



Parks and Open Space

5201 St. Vrain Road • Longmont, Colorado 80503
303.678.6200 • Fax: 303.678.6177 • www.bouldercounty.org

TO: Hannah Hippely, Land Use Department
FROM: Ron West & Janis Whisman
DATE: April 24, 2011
SUBJECT: Docket SI-09-0001, Southern Water Supply Project II

After a careful reading of the submitted materials, staff's opinion is that the application -- and in particular the alternative analysis -- is incomplete, inaccurate and biased towards the proposed alternative.

Your letter of October 14, 2009, to the applicant included a list of "items to be included in the required alternative analysis." Based on this list, staff will first discuss whether or not the required items were indeed addressed and/or adequately analyzed. Second, staff will present a long list of specific analyses that are incomplete, confusing, inaccurate or biased.

For brevity and clarity, staff will call the Siting Study document, the "SS," and the 1041 Application document, the "Application." Bullets below are from the October 14 letter; for those bullets that are not included here, staff considers the discussions to be adequate.

- Identify the length and width of the Pipeline in National, State, Local Ag Lands – include permanent easement numbers and construction easement numbers.

This analysis is incomplete and confusing. Lengths and widths are not provided, nor are figures for temporary easements.

Permanent Easements

P. 44 of the SS implies that a figure of 75 feet was used for the width of permanent easement, in all cases – "...the area of disturbance was calculated...using a typical cross-section.... A permanent easement of 75 feet would...be required at most locations." However, Figure 6 of the SS shows a 60-foot easement for areas parallel to SH 119. Which width was used for areas on SH 119? Figure 3 of the SS shows a 70-foot permanent easement for select sections, while Figure 1 shows a 90-foot permanent easement, but does not indicate where this would be required. If the accurate easement widths were indeed used, section by section, then staff needs to review the actual spreadsheets used; it is impossible to verify the numbers presented without this.

Temporary Easements

Other than stating that temporary easement would also be required, staff could find no reference to quantification of these acreages. These acreages will of course need revegetation, yet the separate figures, as called for in the above bullet, are not presented. It is unclear if Table 6 in the SS includes any temporary easements disturbed. Staff assumes it does not.

- Identify the area of Disturbance in National, State, Local Ag Lands

Although acreage numbers for this analysis are provided, they are again misleading and/or inaccurate. Page 12 of the SS states that, "Any agriculturally significant lands that fell within either the City of Longmont or City of Boulder municipal boundaries were removed from this dataset, as well as any parcels smaller than 2 acres.... Also, lands that...are no longer cultivated were removed...." While not quite arbitrary, these decisions to "update" these data are not based on sound planning assumptions.

- a) If a parcel has been annexed, it does not automatically follow that it would no longer continue in agriculture. Large portions of the IBM campus in Boulder have been actively farmed since the site was founded in 1965 – for 45 years. In Longmont, many parcels of nationally significant farmland are still farmed. At best, the assumption that all municipal lands will be developed is an attempt to make land use decisions for the cities. It is quite possible that the cities themselves will make it a goal to preserve some farmland within their boundaries. Finally, the base maps used, such as Map 3 in the Application, do not include the correct municipal boundary for Longmont near 75th St. Several square miles of city are not portrayed.
- b) Parcels that are from one to five acres play a major role in the current trend towards local food production. To assume that all 2-acre parcels are irrelevant to an alternative discussion is flawed. One successful community supported agriculture site near Lafayette grows 4000 pounds of produce per year, on ¼ acre.
- c) It is not a reasonable planning assumption to conclude that currently uncultivated lands will permanently remain so. Some of POS's own agricultural lands have "returned" to cultivation after a long absence.

An impartial alternative analysis cannot include such unfounded assumptions.

- For irrigated lands describe and quantify both the long term and short term impacts of the pipeline on irrigated lands.

Although pages 45 and 46 in the SS attempt to discuss these impacts, there is no distinction made between long and short term impacts. Rather, the discussion appears to concentrate on commitments to "mitigate," implying that these impacts can be fixed and are therefore not relevant to an alternatives analysis. How can alternatives be compared if the document basically says that "it doesn't matter how many acres of disturbance, because it all can be returned to how it once was?"

The SS states that, "Soil structure is developed over hundreds to thousands of years and once disturbed through mechanical means, the soil structure is destroyed." Yet, this can be "minimized" by limiting construction to when the soil is dry; this will "help prevent the total collapse of this structure." Then, simply, "Northern Water has agreed to *minimize* the working of soil during wet conditions." If only "minimized," wet soils *will* be worked, resulting in apparently "total collapse" of the structure.

Finally, "Northern is also committed to preserving and/or repairing any drain tiles that are encountered." Since individual tiles are part of a large and complex system across a field, this may not be possible to do in isolation. Other construction activities that have occurred on POS lands have left tile systems "permanently" damaged.

- Identify all water feature crossings and the nature and extent of any associated habitat, describe and quantify the impact of pipeline construction on the associated habitat.

This analysis is completely inadequate. Appendix V in the Application lists and described 47 crossings of water features, yet the SS concludes that the vast majority of these are not relevant to the alternative analysis. Rather, only permanent and intermittent drainages are relevant. P. 3 states that, "man-made features, such as canals, ditches, and reservoirs were not analyzed," while p. 5 states that, "...ditches usually have a narrow band of riparian vegetation, if any."

Appendix V includes riparian widths on all crossings. South of St. Vrain Road, there are 24 crossings, that add up to 306 linear feet of riparian. The appendix clearly shows that most of the crossings include riparian vegetation. Yet the analysis only considers 5 of these (on Alternative 1), leaving 19 crossings not considered in the analysis. These unconsidered crossings total about 166 linear feet of riparian.

- Identify existing riparian areas and describe and quantify the impact of pipeline construction on the identified resource (include a discussion of tree and other vegetation removal/impact here). Identify existing Rare Plant/Significant Natural Community areas and describe and quantify the impact of pipeline construction on the identified resource.

Tree removal is discussed, yet it is inadequate. The numbers of native, landscape, and exotic (non-native) trees to be removed are quantified. Native trees include coyote willow, which is not a tree, but rather a shrub with multiple stems and of about 6 to 10 feet in height.

Staff does not understand why a quantification of non-native trees is relevant to an alternatives discussion. These include Russian-olive, which POS actively eradicates from all of its properties. If anything, removing more would be beneficial.

Technically, the bullet above is discussing impacts to trees in riparian areas, so staff questions why landscape trees are included. Other than cost of replacement, are landscape trees relevant to an environmental analysis?

Rare plants and natural communities are adequately addressed.

- Identify existing Critical Wildlife Habitat areas and describe and quantify the impact of pipeline construction on the identified resource.

Critical Wildlife Habitats are discussed, but simply by the number of crossings. There is no description or quantification of impacts, or the county-sensitive wildlife species that are expected there. Impacts are dismissed by being "temporary."

- Identify where pipeline construction would have a traffic/transportation impact and describe and quantify the nature of this impact.

Although this category is outside of staff's expertise, even a lay review of this section has to conclude that it is one of the poorest of the impact areas addressed. Staff does not understand how a construction corridor 90 feet outside of road rights-of-way can be considered a metric of impacts to transportation. Even the documents seem to question this. P. 77 of the

Application states that “residential and emergency access will be provided at all times to adjacent properties,” and that, “Under normal traffic volume patterns, only several minutes of delay would be expected.” Yet, when comparing alternatives in the SS, construction 90 feet off the ROW is considered to be a valid evaluation criteria.

Roadway crossings are another metric deemed to be important in. The documents state that all roadway crossings will be by bore and jack methods. P. 77 of the Application also states that bore and jack crossings would “create minor impacts.”

Even if crossings are to be considered important, the data presented are questionable. Map 12 of the Application shows road crossings. For Alternative 1, south of St. Vrain Road, they are listed as follows: 75th St., Nelson Rd., Pike Rd., N. 73rd St. (twice), Nimbus Rd., Niwot Rd., Monarch Rd., and 63rd St. -- 9 listed crossings. The summary alternative comparison table on p. 35 of the SS shows 7 major arterial crossings, 1 county paved road, and 3 county unpaved roads, or a total of 11 crossings. Of the first list above, only Pike and Nimbus are unpaved at the crossing. Staff assumes that both county and municipal arterials are included in the 7 listed. Both the 75th and the 63rd crossings are city jurisdiction. These numbers still do not jibe.

- Identify where pipeline construction would impact existing development (and where development may encroach into the existing easement) and describe and quantify the nature of this impact.

Addressed below.

Other Issues with the Documents

Considering the inadequacy of the alternative analysis, perhaps the most telling pages are p. 32 to 37 in the SS. First is a list of “evaluation criteria” “that merit consideration.” Second is the summary table of quantified impacts. And third is a text synopsis of advantages and disadvantages of each alternative.

On the list of evaluation criteria, there are four criteria that are not even included in the subsequent summary table – ditches/canals (discussed above), prairie dog towns, distance in conflict with planned land uses, and total length of pipeline.

On the summary table, two “new” criteria appear – number of parcels crossed and number of commercial buildings within 100 ft., and an entire new category is added – Utilities, with “conflict rating” and “constructability” as criteria. “Conflict rating” does not include a rating (the table is empty), rather it references a long text discussion that makes conclusions but no “rating.”

There could actually be logical reasons for these discrepancies, but it is alarming that the “evaluation criteria” seem to arbitrarily vary across these parallel pages.

The summaries of the results, on p. 36 and 37, are even more arbitrary. For the purposes of simplification, staff will assume that the advantages and disadvantages, as listed, are correct, though several are questionable. But what is telling is what is *not* included. Given the way this summary is approached, the following advantages and disadvantages should be *added* to these pages, as follows (data from the table included).

Alternative 1

Disadvantages

- Higher amount of new easement required (75 ac)
- Higher amount of crossing through riparian forest (0.7 ac)
- Highest amount of prairie dog habitat crossed (12 sites; from map 4)

Alternative 2

Advantages

- Lower number of native trees removed (21)
- Highest number of exotic trees to be removed (93)

Disadvantages

- One of two alternatives with 3 raptor nests within 100 feet. This conflict will be mitigated by seasonal avoidance. (As presented for Alternative 1; mitigation should actually have no place in these summaries.)
- Some isolated construction difficulties

Alternative 3

Advantages

- Lower number of parcels crossed (36)
- Lower level of transportation effects (12 crossings, 4.9 miles)
- Lowest (not lower) amount of riparian vegetation disturbed (0.3 ac)
- Lowest number of commercial buildings within 100 feet (4)

Alternative 4

Advantages

- Least amount of new easement required (43.5 ac)
- Lowest number of intermittent stream crossings (1)
- Lowest overall level of disturbance to agricultural lands (28.7 ac)
- Least amount of prairie dog habitat crossed (1 site; from map 4)
- No raptor nests disturbed
- No critical wildlife habitats crossed

Disadvantages

- Highest disturbance to agricultural lands of national importance (19.3 ac)

As is readily seen by these omissions, the summary of the results is arbitrarily presented and is biased to Alternative 1.

Text sections that discusses each criteria -- p. 37 and on

P. 42, Open Space

1. The information provided as to which County open space properties will be affected by the pipeline (including all proposed alternatives) is incomplete.

- a. The property tables on p. 42-43 of the SS and on p. 78-79 of the Application are incomplete and inaccurate. Each list purports to contain all open space properties crossed, but the tables neither match nor include all of the fee and conservation easement parcels that will be affected. About 6-8 County open space properties are missing, with the actual number depending on how many house lots will be affected at the Dodd Farm open space near the intersection of North 73rd Street and Niwot Road. For example, the "County Carpenter CE" property is appropriately shown on Map C, West Side Longmont Segment, but the property is not in either table. (Please also note that the AHI property north of Lagerman Reservoir is now owned by Boulder County, so it should also be included in updated tables.)
 - b. A list of properties under negotiation for open space is needed. The statement on p. 11 of the SS that "Two parcels totaling 1.4 acres are currently in negotiation for conservation easements" comes with no further explanation, so it is not possible to tell where the data came from or whether it is complete. It appears to be incomplete, because two larger properties are not mentioned. The 756-acre AHI property acquisition and the 80-acre Ward property conservation easement acquisition should both have been listed, as they were both underway and already discussed publicly when the application was being prepared.
2. As a result of the incomplete information described above, the application contains incomplete data regarding the total numbers of open space properties that could be affected along the entire route, including along the various alternative routes. In addition, detail is needed regarding each of the open space properties that could be affected. For example, the tables on p. 43-43 of the SS do not provide the same information about crossing distance, alignment and comments that are included in the table on p. 78-79 of the Application, and since the tables do not list all of the properties, this data is incomplete.
 3. The length of fee and conservation easement properties affected on p. 34 of the SS do not match the sums of lengths listed on p. 78-79 of the Application. In some cases, the numbers provided also do not match the measurements the consultant provided in GIS shapefiles.
 4. The easement widths given are inconsistent throughout the documentation, making missing or unclear the area of proposed disturbance on affected properties, particularly those containing Agricultural Lands of National, State and Local significance.

Staff's analysis of the amount of disturbance on open space lands, by alternative, significantly differs from that presented in Table 1 of the SS. As examples, total POS miles crossed (fee and easement combined) will be presented here. (Note that staff's figures do not include the most recent POS purchases, such as AHI, thus the staff analysis and the SS analysis should be comparable.)

	Table 1	Staff's analysis	% Difference
Alt 1	4.0	4.8	17 % under-reported in SS
Alt 2	2.8	1.8	56 % over-reported in SS
Alt 3	2.7	2.8	no significant difference
Alt 4	3.5	3.0	17 % over-reported in SS

P. 47, Transportation Impacts

Staff does not understand why the section on City of Longmont is included in an alternative analysis. It would be just as (in)appropriate to include a paragraph on the extensive concerns that the county (or any other entity) has raised on the project for the last two years. It appears by its inclusion to bias the document, e.g., can the following issues truly be significant potential impacts: a "reduction in speed

limits of 10 mph,” “possible” lane closures, and “increased emissions?” It is stated that the City of Longmont letter is in Appendix 4, but there is no Appendix 4 in the document.

The document appears to claim (and the Longmont letter apparently does claim) that the pipeline sections paralleling Airport Road are particularly troublesome for transportation impacts. These sections total 7700 feet (p. 48). The Application states that the anticipated construction rate is 200 to 400 feet per day. If the slowest rate is used – 200 feet per day – this 7700-foot section could possibly be completed in 38.5 days, or 5.5 weeks. There was recently major work completed on Broadway Street in the City of Boulder, a street with traffic counts that are surely much higher than Airport Road. This repaving and extensive underground utility work took *over a year to complete*. Yet the drivers were indeed “inconvenienced” (p. 47) and the project was completed. Staff cannot understand how five weeks of construction on Airport Road is a (seemingly) insurmountable endeavor. Such a stance is simply incorrect.

P. 47 also states that, “Most of the roadways within the study area receive heavy use by cyclists.” Yet there is no attempt to either identify where bicycle lanes exist nor to quantify or compare impacts across alternatives. On the wider topic of outdoor recreation (identified in the Application as a “significant environmentally-sensitive factor,” the Application identifies only one parcel with outdoor recreation – “one property at the Boulder Reservoir” (p. 74). It is unclear if this refers to the IBM park near Coot Lake or a different parcel. At this park, it appears that a wide swath of the parking lot and a play area will be impacted during construction. Also unmentioned in either document are the Niwot ball fields just south of Lefthand Creek. At this site, the distance between the backstops/dugouts and a thick windrow of trees is only 50 feet. It appears that at least two ball diamonds will need to be temporarily removed and be unavailable under Alternative 1.

P. 48 states that in Alternative 4, Airport Road is crossed three times. This is incorrect; it is crossed four times. Again, to find such a simple and central piece of data incorrectly presented in the document is very problematic.

P. 1 to 31 of the SS

P. 3 states that, “Some of the data were field checked; however, the extent of this was limited since the alignments of some alternatives were only viewed from public ROW.” How can an alternative analysis be considered complete or impartial if it relies on remotely acquired information? As an example, are the 286 landscape trees impacted by Alternative 4 only an estimate, or were they actually seen? (A related question is how many of the 286 are, for example, newly-planted saplings vs. how many mature trees. This could easily make a significance difference in comparing and evaluating alternatives.) Map 3, with its aerial photos of “tree concentration [sic] areas,” implies that trees were only tallied using aerial photography.

P. 5 states that, “The riparian vegetation along [Lefthand Creek] is dominated by narrowleaf cottonwood” (*Populus angustifolia*), yet Appendix V in the Application clearly reports that the “dominant vegetation” is “*Populus deltoids* [sic] subsp. *monilifera* [plains cottonwood], *Alnus incana* subsp. *tenuifolia* [alder], *Elaeagnus angustifolia* [Russian-olive], *Festuca pratensis* [a grass], and *Salix fragilis* [crack willow]” The appendix data, presumably from field botanists, does not even mention narrowleaf cottonwood at Lefthand Creek. This could be considered a minor mistake, but the

document makes many statements about how the Lefthand crossing for Alternative 1 is superior to any others. This error is simply another of many in the document that lead to questions on the adequacy and fairness of the analysis.

P. 20: "CDOT would *unlikely* grant approval for siting this line inside of the SH 119 ROW" (emphasis added). This sentence implies that CDOT has never actually been asked this simple question. Either they would allow it, or they would not allow it. It has been two years since the last application. Is this question, a question that is of fundamental importance to the analysis, still an outstanding question? Has it still not been determined?

P. 26 and 28 discuss the Longmont Airport yet there is no discussion of possible consequences if the runway is extended. If the runway is extended, would the same long-term pipeline maintenance or emergency concerns exist, given the proposed alignment of Alternative 1?