>. Any future analysis by the Corps must utilize the most current data available at the time of the analysis and must explicitly cite the download date for the data.

The Corps must also clearly define the geographic scope of its analysis. Accurate source data and geographic scope are essential for the public to competently review the analysis.

On August 4, 2015, STP completed an inventory of oil and gas well permits within the vicinity of the proposed Galeton Reservoir. This inventory identified extensive changes from the inventory presented in the Technical Memorandum and illustrates the fluidity of the oil and gas development situation and the importance of current data: all of the wells listed as “planned” in the Technical Memorandum except for one have been abandoned; six producing, one shut-in, and eight planned wells were identified that were not included in the Technical Memorandum.

Importantly, the STP inventory also identified 11 producing and planned wells that appear to be located either within or immediately adjacent to the dam footprint as indicated in Figure 2-6 of the SDEIS. These well sites could pose additional difficulties for safe abandonment and/or dam maintenance. The Corps must explicitly identify all wells located either within or immediately adjacent to the dam footprint in any future inventories.

The STP inventory also revealed that the majority of the wells in the Galeton Reservoir vicinity are developed on split estate lands, i.e., lands where the mineral ownership is held separately from the surface ownership. Split estate lands pose additional difficulties for acquisition activities. The Corps must explicitly identify all wells that occur on split estate lands in any future inventories.

Expanded Hazardous Materials Analysis

The Corps must complete a thorough review of both the surface and sub-surface risk of hazardous material contamination associated with abandoned, current, and planned wells at the proposed Galeton Reservoir site rather than relying on a review of COGCC records of surface spills.

The Corps’ analysis of potential hazardous material contamination must be updated to reflect the current understanding of oil and gas development contamination risk as presented in the studies “A Public Health Review of High Volume Hydraulic Fracturing for Shale Gas Development,” attached here in Appendix E (E45), and “Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources—External Review Draft,” attached here in Appendix E (E46). Both of these studies indicate that hazardous material contamination occurs, and may be more likely to occur, than is indicated by the SDEIS analysis due to fluid migration in areas surrounding oil and gas wells.

The Corps must consider that a high potential for well casing failure may exist, even after abandonment, especially with the added pressure from the water in the proposed Galeton reservoir. If well bore integrity were to fail, hydraulic fracturing chemicals as well as oil and gas, brine, and naturally occurring radioactive materials (NORM) from the shale formation could leak into the reservoir. A 2014 study (Darrah et. al, 2014, attached here in Appendix E (E12)) documented contamination in drinking water wells near oil and gas wells. They determined the contamination was a result of well failures from poor cementation, improper, faulty, and failing production casings and one documented underground well failure. This shows that even if the wells are properly abandoned, the initial well construction may have issues that result in well failure and contamination of the well. A 2003 study (Brufatto, et. al, 2003, viewed at http://www.slb.com/~media/Files/resources/oilfield_review/ors03/aut03/p62_76.ashx on 8/1/2015) showed that the majority of wells fail by maturity (60% of wells failed in 30 years in their study). The wells in this study were located in the Gulf of Mexico, so they were subjected to higher water pressures, as will the wells under the proposed Galeton reservoir.

Although the oil and gas industry prefers to cite studies that have shown that well casing failures are rare, the wells surveyed for these studies were all located on dry land and are not representative of the Galeton Reservoir situation. Wells within the proposed Galeton Reservoir footprint will be under water and therefore subjected to elevated pressure, as a result of the water on top of them. The Corps must consider the post-impoundment geologic impacts resulting from large and fluctuating weight of the proposed reservoir. The Corps must do so by consulting with a qualified expert who can provide expert advice on the post-impoundment landscape.

The Corps must consult with qualified experts and fully consider any special issues related to abandoned and/or sealed wells in an underwater environment. In particular, they must consider impact of the substantial weight that will be experienced at well sites from the impoundment as well as the unique weathering forces that will occur with fluctuating water levels, and the potential impacts of those forces on sealed well and well bore integrity.

The Technical Memorandum discloses that impounded water could cause a hydraulic gradient away from the reservoir, citing this as a rationale to not be concerned about adjacent wells contaminating the proposed reservoir. Oil and Gas Development at the Proposed Galeton Reservoir Site Technical Memorandum (an SDEIS technical report) at 8. There is, however, no discussion of the potential impacts resulting from the new hydraulic gradient carrying contaminants from well bores located under the

proposed reservoir footprint to nearby and adjacent water wells and/or surface seeps. A hydraulic analysis of the post-impoundment groundwater flow must be conducted with attention given to potential contamination off-site from spills or failed well integrity originating from abandoned, current, and planned wells located within the proposed Galeton Reservoir footprint.

The SDEIS states that hydraulic fracturing (“fracking”) has occurred at the proposed Galeton Reservoir site. SDEIS at 3-91. Only about 30% of fracking fluid that is injected into a well during completion is recovered during the job. Studies have shown that over 75% of the chemicals used in fracking can affect skin, eyes and other sensory organs including respiratory and gastrointestinal systems. About 40-50% of the chemicals could affect the brain and nervous system, immune system, cardiovascular system or kidneys. About 37% affect the endocrine system and 25% of the chemicals have the potential to cause cancer or mutations. Colborn, et al., 2001, attached here in Appendix E (E10). There is also danger from high levels of salts (25-180 g/L) and naturally occurring radioactive materials and oil and gas. Vengosh, 2014, attached here in Appendix E (E28) and Abualfaraj, Gurian, and Olson, 2014, attached here in Appendix E (E01). The Corps must consult with qualified experts and consider the potential for contamination from lost fracking fluid.

Cost of Mineral Right Buy-out and Well Closure and/or Relocation Analysis

Although the SDEIS identifies numerous active and planned wells at the reservoir site and acknowledges that some or all of the wells may require relocation (SDEIS at 2-46, “The District would relocate any well that would interfere with reservoir operations”), the Corps undertakes no analysis of impact of these wells on the cost of the project. The only justifications for this omission are the unsupported statements of the project proponent that the wells will be abandoned prior to development of the reservoir. SDEIS at 2-46, “The District anticipates that all of the wells would be abandoned by the operator before Galeton Reservoir was built”, SDEIS Appendix F at 55 “Northern Water has cooperated with and reviewed plans by the well operators to ensure that the operator’s oil and gas development plans are consistent with the construction of Galeton Reservoir”). The SDEIS provides no meaningful data to support the conclusion that the wells will be abandoned at the time of reservoir construction and therefore fails to meet the “hard look” requirements of NEPA. As discussed above, the on-the-ground situation in the oil patch changes rapidly and there is no reason to take on faith that the wells will be abandoned and the minerals will be depleted in the time frame that the project proponent outlines for NISP. Recent developments in technology and techniques have extended the utility of wells that were

previously considered to be at the end of their productive lifespans. See “Refracking is the new fracking,” attached here in Appendix E (E22).

The Corps must either: 1) provide a detailed cost analysis for the buy-out of mineral rights that would be impacted by construction and/or operation of the proposed Galeton Reservoir and well closures and/or relocations, or 2) a competently documented analysis of the life-span of the oil and gas field underlying of the proposed Galeton Reservoir that objectively supports the conclusion that all existing and planned wells as well as underlying mineral rights will be abandoned prior to the proposed reservoir construction.

A detailed cost analysis must include, but is not limited to:

1. An estimate of the cost of “abandoning” active and planned oil and gas wells that would be impacted by the proposed Galeton Reservoir. A recent University of Colorado study, “Assessment of Oil and Gas Industry Economic and Fiscal Impacts in Colorado in 2010” (2011, attached here in Appendix E (E48)), estimated that each oil and gas well generates an average \$1.76 million/year in Colorado, and approximately \$20 million over a well’s lifetime. Any costs analysis must consider the full net present value of wells drilled at the time of inundation, as well as any industry infrastructure development costs that would be lost due to abandonment of the site, as re-location of the wellheads may not be possible. This estimate must explicitly address split estate lands and the possibility of acquisition costs for separate mineral rights and surface ownership and must document ownership records.
2. An analysis of the possibility of relocating wells in the affected oil and gas field and an estimate of the cost of relocating active and planned oil and gas wells that would be impacted by the proposed Galeton Reservoir. A 2014 Denver Post newspaper article, “Falling oil prices aren't dampening Colorado drilling” (attached here in Appendix E (E57)), estimates that the average cost of drilling an oil or gas well in Colorado is \$4 million. This estimate must explicitly address split estate lands and the possibility of acquisition costs for separate mineral rights and surface ownership and must document ownership records.
3. An analysis of the impact of development of the proposed Galeton Reservoir on owners of currently undeveloped or not fully developed mineral rights on underlying lands and an estimate of the cost to buy-out all of the rights that would be negatively impacted. The Corps

must consult qualified experts and determine the lost net present value of mineral rights whose values will be reduced or eliminated. Current development reflects current market conditions rather than the true value of the minerals that might be impacted. Mineral right holders have extensive rights of access under Colorado law that could be compromised by development of the reservoir. This estimate must explicitly address split estate lands and the possibility of acquisition costs for separate mineral rights and surface ownership and must document ownership records.

Subsequent to developing the detailed cost analysis for the buy-out of mineral rights that would be impacted by construction and/or operation of the proposed Galeton Reservoir and well closures and/or relocations, the Corps must explicitly review the feasibility of all of the action alternatives that depend upon the proposed reservoir for their implementation. The Corps must reassess the overall project cost estimates and timelines and determine if each of the action alternatives continues to meet the alternative screening criteria.

Consideration of Flooding and Fracking Fluid Spills

The Corps must consider the potential for flooding upstream of the proposed Galeton Reservoir and the potential for fracking fluid spills into and near the reservoir. During the Colorado Front Range floods of 2013, there were 50 spills of fracking fluid and oil and gas development-associated wastewater in less than a week. The chemicals that are used in fracking fluids are often stored on site so there is potential for high concentrations of chemicals to be released into or near the proposed reservoir during a flood event. Colorado Oil and Gas Conservation Commission 2014 Annual Report, 2014, attached here in Appendix E (E49)). If the Corps permits NISP, the Corps also must develop as mitigation a specific emergency action plan for flood response.

Consideration of Surface Excavation on Well Sites

The Technical Memorandum states that the surface of the reservoir site will be scraped of unconsolidated material, potentially to a depth of the groundwater table (suggested at 18-35 feet depth within the reservoir site). Oil and Gas Development at the Proposed Galeton Reservoir Site Technical Memorandum at 7. The Corps must consider how such excavation will impact previously abandoned wells and how the excavation will impact the proposed reservoir-related well abandonment.

Transparency of Cooperation and Coordination between the Project Proponent and Well Operators

The Corps must not rely on blanket assurances about cooperation and coordination between the project proponent and well operators concerning the future longevity of the existing wells, future development, and the impact of the development of Galeton reservoir on oil and gas operations and vice versa. The Corps' reliance on these unsupported statements in the SDEIS (SDEIS at 2-46, SDEIS Appendix F at 55) utterly fails to meet NEPA's requirement for full disclosure and make it impossible for the public to meaningfully engage in the review of the NISP proposal. The Corps must provide documentation for, and critical review of, any such statements.

35. The SDEIS Fails to Adequately Consider the Impacts on the Local Economy of the Alternatives

The Corps fails to consider the economic impact on junior water rights holders whose water use would be displaced by the diversion of the Grey Mountain right under Alternative 2. Although it is a valid conditional right, no water has been diverted under Grey Mountain to date. The over-appropriated nature of the Cache la Poudre suggests that junior water rights are currently used to divert water that would be captured by the Grey Mountain right. The Corps must identify those water rights and independently analysis the economic impact of the loss of use of water under those rights.

The SDEIS states the recreational use of Glade Reservoir would be implemented by a "qualified vendor or lessee," likely Larimer County or Colorado State Parks. SDEIS at 2-34. The Corps fails to consider the costs of construction, maintenance and ongoing operations that would be incurred by the operator and the impact of those costs on the regional economy and taxpayers. The Corps must conduct an analysis of the costs associated with ongoing operations at the proposed reservoir and the impact of those costs on public entities and the regional economy.

36. The SDEIS Fails to Present a Reasonably Complete Environmental Analysis of NISP

In addition to the many shortcomings details above, the SDEIS itself acknowledges that numerous elements of the required environmental impact analysis are incomplete. SDEIS at S-12 – S-13. The SDEIS describes five activities to be undertaken by the proponent and 13 activities to be undertaken by the

Corps “before FEIS issuance.” SDEIS at S-12 – S-13. Importantly, the Corps indicates that it “indicates” that these activities will be completed before the FEIS is issued; the Corps fails to assert that they will.

The activities that the Corps identifies at SDEIS at S-12 – S-13 are critical, although not internally sufficient, to the completion of a competent environmental impact analysis of NISP. The Corps must complete all of these actions and provide for meaningful public review of the results before any decision making on NISP. Such consideration and disclosure must be consistent with, and in addition to, the other actions called for by STP in these comments.

37. The SDEIS Unreasonably Portrays the Cache la Poudre as Suffering from Inevitable Decline

The SDEIS makes numerous references to the environmental conditions of the Cache La Poudre being on projected “trajectory” or trend SDEIS at 3-74 (“These consequences of past development are reflected in the current trajectory of the morphologic and sediment transport conditions of the mainstem”); *See, e.g.*, SDEIS at 3-77 (“The trajectory for the channel upstream of I-25 under current conditions is a continuation of spatially discrete episodes of alignment and profile instability during short periods of unusually high flow with prolonged periods of relative stability at other times”), SDEIS at 3-79 (“There are two main reasons why the trajectory for the river downstream of I-25 is different from the trajectory for the river upstream”), SDEIS at 3-118 (“The Martinez Park site demonstrates the trajectory of the riparian woodlands associated with the Poudre River from about Fort Collins to the confluence with the South Platte River”). The SDEIS cites this trajectory as a baseline for comparison of the environmental impacts of the alternatives. *See, e.g.*, SDEIS at 4-154 (“the predicted river response is presented and discussed in light of the current trajectory of river condition”), SDEIS at 4-213 (“For the assessment of indirect effects, first the trajectory of the riparian and wetland resources along the Poudre River was estimated to determine context for how changes in streamflow would potentially affect the future of the resources.”). In general, the trajectory is described as a decline in river health. *See, e.g.*, SDEIS at 4-154 (“the trajectory of the river is expected to continue under Current Conditions hydrology as the result of ongoing channel contraction, fining of surficial material, and loss of channel complexity”).

By invoking the inevitability of the projected trajectory, the Corps fails to conduct an objective “hard look” at the impacts of the alternatives. The Corp’s use of “trajectory” and projected trends in the impacts analysis improperly minimize the impacts of the alternatives by characterizing those impacts on river health as a continuation of the status quo. *See, e.g.*, SDEIS at 4-157 (“Assessments of the effects of

Alternative 2 compared to the Current Conditions confirm an amplified trajectory of the river conditions”), SDEIS at 4-158 (“the ongoing trend associated with channel contraction downstream of I-25 would likely lead to an increase in overbank flooding”), SDEIS at 4-161 (“The result would be expected to reinforce the current net depositional trend”), SDEIS at 4-162 (“the river downstream of I-25 had crossed a bio-geomorphic threshold and is on a trajectory leading to a shallower and narrower channel”), SDEIS at Table 4-69 (“Changes in flows associated with Alternative 2 are predicted to accelerate and/or reinforce the well-established trajectory”). The Corps’ approach also fails to properly document the significance of the incremental effects from Alternative 2 that would exacerbate impaired or degraded conditions.

NEPA requires a review of an alternative’s impacts in comparison to current conditions not in relation to historic changes. STP and other commentators (Appendix E (E03, E08)) assert that the continued decline of the Poudre is not an inevitable outcome. The NISP review process must focus on the impacts of the NISP alternatives and not on what has occurred in the past.

The Corps must reconsider its environmental impact analysis and properly disclose the environmental impacts of each alternative as a function of the environmental change that the alternative generates in relation to the current conditions. The Corps must fully consider the contribution of Alternative 2 even if there are existing or projected impacts not caused by NISP.

B. The SDEIS Fails to Establish Alternative 2 as the LEDPA under the Clean Water Act

The Corps can only permit Alternative 2 (or any other action alternative) if it affirmatively establishes that there are no practicable options that have less adverse environmental impact than the action to be permitted. *See* 40 C.F.R. 230.10(a) (“[N]o discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem ...”). The SDEIS fails to do this. Two of the project alternatives (3 and 4) have demonstrably less adverse impact on stream hydrology, water quality, aquatic habitats and wetlands and riparian vegetation.

The No Action Alternative analyzed in the SDEIS fails to represent the actual steps communities in the region are taking today to meet their water supply needs. *See* “The SDEIS Fails to Establish the Reasonableness and Feasibility of the No Action Alternative.” The Corps has failed to refute that a No

Action Alternative that accurately reflects the outcome of a permit denial would also have less impact than Alternative 2.

Alternatives 2, 3 and 4 described in the SDEIS all have greater adverse environmental impacts on aquatic resources than the water supply initiatives the project participants are already pursuing and are likely to continue pursuing in the future. SDEIS at 5-13. These initiatives include traditional water purchases, conservation, water use efficiency improvements, alternative agricultural transfers (rotational fallowing agreements, interruptible supply agreements, water cooperatives, municipal-agricultural water use sharing, water banks, flex markets), water reuse, and reverse osmosis. They serve a critical role in meeting the region's water needs without requiring new diversions from the Cache la Poudre River and therefore not requiring a NEPA process or a 404 permit. These actions, by virtue of not impacting special aquatic resources, must be assumed to have less adverse environmental impact unless shown otherwise. 40 C.F.R. 230.1 ("the degradation or destruction of special aquatic sites, such as filling operations in wetlands, is considered to be among the most severe environmental impacts").

As there are practicable alternatives which would have less adverse environmental impact on aquatic resources, NISP must not be permitted.

C. The Conceptual Mitigation Plan Fails to Provide a Clear Assessment of Mitigation Measures Practicable for NISP

The Corps' regulations require that "mitigation measures will be clearly assessed" in an Environmental Impact Statement. 32 C.F.R. 651.15(b). Such an assessment requires a clear disclosure of potential mitigation measures and a thorough review of their practicability, coupled with details on monitoring and enforcement to ensure implementation 32 C.F.R. 651.15(b), 32 C.F.R. 651.15(h). The proposed Conceptual Mitigation Plan (CMP) fails to meet those standards.

In fact, the CMP cannot possibly provide a clear assessment of mitigation for impacts that are not understood. . *Ohio Valley Env'tl. Coalition v. United States Army Corps of Eng'rs*, 479 F. Supp. 2d 607, 627 (S.D. W. Va. 2007). Until the Corps completes a competent environmental impact analysis, addressing the concerns raised by STP and many others, any consideration of mitigation must be seen as hypothetical at best. The vague measures presented in the CMP do little to advance a meaningful review of NISP.

The CMP does however alert reviewers to a bias towards project implementation with unsupported statements that seem intended to provide justification for Alternative 2.

“Typically, aquatic resource mitigation efforts that address low flow conditions would be more beneficial than high flow periods (both enhancement of low-flow and low-flow channel improvements).”

SDEIS Appendix F at 17.

Absolutely no analysis or documentation is provided in the CMP to support this significant claim that goes to the heart of what mitigation for this project must address. The only apparent support for the claim is the following sentence,

“Glade Reservoir provides an opportunity for low-flow aquatic resources mitigation.”

SDEIS Appendix F at 17.

The logic appears to be that Alternative 2 would allow for low-flow augmentation, as has been proposed, so this should be our mitigation approach. Such an assumption utterly fails to provide a clear and objective analysis of mitigation potential and needs.

(Concerns with the use of augmentation flows as both project components and mitigation are discussed in “The SDEIS Improperly Considers the Proposed Augmentation Flows under Alternative 2” above.)

The most definite proposals in the CMP involve distribution of funds for various projects. *See, e.g.*, SDEIS Appendix F at 68 (Steam channel improvement plan, \$1 million commitment), SDEIS Appendix F at 77 (channel structures, \$200,000), SDEIS Appendix F at 85 (adaptive management program, \$50,000 per year for 20 years; escrow account to implement actions developed in the stream channel habitat and improvement plan, \$5 million), summary table at 239. Although specific numbers are presented in the document, there is no support for the funds proposed; no indication of how adequately they would address any of the yet-to-be-determined impacts or anyway mitigate the project’s implementation. It is reckless and contrary to the intent of our environmental laws, which require objective consideration of the net impacts and benefits of a proposal, to offer up funds in a fashion that appears to *Seek* to facilitate approval of the project.

Importantly, the CMP fails to address the most significant impact that would result from implementation of the Alternative 2 as we current understand it—the loss of the peak flows that are critical to river health. See “The SDEIS Fails to Adequately Consider the Contribution of Peak Flows to the Health of the Cache la Poudre.” The CMP fails to provide any meaningful mitigation for these impacts even though there is no controversy that Alternative 2 will significantly curtail these flows.

Seemingly without a sense of irony, the CMP claims as “avoidance” mitigation components of the project that have been removed from the consideration by the applicant prior to development of the CMP.

“Two of the most significant changes in the NISP/Glade Reservoir that avoid environmental effects are the movement of the proposed reservoir from an on-channel reservoir site to an off-channel reservoir site, and the elimination of a potential point-of-diversion that would have been upstream of the North Fork confluence with the Poudre River.”

SDEIS Appendix F at 28.

The proponent gave up on the in-channel reservoir, for its own purposes, two decades ago. SDEIS Appendix F at 28-29 (“Through these processes, Northern Water determined that an on-channel reservoir was not environmentally or publically acceptable, and moved its preferred alternative to its current location at Glade Reservoir”). Further, an in-channel reservoir apparently would not have passed the Corps’ own screening analysis. SDEIS Appendix F at 29 (“All on-channel reservoirs were eliminated through the NISP screening process”). The diversion point change was voluntarily discarded by the proponent between the DEIS and SDEIS and does appear to have been under serious consideration by the proponent. SDEIS Appendix F at 29 (“Another feature of the NISP project that has been informally studied by Northern Water”). The CMP fails to meet the intent and application of mitigation by seeking to claim that actions taken before the project has been proposed or approved can be considered “avoidance” of impacts that will result from NISP.

Similarly, the CMP cites the proponent’s willingness to comply with water court decrees on its water rights and curtail diversions when required to do so. SDEIS Appendix F at 35. Such compliance, fundamental to its implementation of the Grey Mountain right to NISP, fails to qualify as meaningful mitigation of the impacts from the diversions that are allowed under the Grey Mountain right.

The Corps must develop a competent mitigation plan through a clear assessment of practicable mitigation measures, and ensure the monitoring and enforcement of any adopted measures, if any of the NISP action alternatives are permitted. The Corps must base such a plan on a thorough environmental impact analysis and must complete and implement the plan in a manner that provides for meaningful public review.

D. The Corps Failed to Provide for Adequate Public Scrutiny of the Impacts Associated with NISP

1. The Corps has Failed to Provide Adequate Opportunity for Meaningful Public Review of the SDEIS

The SDEIS is nearly 1,500 pages long and is accompanied by dozens of technical reports. Its release comes seven years after the SDEIS and comes at a cost of “nearly \$10 million.” Appendix E (E20). Clearly, a massive amount of effort went into generating this unfortunately incomplete document.

Despite a thorough understanding of the effort that was required to generate this analysis and the scope of the final product, the Corps has only granted the public 75 days to acquire, review, and comment on the SDEIS. “NWO-2003-80509-DEN” attached here in Appendix E (E21). The Corps’ action in this regard is a clear rebuke of the intent of NEPA.

“NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.

32 C.F.R. 1500.1 (emphasis added).

Further, despite the volumes submitted for public review, the Corps has failed to make all of the information necessary to fully review the SDEIS publicly available. After an initial review of the SDEIS, STP submitted, on July 19, 2015, a Freedom of Information Act (FOIA) request for the Corps documents necessary for the public to fully understand several elements of the SDEIS including:

1. The alternative development and screening process, including the newly developed No Action Alternative;
2. Project cost estimation;

3. The water exchanges essential for a key component of NISP – the South Platte Water Conservation Project – to function;
4. The ability of the preferred alternative to meet the SDEIS’ own firm yield criteria;
5. Data used to develop the critical irrigation-associated wetlands loss analysis; and
6. The failure by the Corps to respond to several relevant documents submitted by STP in a timely fashion for incorporation into the SDEIS analyses.

Appendix A (A04).

This request includes at least one document explicitly referenced by the SDEIS that does not appear to be publicly available.

STP did not receive a response its request until August 18, 2015, a date after the expiration of the 20-day response period that the Corps is allowed under FOIA (5 U.S.C. 552(a)(6)(A)(i)), which expired on or about August 10, 2015. The response indicated that the Corps “are trying to determine the volume of records we have responsive to your request and how long we will need to gather these records.”

The day after STP received the response, believing that they would not receive the essential information in a timely fashion to incorporate the material into these comments, STP submitted a request to the Corps for an extension to the comment period. See Appendix A (A03). STP has received an acknowledgement of the receipt of that request but no acceptance or denial of the request. See Appendix A (A02).

The Corps has failed to provide the information needed to thoroughly review the SDEIS within the time that it has provided for that review. The Corps has also failed to provide a timely response to a reasonable and properly submitted extension request.

STP is unable to provide meaningful comments on the SDEIS issues cited above without the additional documents that have been requested. The Corps has failed to provide adequate opportunity for public review of the SDEIS, contrary to both the intent and implementation of NEPA.

2. The SDEIS Fails to Provide Information in a Clear and Readily Accessible Manner

The volume of information contained in the SDEIS can only be meaningfully reviewed if it is presented in a clear and readily accessible manner. The Corps has failed to do that and consequently fails to meet the

intent of NEPA. 40 C.F.R. 1502.1 (“Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses”).

The sheer volume of the SDEIS (coupled with the unreasonably short review period granted to the public) makes it critical that the summary information presented in the main document be competent. Unfortunately, the Corps imposes qualitative classes on its impact descriptions. SDEIS at 4-3. The SDEIS defines these terms but does so with ambiguous, unquantifiable standards such as “slight” and “readily apparent.” SDEIS at 4-3. The terms are then used for comparison of the impacts of the various alternatives. *See, e.g.*, SDEIS at Table 4-50, Table 4-53. By using these qualitative terms rather than the quantitative data determine during the impact analysis, the Corps fails to provide for a concise and clear comparisons in summaries. The Corps must reconsider and disclose its environmental impact analysis without the use of ambiguous impact classifications and must instead rely on quantitative measures or fully defined and quantifiable impact classes that meaningfully convey the differences between impacts.

II. The Corps Must Allow for Additional Meaningful Public Input

NEPA requires a “hard look” at the environmental impacts associated with a project. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1985). The Corps must complete numerous additional analyses in response to the Corps’ failure to present a complete and adequate disclosure of both the environmental impacts associated with NISP and the potential mitigation. 40 C.F.R. 1502.22 (“If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement”). The Corps must provide for meaningful public review of these analyses before undertaking any decision making concerning NISP. *Colorado Env'tl. Coal. v. Dombeck*, 185 F.3d 1162, 1172 (10th Cir. 1999) (A document prepared under NEPA must “foster both informed decision-making and informed public participation”). Failure to provide for such public review would clearly fall short of both the intent and implementation of NEPA and the Clean Water Act.

The Corps must not wait for the issuance of a Final Environmental Impact Statement to make these disclosures. 40 C.F.R. 1502.9(a) (“The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements”). The required disclosures must be made through either a revision to the SDEIS or another Supplemental Draft Environmental Impact Statement.

40 C.F.R. 1502.9(a) (“If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion”), 40 C.F.R. 1502.9(c)(2) (The agency “[m]ay also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so”).

The Corps’ Project Manager for NISP, John Urbanic, has made a statement in an email that,

The Corps has “not made a determination regarding how that additional information will be presented to the public prior to the Final EIS. At this time we do not anticipate having a formal comment period when the FEIS is released.”

“RE: FW: Fort Collins/Larimer County NISP concerns,” attached here in Appendix E (E50).

If the Corps will not offer public comment on the FEIS, as is indicated by this statement, the Corp must present any and all required additional analyses in either a revision to the SDEIS or in an additional Supplemental Draft Environmental Impact Statement. If the Corps fails in this duty, it must provide a meaningful opportunity for public review of the FEIS.

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