September 2, 2015

John Urbanic, NISP EIS Project Manager
U.S. Army Corps of Engineers, Omaha District
Denver Regulatory Office
9307 S. Wadsworth Blvd.
Littleton, CO 80128
Email:nisp.eis@usace.army.mil

Dear Mr. Urbanic:

I am submitting these comments on the NISP Supplemental Draft EIS (SDEIS) on behalf of the Open Water Foundation, an organization that seeks to improve understanding of complex water issues by improving access to data and information, and increasing transparency. These comments have been prepared by myself, based on my familiarity with the subject matter and review of SDEIS materials. The following comments do not advocate for an alternative but instead point out specific issues with the SDEIS that, if addressed, could help stakeholders and the public better understand the subject matter. These comments are divided into sections, with reference to various technical reports.

Issues with the EIS Process

I will not dwell on the significant and well-known issues with the EIS process (schedule, complexity of process, etc.) but will point out that the comments below may help address some of these issues. In some cases, the feedback may be impossible to consider given current EIS processes and resistance to change. However, it is important to point out that if there truly are issues with the EIS process, shouldn't they be addressed? High performing government should learn and adapt.

Need for Open Data and Transparency

President Barack Obama is well-known for his support of open data and open government. See:

- https://www.whitehouse.gov/open
- May 9, 2013 Executive order "MAKING OPEN AND MACHINE READABLE THE NEW DEFAULT FOR GOVERNMENT INFORMATION" (https://www.whitehouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government-)
- January 21, 2009 Presidential Memorandum "Transparency and Open Government" (https://www.federalregister.gov/articles/2010/04/27/2010-9706/publication-of-open-government-directive)

However, it is unclear how the open government initiative applies to the NEPA EIS process. For example, section 2.1.1 in https://www.whitehouse.gov/open/around/eop/ceq/plan states:

> ***NEPA***

Under NEPA, CEQ ensures that Federal agencies meet their statutory obligations. The challenge of harmonizing our economic, environmental, and social aspirations has put NEPA and CEQ at the forefront of our nation's efforts to protect the environment.

At its core, NEPA creates transparency by requiring disclosure, public comment, and coordination about the environmental impacts of Federal actions. CEQ, with support from the Department of Energy Office of Health, Safety and Security, manages an extensive web portal for NEPA at NEPA.gov.

To modernize NEPA, CEQ has updated its public webpage, NEPA.gov (also known as NEPAnet), and is providing a wide range of information about NEPA through this portal. CEQ continues to upgrade this site to include the status of reviews of agency NEPA guidance, Recovery Act NEPA reporting, real-time NEPA review status, and links to the database of Environmental Impact Statement (EIS) filings and statistics posted on the Environmental Protection Agency's (EPA) website. These upgrades are designed to improve public participation and the quality of Federal agency administration of NEPA.

Although the actions highlighted above have positive results, they do not go far enough to promote transparency. A criticism of open data and open government is that government does the bare minimum by providing access to some data, often in formats that are archaic. The definition of government should to a large degree result in openness and participation – this should be the default behavior! President Obama's May 9, 2013 executive order requiring data to be made available in machine readable formats recognizes that government needs to go beyond the bare minimum and facilitate access to data. Why? Because it is useful and efficient to do so and results it many benefits for those who have access to the data.

With respect to the Army Corps and the EIS process, the following general observations and recommendations are made:

1. It is not clear how the President's Open Government Directive should be interpreted with respect to the EIS process and Army Corps publishing of data, the Federal Government, Army Corps, etc. An internet search using the phrase "open government directive environmental impact statement" and "open government directive army corps" did not yield significant information. If guidelines do not exist, it is recommended that they be developed and provided to those who contribute content to the EIS.
2. Granted, some of the open government efforts have occurred after the initial NISP EIS; however, open government has been a priority throughout President Obama's time in office and this time generally overlaps the period of the NISP SDEIS. It is recommended that remaining NISP EIS efforts be conducted in a way that is consistent with the Open Government Directive and in particular the May 9, 2013 executive order requiring data to be made available in machine readable formats (NOT ONLY PDF!).
3. I requested from the Army Corps quite a long list of data resources during the public comment period on the NISP DEIS. I thought that most of these request were fairly straightforward, basically: "give me the data that are mentioned in the technical reports". If the data were published in a way that adhered to the May 9, 2013 executive order requiring data to be made available in machine readable formats, it should have been a simple matter to download the data corresponding to the technical reports. Feedback that I received was that not many people had requested such information, the Army Corps was not prepared to provide the data, some

data was proprietary, I could get the raw data from other sources, and my request was not specific enough to provide the data. In the end, of all the requests, a relatively small amount of materials was provided. This illustrates the following issues: the public comment period is short compared to the overall EIS period, the amount of information to review is large, and the barriers to REALLY being able to review the data inputs and evaluation are so large that a natural response is to provide input that the analysis and report are not understandable and therefore are insufficient. My feedback is that the Army Corps appears to have been ill-prepared to provide data for the SDEIS in a comprehensive and understandable way. The recommendation is to improve, for example by considering recommendations made in the following sections.

4. My request for data and in particular for the Common Technical Platform (CTP) model data sets was met with the response that some data are proprietary and cannot be released. However, I was instructed that I could ask for the data sets using a FOIA request. This seems to be counter to the President's Open Government Directive and May 9, 2013 Executive Order. I have never done a FOIA request and am not sure that I want to go through the pain of that process. However, I may request the model data sets because it is the only option. See the next section.

The Common Technical Platform Needs to be Transparent

Presumably the reason for the CTP is to provide a framework within which technical analysis can occur, sharing data and tools, increasing efficiency, and minimizing redundant analysis. This sounds like collaboration that could benefit "the commons" understanding the analysis. In reality, the CTP appears to be a complex set of processes and tools that are understood by very few people and is essentially a black box. Given that the SDEIS is evaluating how to allocate a significant amount of the most fundamental resource (water), and that water is a public resource in Colorado, it would seem that the data, tools, and processes used to analyze the resource should fundamentally be open and accessible. The lack of transparency around the models is a significant barrier to the public and various stakeholders being able to evaluate the SDEIS and again, the result is likely a multitude of comments asking for more information and more analysis.

I strongly recommend that the Army Corps find a way to provide the CTP software, input data, and results, without the need of a FOIA.

Need for More Clarity

The SDEIS is primarily an engineering study written by engineers for engineers. Being an engineer myself, I understand the challenges of publishing information that can be understood by a spectrum of readers. If readers of the SDEIS documents cannot understand the content to a reasonable degree, additional requests will be made. The SDEIS documents attempt to address this issue by providing summaries in the main report and referencing technical reports and other appendices. There is significant work remaining, in particular water quality modeling, that impacts clarity of the SDEIS documents. However, there are other limitations that could have been and need to be addressed. A few examples are included below:

1. Many of the reports use "IY" and the definition is given as "Irrigation Year". In Colorado, irrigation year often indicates the period November 1 through October 31. However, it may have other definitions such as October 1 through September 30 (often called water year). Technical reports show annual data in calendar year, water year, and irrigation year.

Specifically, it would be helpful if IY is defined by stating the dates and that various reports clearly indicate how annual data are reported.

2. Similarly, there are basic definitions that can be misinterpreted. The term "use" is often used to mean withdrawal from river or reservoir but could also mean delivery to a customer (after some delivery losses). The term "consumptive use" is more specific. Similarly, "demand" can mean the actual or projected withdrawal from a river, or it could mean consumptive use demand. These are fundamental definitions that impact understanding of the need and sizing of large projects like NISP. It is recommended that such terms are more clearly defined to facilitate understanding by the public.
3. The "no action" alternative appears to take an action. This is confusing. Why is there not a true "no action" alternative?
4. There is a need for clear visuals that address the key issues and integrate information. It may be difficult for the consulting team to provide such visuals because of separate analyses. Such analysis and visuals may actually be best created proponents and opponents of the projects. However, without easy access to the data (CTP, etc.), it is difficult for third parties to develop visual products that could enhance the clarity of understanding.
5. An example of a need for visuals is the disaggregation of monthly data to daily timestep. Visuals that illustrate how the data are manipulated would help people understand the concept and validity of the disaggregation.
6. The use of statistics without access to raw data can be misleading. For example, presenting impacts as an average or box and whiskers type of visual can mask impacts. In Colorado, there are often many dry years and occasionally years with very high precipitation and river flows. The difference between using mean and median can be large, for example for flows at the Lincoln Street Gage depending on month. Similarly, the impacts of NISP when built (positive and negative), need to be presented appropriately and not masked with statistics. Again, having access to the raw data allows for closer examination and development of data product that examine issues from multiple perspectives. The raster graphs and stream mile representations of data are useful, but additional clarity could be provided by publishing the data used in the analysis.

Need for "Bread Crumb Trail" or "Audit Trail" in Analysis

The data that were provided by the Army Corps points out issues in "connecting the dots". Ideally, one could read the PDF document, focus on a specific section that evaluates an issue using a data analysis, and access the data used in the analysis. This "drill down" ability is fundamental to understanding approach, challenging the analysis, and verifying or criticizing the analysis. As it stands, it is difficult to confirm that an analysis is adequate or accurate and this may be critical for specific issues.

As an example, the Army Corp provided the Technical Report file 05NISP_SDEIS_BBC_2011_Demand_Review_TM.pdf. A request for data resulted in the Army Corp providing the Excel file "BBC analysis of HE data 2011 Email.xlsx". The Excel workbook contains very little information about data sources and methodology for projections and estimates. Although it is possible to read the document for additional information, it would be very helpful if the Excel workbook could stand on its own by including more explanatory information.

Ultimately, an analysis will be criticized for any number of reasons including criticism of the input data, criticism of the analysis process, and criticism of the interpretation of results. If there is not a clear

bread crumb trail (audit trail) from original data to result, and consistent documentation, then it is difficult to fully trust the analysis.

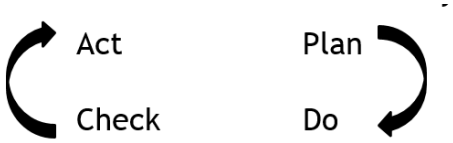
Another example is referencing external sources of information. For example the 13NISP_SDEIS_CDMDiNataleHydros_2011_Water_Administration_TM.pdf file references memoranda from Colorado's Decision Support Systems stored in the State of Colorado's imaged document system. These memos are not trivial to access in the State's system and some links in the document are broken. It would be better if a copy of the memos are downloaded and saved with the technical report and made available later. The online resource can be referenced, but a saved artifact will ensure that others can efficiently find and review resources. Such artifacts can then be published with the SDEIS.

Need for Sufficient Time to Review Results

Simply put, the time for public comment is insufficient. Moreover, a lack of published data limits evaluation of the core datasets, an activity that could be efficiently performed and shared among interested parties. More time for review would be helpful. More time coupled with release of data would be extremely helpful.

Need for Flexibility in Implementation

The Poudre is a complex system and is impacted by over a hundred years of operations. It is not simple to make significant changes to such a system. Consequently, a key part of NISP should it move forward, is to build in an ability for flexibility, in order to ensure project goals and address impacts. Any alternative that is adopted will hopefully allow for ongoing input from basin stakeholders in order to address local and regional issues. This following figure illustrates one iterative approach. Adaptive management is a similar approach. There is a need to ensure that impacts from any project are understood and addressed through monitoring and coordinated operations within the basin.



I wish that I had more time to review the SDEIS, and I wish that I could have received more data to review, in particular the CTP datasets. I hope that this feedback proves useful.

With regards,

Steve Malers
Chief Technology Officer and Founder
Open Water Foundation