

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

Crown Hydro, LLC

Docket Nos. P-11175-000  
P-11175-025

**COMMENTS OF FRIENDS OF THE LOCK AND DAM  
ON THE ENVIRONMENTAL ASSESSMENT**

Pursuant to the Notice of Availability of the Draft Environmental Assessment (“EA”)<sup>1</sup> for the unconstructed Crown Mill Hydroelectric Project No. 11175-025 (“Crown Hydro Project” or “Project”) issued September 2, 2016, by the Federal Energy Regulatory Commission (“FERC” or “Commission”) in the above-captioned proceeding, Friends of the Lock and Dam (“FL&D”) respectfully submits the following comments on the Draft Environmental Assessment (“EA”).

**I**

**INTRODUCTION**

The Crown Hydro Project is a 3.4 MW previously-licensed project that would be located in the midst of the central riverfront in Downtown Minneapolis at the U.S. Army Corps of Engineers (“Corps”) Lock adjacent to the Upper St. Anthony Falls (“Upper Lock”). The FL&D previously filed to intervene in the licensing proceeding in the above-captioned proceeding and to protest the licensing and construction of the Crown Hydro Project.<sup>2</sup> FL&D now addresses the EA’s facially inadequate conclusion that Commission approval of the Project, now in its third

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<sup>1</sup> Crown Hydro, LLC, Notice of Availability of Draft Environmental Assessment, Docket No. P-11175-025 (Accession No. 20160902-3016) (Sept. 2, 2016), 81 Fed. Reg. 62,494 (Sept. 9, 2016) (hereinafter “EA”).

<sup>2</sup> Indeed, any hydroelectric facilities subject to Part I of the Federal Power Act (“FPA”) constructed on the Minneapolis central riverfront (west side) would seriously compromise public use of the local reach of the Mississippi River, potential cultural and aesthetic benefits of the Upper St. Anthony Falls and the Corps’ Upper Lock at that site. In exchange for a proposed power generation facility, FL&D plans to spearhead development of improved access from the City to the Upper Lock, the Upper St. Anthony Falls dam, and the river, development of green space, visitor and interpretive centers, and other accommodations for public use. That development is known as “The Falls.”

incarnation, will result in no significant impacts, despite the fact that Crown proposes to construct its Project in the center of a major American city experiencing significant demographic change and modernization, on the nation's most legendary and commercially important estuary, and virtually atop a major piece of hydrological engineering owned by the United States. These factors accentuate both the intensity and likelihood of serious impacts on the river, the Upper Lock, and the City's four decade effort to rehabilitate and improve the central riverfront. Those impacts would adversely affect the natural environment, the disposition of the Upper Lock, and the social and economic health of the high density areas surrounding the Upper Lock.

In addition to the Project's situation overall, FL&D argues that the licensee's conduct and lack of progress, failure to provide information that would make assessment of the Project's impacts possible, and the changed environment surrounding the Project make Commission action on Crown Hydro's License Amendment Application ("Second License Amendment") a major Federal action significantly affecting the quality of the human environment. At bottom, the EA's deficiencies are attributable to its failure to take a hard look at the Project's impacts on certain resources and activities, its context, and the intensity of the interests arrayed against it. Moreover, the EA has not even attempted to argue for a countervailing public benefit from the Project, such as a supply of needed or otherwise inaccessible source of clean or low-cost energy for the metropolitan area. Nor does the EA address all plans for the Project's proposed site, or reflect the input of the agencies that the licensee or the Commission must consult about the Project's impacts, or account for the recent changes in the City or the operation of the Upper Lock, or address the near-unanimous opposition to the Project. Finally, the proposed Finding of No Significant Impact ("FONSI") in the EA is hard to justify on the basis that the amended Project

would have consequences no different from its original 1999 configuration in the same general locale.

FL&D therefore strongly encourages the Commission, at a minimum, to (1) order Crown Hydro to complete its consultation responsibilities within a reasonable time and then to mitigate any and all adverse impacts identified in those consultations, (2) prepare a draft Environmental Impact Statement, and (3) seriously consider the no action alternative with respect to the Second License Amendment. Although FL&D believes that the Second Amended License of Crown Hydro should be rejected as inconsistent with the public interest and the standards of the FPA, these comments will be limited to showing how the Commission's FONSI under the existing facts of this case is inconsistent with the facts as we understand them, the requirements of the National Environmental Policy Act ("NEPA"),<sup>3</sup> and the Commission's regulations.<sup>4</sup>

The Commission affords commenters on a NEPA document like the EA in this case a separate opportunity to intervene and become a party. We therefore move to timely intervene on that basis pursuant to 18 C.F.R. § 380.10 (2016).<sup>5</sup>

## **II.**

### **FL&D'S RESPONSE TO THE EA**

#### **A. Does the EA Represent a Hard Look at the Crown Hydro Project?**

NEPA requires that the Commission prepare an Environmental Impact Statement ("EIS")

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<sup>3</sup> National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* (2012).

<sup>4</sup> 18 C.F.R. Part 380 (2016).

<sup>5</sup> *See Central New York Oil and Gas Co., LLC*, Notice of Intent to Prepare an Environmental Assessment, at p. 6, Docket No. CP10-480 (Accession No. 20100922-3010) (Sept. 22, 2010).

for “major Federal actions [s]ignificantly [a]ffecting [t]he quality of the human environment.”<sup>6</sup> If an agency determines that a Federal action is not likely to have significant adverse effect, it may prepare a draft EA in compliance with NEPA to determine whether the Project constitutes a major Federal action requiring an EIS which is memorialized in a FONSI.<sup>7</sup> A FONSI is not typically the product of the same level of public review and case-specific study that characterizes formulation of an EIS. Moreover, unlike the Federal Power Act (“FPA”),<sup>8</sup> which regulates entry into (and at least theoretically, exit from) the hydropower business, NEPA is procedural; however, from its inception, courts made clear that NEPA was “more than an environmental disclosure law. NEPA was intended to effect substantive changes in decision making.”<sup>9</sup> In other words, FERC’s actions on Crown Hydro’s Second License Amendment must sustain judicial scrutiny as to the following:

(1) whether the agency took a “hard look” at the environmental problem; (2) whether the agency identified the relevant areas of environmental concerns; (3) . . . whether the agency made a convincing case to support its finding of no significant impact; and (4) if there was an impact of true significance, whether the agency convincingly established that changes in the project sufficiently reduced it to a minimum.<sup>10</sup>

In our view, the Commission has a history of admirable efforts to apply NEPA. The corpus of FERC decisions gives us some guidance as to what does and does not constitute a hard look at the impacts of this Project adequate to sustain its NEPA review in this particular case.<sup>11</sup>

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<sup>6</sup> 40 C.F.R. § 1502.3 (internal citation omitted) (2016).

<sup>7</sup> 40 C.F.R. §§ 1501.3-1501.4.

<sup>8</sup> 16 U.S.C. Ch. 12, Subch. 1 (2012).

<sup>9</sup> *Environmental Defense Fund v. Corps of Engineers of U.S. Army*, 470 F.2d 289, 297-8 (8th Cir. 1972).

<sup>10</sup> *Pub. Employees for Environmentally Responsibility v. U.S. Fish and Wildlife Service*, Civ. No. 14-1807, Slip Op., 2016 WL 1254214, at \*4 (D.D.C. Mar. 29, 2016) (“*Public Employees*”); *Myersville Citizens for a Rural Community v. FERC*, 783 F.3d 1301, 1322 (D.C. Cir. 2015); *Sierra Club v. Peterson*, 717 F. 2d 1409, 1413 (D. C. Cir. 1983). We note that there is a historical debate as to whether NEPA analyses can even take account of mitigation measures.

<sup>11</sup> *See Tennessee Gas Pipeline Company, L.L.C.*, 156 FERC ¶ 61,157 (2016) (“*TGP*”); *Alabama Power Co.*, 143 FERC ¶ 61,249, at P 218 (2013); *Public Util. Dist. No. 2 of Grant County, Washington*, 143 FERC ¶

An EA provides evidence and analysis for determining whether to prepare an EIS.<sup>12</sup> According to the Council on Environmental Quality (“CEQ”) regulations, EAs must contain “high quality” information so that decisions are “based on an understanding of environmental consequences[.]”<sup>13</sup> The Commission must be able to show it took a “hard look” at potential impacts when preparing the EA and, if a FONSI is made, FERC must make a “convincing case” to support the FONSI.<sup>14</sup>

Looking at the guidelines provided by the President’s Council on Environmental Quality, the Commission has explained that the CEQ guidelines for agencies do not define what makes an agency decision or its environmental impacts “significant.” However, it concludes that the guidelines do explain that whether an impact is “significant” depends on both “context” and “intensity.”<sup>15</sup> “Context,” the Commission has stated, means that the “significance of an action must be analyzed in several contexts,” including “the affected region, the affected interests, and the locality.”<sup>16</sup> With respect to “intensity,” the CEQ sets forth **10** factors that agencies should consider, including: the unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild or scenic rivers, or ecologically critical areas (factor 3), the degree to which the effects on the quality of the human environment are likely to be highly controversial (factor 4),<sup>17</sup> and whether the action threatens a violation of

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61,046 (FERC 2013); *Dominion Transmission, Inc.*, 141 FERC ¶ 61,240 (2012) (“*DTI*”); *NE Hub Partners, L.P.*, 83 FERC ¶ 61,043 (1998).

<sup>12</sup> 40 C.F.R. § 1508.9(a).

<sup>13</sup> 40 C.F.R. §§ 1500.1(b), 1500.1(c).

<sup>14</sup> See e.g., *Public Employees*, 2016 WL 1254214, at \*4; *Nat’l Parks Conserv. Ass’n v. United States*, Civ. No. 15-cv-01582, Slip Op., 2016 WL 1273190, at \*14 (D.D.C. Mar. 31 2016).

<sup>15</sup> *TGP*, 156 FERC ¶ 61,157, at P 47 (citing 40 C.F.R. § 1508.27 (2016)). See also *Alabama Power Co.*, 143 FERC ¶ 61,249, at P 218 (2013).

<sup>16</sup> *TGP*, 156 FERC ¶ 61,157, at P 47 (citing 40 C.F.R. § 1508.24(a)-(b)).

<sup>17</sup> *TGP*, 156 FERC ¶ 61,157, at P 47; *DTI*, 141 FERC ¶ 61,240, at P 73. The Commission explained, “For an action to qualify as highly controversial, there must be a “dispute over the size, nature or effect of the action, rather than the existence of opposition to it.” *Id.* at P 76 (citing *Fund for Animals v. Williams*, 246

federal, state, or local law (factor 10).<sup>18</sup> At the root of the EA’s deficiencies is a lack of information owing to the incompleteness of the required agency consultations for which the licensee is responsible and to the reliance by the Commission on old data and unsupported assumptions probably dating back to the original licensing proceeding. The resulting uncertainties about the Project’s impacts and its very future need to be resolved by the Commission.<sup>19</sup>

FL&D therefore evaluates the EA based on these factors and criteria. Although the EA considers many aspects of the Crown Hydro Project and its likely impacts, the context of the Project is not sufficiently or accurately analyzed. In fact, the EA implicitly assumes that nothing has significantly changed on the Minneapolis riverfront or the Upper Lock since the original license was issued. In addition, the CEQ factors are not meaningfully addressed. In other words, the EA is deficient even under FERC precedent.

### **B. The Failure to Look Hard at Crown Hydro Project’s Impacts**

As noted above, NEPA requires agencies to use “high quality information” as the basis for its decisions. The draft EA appropriately checks all the usual boxes and identifies all the applicable laws and regulations that govern the Commission’s investigation in such cases. It recognizes the licensee’s proposed environmental protection measures, which range from storing small amounts of lubricant on site, to re-seeding native grasses, and to promises to work with permitting agencies in the future. These are the typical mitigation measures that must routinely be

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F.Supp.2d 27, 45 (D.D.C. 2003)).

<sup>18</sup> *TGP*, at P 47 (*citing* 40 C.F.R. § 1508.24(b)); *DTI*, at P 73 (*citing* §§ 1508.27(b)(3)-(4), and (b)(10)).

<sup>19</sup> In *Ocean Advocates v. U.S. Army Corps of Engineers*, the court held, “Preparation of an EIS is mandated where uncertainty may be resolved by further collection of data or where the collection of such data may prevent speculation on potential . . . effects.” 402 F.2d 846, 867, 870-71 (9th Cir. 2005) (internal quotations omitted) (*quoting National Parks Conservation Association v. Babbitt*, 241 F.2d 722, 732 (9th Cir. 2001)).

undertaken during ground-disturbing activities like project construction. But they are less important as indicia of the Commission's discharge of its obligations under NEPA, especially in a sensitive area. The EA addresses affected geology and soils, possible construction impacts, water quantity and quality, seasonal flows, and various aquatic resources. As far as these sections of the EA go – largely off-the-shelf descriptive information with brief Staff conclusions – it is what we expect from a typical EA for projects that are farther removed from urban features, large in-river infrastructure investments, and the concerns of highly concentrated groups and populations, commercial activities, and the interests of federal and state property owners and regulatory agencies. We think that the EA should be held to a higher standard in this case due to the unique environment in which the applicant seeks to construct and operate.

The EA fails to address the changes that have occurred since the Project was originally proposed and licensed. That “context” is absent from Staff's analysis. We submit that the proximity of historical and cultural resources, like parklands and planned parklands, the Upper Lock, the Upper Falls, and the Stone Arch Bridge, and the impacts that subsoil construction might have on historic structures require greater vigilance.

The “intensity” of likely impacts is magnified by the immediate socio-economic environment, that is, the probable effects on human activities and expectations of Minneapolitans that are reasonably to be predicted in an urban environment. Finally, the lack of completed consultations and insufficient information and record support about critical environmental features, due at least in part to the licensee's dilatory conduct, deprives both parties and decision makers of assurance that the Crown Hydro Project will comply with applicable federal, state, or local laws.

We recognize that the Commission is not required to await compliance with all of the

legal requirements of fellow agencies and the complete satisfaction of the public and stakeholders before conducting its environmental review. However, the EA's reliance on the licensee's assurances of future compliance in virtually all cases is an extraordinary departure from FERC's NEPA obligations, which are ultimately based on its independent evaluation of reliable and high quality information. On the basis of CEQ's 10 factors and FERC's own requirements and case law, FL&D concludes that the EA does not constitute a hard look at the potential impacts of the Crown Hydro Project.

FERC has always sought to achieve balance in its decisions, and nowhere is a balance of competing interests more important than when the damage to the natural and human environment potentially affects thousands of people and a City's cultural life, compared to an energy investment of limited economic or environmental consequence by a supposedly capable private applicant. FERC decision makers need an understanding of the consequences of the Crown Hydro Project that only the extensive analysis of an Environmental Impact Statement can provide.

We now expand on that point by commenting on the likely impacts on individual resources, the infirmities in Crown's prosecution of its application for a Second License Amendment, and the unsupported assumptions upon which the EA relies.

### **1. Impacts on Access to the Riverfront and the Lock and Dam**

In its previous Intervention and Protest, FL&D identified the overall conflict that the Crown Hydro Project's Second License Amendment poses for various current and future activities and physical features at the Upper Lock and Dam. The Project presents a much larger problem for the re-purposing of the Lock and the revitalization of a critical part of the Minneapolis riverfront than the FERC appears to appreciate or than the EA has addressed.<sup>20</sup>

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<sup>20</sup> The EA argues that the Project's impacts on plans that are not fully accomplished, such as Water Works



FL&D has attempted to supply information that is not reflected in the EA, but the overall challenge facing FERC Staff in this case has to do with the fast-changing environment surrounding the proposed Project and the failure of FERC analysts to insist that the licensee pursue that information and finish the consultations that are required by law precisely because of the variety of environmental (including socio-economic) features that could be affected and the timing of developments about which the Commission and the licensee need to be fully apprised.

In broad brush, the FERC should have studied the range of adverse impacts the Project would have on the riverfront. In sum, the Crown Hydro Project:

- Conflicts with plans of the Minneapolis Park and Recreation Board, the National Park Service, the Minnesota Historical Society, the Minneapolis Parks Foundation, the St. Anthony Falls Heritage Board, and several non-governmental organizations to make the lands and waters surrounding the Lock and Dam into parks, historical centers, recreational centers and other opportunities for public enjoyment of this part of the City. Many of these plans are formally adopted land use or regional park plans that would support denial of the amended license for this Project;
- Forecloses development of a central feature of “The Falls,” FL&D’s design plan to re-purpose the Lock and Dam and surroundings for the educational, cultural, aesthetic, and recreational benefit of the public;
- Prevents achievement of the Minneapolis Park and Recreation Board’s and the St. Anthony Falls Heritage Board’s long time mission to connect the many parks, trails and historic sites, of which The Falls is the keystone;
- Limits the options for converting the industrial hardscape surrounding the Lock and Dam into accessible outdoor space for public use;
- Effectively blocks easy public access to the Lock and Dam in the future, which perpetuates the separation of the City from its central riverfront;
- Restricts public access along, through, and parallel to the River, blocking

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which residents have been working on for six years, shouldn’t be studied because they are not fully developed. *See* EA at p. 61. We expect the same criticism to be levied against The Falls and FL&D’s positions. FL&D is not opining about speculative developments. We think that the preclusive effects of the Crown Hydro project with respect to current plans and foreseeable changes at the riverfront make that argument inappropriate for the purposes of NEPA analysis.

or extending portaging around the Project and affecting other recreational opportunities;

- Undermines the historical and educational value of the Corps' Upper Lock and aesthetic value of the Upper St. Anthony Falls Lock and Dam site as a whole; and
- Adversely affects the ability of local civic and government groups to take a balanced approach to improving the Minneapolis riverfront by modernizing access, creating green space, and preserving important remnants of the City's commercial and industrial past so that visitors to the City's center will have a healthier, more livable, and interesting experience.

Although FL&D understands that the FERC Staff could not have known about The Falls project in sufficient time to incorporate it into its draft EA, the City's "chain of parks" and its long-term effort to revitalize all parts of the riverfront make this or other redevelopment efforts inevitable. In this key aspect, the FERC's NEPA review should take a hard look at more than the immediate, direct impacts on existing resources. It should examine the preclusive effects on those efforts and plans. This does not constitute speculation but a thoughtful analysis clearly within the NEPA mandate.

## **2. Consistency with Local and Regional Plans of Development**

The Federal Power Act and the Commission's regulations require FERC to analyze the Project's consistency with Comprehensive Plans.<sup>21</sup> The EA provided analysis of the State Comprehensive Outdoor Recreation Plan, but otherwise summarily concluded that "no inconsistencies were found" between the Project and an itemized list of Comprehensive Plans.<sup>22</sup> We submit that there are other Comprehensive Plans, as well as regional and local plans that are also important.

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<sup>21</sup> FPA Section 10(a)(2)(A), 16 U.S.C. § 803(a)(2)(A); 18 C.F.R. § 2.19; Order 481-A, 53 Fed. Reg. 15804 (May 4, 1988).

<sup>22</sup> EA at p. 83.

**a. Failure to Consider Important Comprehensive Plans**

FPA Section 10(a)(2)(A) requires the Commission to consider the extent to which the Crown Hydro Project is consistent with “comprehensive plans” for, among other things, improving or developing a waterway affected by the project.<sup>23</sup> In order to qualify as a “comprehensive plan” under the Commission’s regulations implementing this provision of the FPA, 18 C.F.R. § 2.19, the plan must: (i) be prepared by a federal agency, or a state agency in which the facility will be located, (ii) include a description of the standards applied, the data relied upon, and the methodology used in preparing the plan, and (iii) be filed with the Secretary of the Commission.<sup>24</sup>

The following plans meet the Commission’s regulations implementing FPA Section 10(a)(2)(A). They are directly applicable to the Project’s proposed site, yet were totally ignored in the EA:

- Upper Mississippi River Basin Commission, Water and Land: Future Perspectives and Plans. April 25, 1978.<sup>25</sup>
- U. S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American Waterfowl Management Plan. Department of the Interior. Environment Canada. May 1986.<sup>26</sup>

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<sup>23</sup> 16 U.S.C. § 803(a)(2)(A) (2012). The EA cites to three older plans but does not explain if or why the information in the plans may or may not be relevant ((1) “Upper Mississippi River Basin Commission. 1981. Comprehensive master plan for the management of the Upper Mississippi River system - environmental report. Minneapolis, Minnesota. September 1981”; (2) “Upper Mississippi River Basin Commission. 1982. Comprehensive master plan for the management of the Upper Mississippi River system. Minneapolis, Minnesota. January 1, 1982”; (3) “National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993”). In *Public Employees*, the D.C. District Court found an EA insufficient, in part, because the agency relied on modeling data that was 5 years out of date. *Public Employees*, 2016 WL 1254214, at \*4. In *Western Watersheds Project v. Abbey*, the Ninth Circuit held that an agency errs when it relies on old data without showing the data to remain accurate. *Western Watersheds Project v. Abbey*, 719 F.3d 1035, 1052 (9th Cir. 2013).

<sup>24</sup> 18 C.F.R. § 2.19 (2016); Order 481-A, 53 Fed. Reg. 15804 (May 4, 1988).

<sup>25</sup> Upper Mississippi River Basin Commission, Water and Land: Future Perspectives and Plans (Accession No. 20090207-1214) (April 25, 1978).

<sup>26</sup> See Federal Energy Regulatory Commission, Office of Energy Projects, List of Comprehensive Plans, at p. 50 (Oct. 2016); Department of the Interior, Environment Canada, North American Waterfowl Management

- Minnesota Department of Natural Resources. Undated. Minnesota Department of Natural Resources Canoe and Boating Route Program. St. Paul, Minnesota. 39 Pamphlets.<sup>27</sup>

The Upper Mississippi River Basin Commission's *Water and Land: Future Perspectives and Plans* deals directly with the Minneapolis metropolitan area and discusses many aspects of the urban Mississippi river, including outdoor recreation and hydroelectric generation. Prepared by the State of Minnesota, the United States Department of Agriculture, the Corps, the United States Department of the Interior, the United States Environmental Protection Agency, and the United States Department of Housing and Urban Development, it describes all standards, data, and methodology for the study of water and land use, and was filed with the Commission on April 25, 1978. The *American Waterfowl Management Plan* and the *Minnesota Natural Resources Canoe and Boating Route Program* also meet the Commission's regulatory criteria and were analyzed by the Commission in the EA for Northern States Power Company's (Xcel Energy) St. Anthony Falls Hydroelectric Project (P-2056).<sup>28</sup> Given the fact that Northern States Power Company's Project No. 2056 and Crown Hydro's Project No. 11175 both rely on the same hydrologic environment and draw water from the St. Anthony Falls, it's is appropriate to analyze the implications of these plans with respect to the Crown Hydro Project.

**b. The EA Omits Consideration of Important Regional and Local Plans**

As discussed above, FERC is obligated under 18 C.F.R. § 2.19 to review plans that are, among other things, on file with the agency. Without advocating an unlimited Staff resource

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Plan, at p. 10 (1986), available at <https://www.fws.gov/migratorybirds/pdf/management/NAWMP/OriginalNAWMP.pdf>.

<sup>27</sup> See Federal Energy Regulatory Commission, Office of Energy Projects, List of Comprehensive Plans, at p. 49 (Oct. 2016).

<sup>28</sup> Northern States Power Company (Xcel Energy), Notice of Availability of Environmental Assessment, Docket No. P-2056-016, at p. 88 (Accession No. 20040308-3049) (Mar. 8 2004).

commitment, we think that the Commission’s focus should be much broader in this case. FERC and the licensee are no doubt aware of the many plans involving the use and enjoyment of the Mississippi River in the Twin Cities metropolitan area. However, the EA apparently disregarded them, with two exceptions. The Commission would be well advised to consider the following twelve important regional and local plans pursuant to FPA Section 10(a)(1) before determining that an EIS is unnecessary in this case, and before ruling on Crown Hydro’s Second License Amendment.<sup>29</sup> State and regional plans that are undeniably relevant are:

- *Mississippi National River and Recreation Area, Comprehensive Management Plan* (1995).<sup>30</sup> Congress established the Mississippi National River and Recreation Area (MNRRA) in 1988 and charged the Secretary of the Interior with coordinating efforts to enhance the 72-mile section of the Mississippi River corridor. The 2016 EA for Crown Hydro discusses the MNRRA, but it does not evaluate the extensive MNRRA master plan.<sup>31</sup>
- *Mississippi National River and Recreation Area, Strategic Plan* (2008-2012).<sup>32</sup> This plan provides strategic goals for heightening the visibility and the position of the Mississippi River for enjoyment, recreation, and education.
- *Minneapolis Park and Recreation Board, Central Mississippi Riverfront Regional Park Master Plan* (2015).<sup>33</sup> This plan provides the regional park boundary, which encompasses the proposed site for the Crown Hydro project.
- *Metropolitan Council, Regional Parks Policy Plan 2030* (June 12, 2013).<sup>34</sup> This plan discusses the Regional Parks system and provides regional park expansion plans through 2030.

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<sup>29</sup> The Commission’s policy statement on Project Decommissioning at Relicensing clarifies that nothing compels the Commission to issue a hydropower license when the license cannot be fashioned in a way that comports with FPA Section 10(a). Project Decommissioning at Relicensing, Policy Statement, 69 FERC ¶ 61,336 (Dec. 14, 1994).

<sup>30</sup> Dep’t of the Interior, Mississippi River Coordinating Commission and National Park Service, Comprehensive Management Plan: Mississippi River and Recreation Area (1995), available at <https://www.nps.gov/miss/learn/management/loader.cfm?csModule=security/getfile&PageID=3202395>.

<sup>31</sup> EA at p. 56, 58.

<sup>32</sup> Mississippi National River and Recreation Area, Strategic Plan (2008-2012), available at [irmafiles.nps.gov/reference/holding/443962](http://irmafiles.nps.gov/reference/holding/443962).

<sup>33</sup> Minneapolis Park and Recreation Board, Central Mississippi Riverfront Regional Park Master Plan (2015), available at [https://www.minneapolisparcs.org/asset/d6kv9t/central\\_riverfront\\_masterplan\\_approved.pdf](https://www.minneapolisparcs.org/asset/d6kv9t/central_riverfront_masterplan_approved.pdf).

- *The St. Anthony Falls Heritage Board, The St. Anthony Falls Interpretive Plan* (2009).<sup>35</sup> This Interpretive Plan provides guidance for the preservation and interpretation of historic features on the Minneapolis riverfront.
- *City of Minneapolis, Historic Mills District Master Plan*, (Published in 1988, update released in 2001).<sup>36</sup> This plan provides the urban design plan and standards for the Historic Mill District, the neighborhood that abuts the site for the proposed Crown Hydro Project.
- *City of Minneapolis, The Minneapolis Plan for Sustainable Growth, Chapter Seven: Open Space and Parks* (2009).<sup>37</sup> This plan provides maps of existing parks that are centered around or near the proposed Project site, including regional parks, regional trails, open spaces in the City, and proposed park and trail facilities.
- *City of Minneapolis, Downtown: Public Realm Framework Plan* (2016).<sup>38</sup> This plan outlines the City's objective for coordinating public and private works in the downtown area.
- *Mississippi National River and Recreation Area, Alternative Transportation Plan* (2011).<sup>39</sup> This plan discusses, among other things, the plan for a continuous trail along the Mississippi River in the Twin Cities metro area.
- *Minnesota Parks and Trails Legacy Plan: Parks and Trails of State and Regional Significance, A 25-Year Long-Range Plan for Minnesota* (2011).<sup>40</sup>

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<sup>34</sup> Metropolitan Council, Regional Parks Policy Plan 2030 (June 12, 2013), available at <https://metro council.org/Parks/Publications-And-Resources/POLICY-PLANS/ParksPolicyPlanJuly2012-pdf.aspx>.

<sup>35</sup> The St. Anthony Falls Heritage Board, *The St. Anthony Falls Interpretive Plan* (2009), available at [http://www.mnhs.org/places/safhb/about\\_plan.php](http://www.mnhs.org/places/safhb/about_plan.php).

<sup>36</sup> City of Minneapolis, *Historic Mills District Master Plan* (Published in 1988, update released in 2001), available at [http://www.ci.minneapolis.mn.us/cped/planning/cped\\_update\\_historic\\_mills](http://www.ci.minneapolis.mn.us/cped/planning/cped_update_historic_mills).

<sup>37</sup> City of Minneapolis, *The Minneapolis Plan for Sustainable Growth*, at Chapter Seven: Open Space and Parks (2009), available at [http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert\\_286387.pdf](http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert_286387.pdf).

<sup>38</sup> City of Minneapolis, *Downtown: Public Realm Framework Plan* (2016), available at <http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/wcmsp-180843.pdf>.

<sup>39</sup> Mississippi National River and Recreation Area, *Alternative Transportation Plan* (2011), available at [https://www.nps.gov/miss/learn/news/upload/FINAL-Transportation-Implementation-Plan\\_02-01-11-2.pdf](https://www.nps.gov/miss/learn/news/upload/FINAL-Transportation-Implementation-Plan_02-01-11-2.pdf).

<sup>40</sup> Minnesota Parks and Trails Legacy Plan: *Parks and Trails of State and Regional Significance, A 25-Year Long-Range Plan for Minnesota* (2011), available at [http://www.legacy.leg.mn/sites/default/files/resources/parks\\_trails\\_legacy\\_plan\\_0.pdf](http://www.legacy.leg.mn/sites/default/files/resources/parks_trails_legacy_plan_0.pdf).

This plan makes trail development and land acquisition within a park or trail boundary a high-priority.

- *The Minneapolis Downtown Council, Intersections: Downtown 2025 Plan* (2011).<sup>41</sup> This plan calls for enhancing and emphasizing the Minneapolis central riverfront as the City’s “green focal point” through collaborative efforts between the business sector, the Minneapolis Park and Recreation Board, and other partners.
- *City of Minneapolis, Critical Area Plan* (2006).<sup>42</sup> This plan identifies critical resources in the City’s river corridor, including the Stone Arch Bridge and the St. Anthony Falls Lock and Dam.

In light of the sensitive environment and unusual circumstances of the Project at issue, we believe this wealth of information should not be ignored. The broad mandate of NEPA in fact encourages a more thorough approach where a federal action like the one contemplated in this case (i.e., granting Crown Hydro’s Second License Amendment) requires the agency to take a hard look. We recognize that other entities may have an obligation to place such plans and studies on file with FERC but, if there is a paucity of such filings, it is easily cured. That would facilitate consideration under FPA Section 10(a)(1).<sup>43</sup> We urge the Commission to consider these plans pursuant to FPA Section 10(a)(1) before formulating a final FONSI in this case, and before determining whether or not to grant Crown Hydro’s Second License Amendment.

### **3. Unfinished Consultations and Insufficient Information**

#### **a. Corps of Engineers**

Because the Project would be located on property of the United States administered by the Corps, several Federal permits and studies required from the Corps with respect to the

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<sup>41</sup> The Minneapolis Downtown Council, *Intersections: Downtown 2025 Plan* (2011), generally and at p. 74 [http://assets.ngin.com/attachments/document/0023/6032/10377\\_PlanBook\\_forWeb\\_opti-1.pdf](http://assets.ngin.com/attachments/document/0023/6032/10377_PlanBook_forWeb_opti-1.pdf).

<sup>42</sup> City of Minneapolis, *Critical Area Plan* (2006), available at [http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert\\_265379.pdf](http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert_265379.pdf).

<sup>43</sup> 16 U.S.C. § 803(a)(1).

proposed Project are required. The EA appears to recognize that the Project must receive a Section 404 Clean Water Act Nationwide Permit from the Corps through the Clean Water Act Section 404 process.<sup>44</sup> Additionally, Crown Hydro must receive authorization from the Corps under Section 408 of the Rivers and Harbors Act to alter or occupy a Corps' civil works project.<sup>45</sup> Nothing in the record shows that Crown Hydro has initiated the Section 408 process.<sup>46</sup> Section 110 of the National Historic Preservation Act ("NHPA") also charges Federal agencies with identifying and preserving historic properties that are owned or controlled by each agency.<sup>47</sup> The Corps is responsible for complying with Section 110 of the NHPA as it owns the property on which Crown Hydro proposes to locate the Project. In order to meet the requirements of Section 110, the Corps must ensure that historic resources within its property have been identified and any effects resolved. To date, no such study or final permissions are in the record of this case. This is a critical omission, given the Project's location. When considered along with the absence of any decision about the future disposition of the Upper Lock, no action by the Corps effectively stays any project development by the licensee and deprives the FERC of critical information about how and where the Project would be constructed, if at all.

### **b. Cultural, Historic, and Archeological Resources**

The EA squarely does not address Crown Hydro's failure to consult with the State historic preservation officer regarding Project impacts, and appears to give weight to Crown

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<sup>44</sup> 33 U.S.C. § 1344 (2012).

<sup>45</sup> 33 U.S.C. § 408.

<sup>46</sup> In 2016, the Commission and the Corps entered into a MOU that recognized that hydroelectric project design and identification of impacts improves when the Corps and the Commission coordinate the Commission's licensing process with the Corps' Sections 404 and 408 permitting processes such that the regulatory processes take place concurrently and not sequentially. Memorandum of Understanding Between the U.S. Army Corps of Engineers and the Federal Energy Regulatory Commission on Non-Federal Hydropower Projects, at p. 8 and Attachment A p. 4 (2016).

<sup>47</sup> 54 U.S.C. §§ 306101(a) - 306114 (2014).



Hydro's potential future consultations. The National Historic Preservation Act<sup>48</sup> requires consultation with the Minnesota Historical Society's State Historic Preservation Office ("SHPO") to identify and hopefully mitigate the Project's adverse effects on properties listed in the National Register of Historic Places or in the State Register of Historic Places.<sup>49</sup> Crown Hydro has not completed this consultation, and it is unknown whether Crown Hydro has initiated this consultation. It is the well-understood job of the Minnesota Historic Preservation Commission ("MHPC") to review proposed changes to properties and sites within the St. Anthony Falls Historic District and it must grant a Certificate of Appropriateness.<sup>50</sup> It is also unknown if the Minneapolis MHPC has reviewed the Project for consistency with the St. Anthony Falls Historic District. Nothing in the record indicates that Crown Hydro has obtained a Certificate of Appropriateness. Consultation with the SHPO, and the Office of the State Archaeologist is also likely required for a recommendation on the preservation of significant archaeological resources that may exist at or near the proposed Project site.<sup>51</sup>

A large number of cultural resources are known to exist within the study area: 27

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<sup>48</sup> 54 U.S.C. § 300101 *et seq.*

<sup>49</sup> Minnesota Historic Sites Act, Minn. Stat. § 138.661 - 138.6691 (2016).

<sup>50</sup> Minnesota Heritage Preservation Commission Certificate of Appropriateness (Minneapolis Code of Ord., Title 23, Ch. 599.350 (2012)).

<sup>51</sup> Minnesota Field Archaeology Act (Minn. Stat. § 138.31-138.42 (2016)). Only two cultural resources studies have been prepared specifically in relation to the proposed project to date. *See* EA at p. 69. The first, conducted in 2007, consisted of a review of previous reports and historical maps and photographs in order to assess the archaeological sensitivity of the project site. The report concluded that the former project site was unlikely to contain intact archaeological deposits. However, the project site assessed in the 2007 report is located south and west of, and does not overlap with, the current proposed project site. In 2012, a literature review and monitoring of geotechnical borings within the proposed project site was conducted. The authors admit that "the ability to assess and define cultural deposits from two inch bore cores is limited at best. However, there appears to be a potential amount of integrity of cultural materials in the western portion of the project area." License Amendment Application for Crown Mill Hydroelectric Project, Docket No. P-11175-025, at Appendix C, p. 5 (Accession No. 20150430-5653 (Apr. 30, 2015)). The report recommended additional studies to fully identify the nature of the archaeological deposits, and ensure that construction avoids the possible tunnel remnant. *Id.* at Appendix C. In addition to these two studies, two additional studies have been completed in relation to the proposed Project, but both studies examined the Project in its former location south of the current proposed location.

previously identified archaeological sites, 250 architectural/historical properties, and four historic districts were identified within the study area.<sup>52</sup> The sheer number of archaeological sites and features already known attests to the need for care in authorizing construction activities.<sup>53</sup> The Upper Lock may itself be eligible for inclusion on the National Historic Preservation List. However, the EA does not discuss impacts on historic aspects of the Lock and only refers to its eligibility in a parenthetical.<sup>54</sup>

### **c. Socio-Economic Impacts**

Most inexplicably, the EA does not consider the socio-economic impacts of the Project at all, despite record evidence and public information showing tremendous social affinity and public and private investment near the Project's site.<sup>55</sup> The EA concluded that “[w]e have not identified

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<sup>52</sup> For a detailed discussion of the potential effects on these cultural resources, refer to Appendix A, at pp. 17-26 (106 Group, Cultural Resources Compliance and the Crown Mill Hydroelectric Project Environmental Assessment (Sept. 30, 2016)).

<sup>53</sup> The National Register of Historic Places listed or eligible historic districts include: St. Anthony Falls Historic District (listed), the Minneapolis Warehouse District (listed), the Gateway Historic District (eligible), and the St. Anthony Falls Locks and Dams Historic District (eligible). Of the 27 archaeological sites, 23 are considered contributing resources to the National Register of Historic Places listed St. Anthony Falls Historic District, one consists of structural ruins associated with a property listed in the National Register of Historic Places, and three have not been evaluated for eligibility. A contributing resource is one that enhances the historic significance of a historic district. Of the 250 previously inventoried architecture/history properties within the study area, six are individually listed in the National Register of Historic Places; of these six, two are also designated National Historic Landmarks. Of the remaining 244 architecture/history properties in the Project area, 72 are contributing resources and 33 are non-contributing resources to the St. Anthony Falls Historic District, 41 are contributing resources and seven are non-contributing resources to the Minneapolis Warehouse District, and 17 are contributing resources to the St. Anthony Falls Historic District. Two architecture/history properties are individually eligible for listing, and 78 architecture/history properties have not been evaluated for National Register of Historic Places eligibility. Despite the prevalence of these historic properties, effects on historic resources have not yet been identified for this project. EA at p. 71.

<sup>54</sup> EA at p. 74.

<sup>55</sup> EA at p. 14. The City of Minneapolis' intervention informed FERC of the “massive amounts of public time and money which have been spent in planning for and developing the central riverfront area of the City of Minneapolis[.]” Motion to Intervene and Comments of the City of Minneapolis, Docket No. P-11176-016 (Accession No. 20030224-0079) (Dated Feb. 14, 2003, Filed Feb 21, 2003). In its comments to the FERC, the City of Minneapolis pointed out that it has been “working assiduously” on plans to develop the central riverfront area. Motion to Intervene and Comments of the City of Minneapolis, Docket No. P-11176-016 (Dated Feb. 14, 2003). Moreover, the Commission received over 80 comments on Crown Hydro's Second License Amendment application, many of which discussed the burgeoning Downtown Minneapolis

any substantive issues related to socio-economics associated with the proposed action; therefore, we do not assess environmental effects on this resource in this EA.”<sup>56</sup> If ever there was a hydro project with potential impacts on a major city and its citizens, the Crown Hydro Project is it. We find this to be a glaring omission.

#### i. Economic Development

The urban environment and economic development surrounding the Project site presents unique considerations to hydroelectric development. The “Downtown East” neighborhood that encompasses the Historic Mill District (the proposed site of the Crown Hydro Project) is home to downtown business professionals and young families who enjoy living in close proximity to the Mississippi riverfront, the Upper St. Anthony Falls, the Mill City Farmers Market, numerous local restaurants, and the many nearby thriving neighborhoods. Current population data places the immediate neighborhood’s population at 1,623 people.<sup>57</sup> The Downtown East neighborhood has been infused with over \$338 million dollars in strategic public investment, and about \$1.9 billion in private and nonprofit investment.<sup>58</sup> Over 5,300 new housing units have been completed or are under construction within easy walking distance from the Lock, over 7,000 jobs have been preserved or created in the riverfront area, and over 4.5 million square feet of new office, commercial, and industrial space has been opened near the proposed Project site.<sup>59</sup> In

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Riverfront and the substantial amount of time and money the community is investing in the area. The EA even recognized “[t]his stretch of the Mississippi River includes . . . economic resources of national significance.” EA at p. 56.

<sup>56</sup> EA at p. 14.

<sup>57</sup> Minnesota Compass, Downtown East Neighborhood Data, *available at* <http://www.mncompass.org/profiles/neighborhoods/minneapolis/downtown-east>.

<sup>58</sup> Ann Calvert, City of Minneapolis, CPED Department, and Rachel Ramadhyani, ASLA Minneapolis Park and Recreation Board, Minneapolis Riverfront Revitalization: Four Decades of Progress, at p. 14 (2012), *available at* [http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert\\_279837.pdf](http://www.minneapolismn.gov/www/groups/public/@cped/documents/webcontent/convert_279837.pdf).

<sup>59</sup> *Id.* at p. 11.

2015 alone, construction, conversions, remodels, and additions of commercial and multi-family buildings in the Downtown East neighborhood ramped up at a consistent rate.<sup>60</sup> Review of major permitted construction projects (those greater than \$1 million) in each quarter of 2015 shows \$132.3 million in new construction projects in the Downtown East neighborhood.<sup>61</sup> Older buildings were more likely to be rehabilitated than condemned or vacated in the area surrounding the proposed Project site.<sup>62</sup>

## ii. Recreation

In addition to those economic development considerations, the area surrounding the Project site has rich recreational value. The CEQ regulations direct federal agencies to interpret the human environment “comprehensively to include the natural and physical environment and the relationship of people with that environment.”<sup>63</sup> The Upper Lock not only facilitates the relationship between citizens and the St. Anthony Falls, it is itself a physical environment that many citizens have an educational and recreational relationship with.<sup>64</sup> Comments from Above the Falls Sports note that the human environment extends inside of the Upper Lock where people

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<sup>60</sup> City of Minneapolis, Community Planning and Economic Development, Minneapolis Trends Reports, Q-1 2015 – Q4 2015 Reports, at pp. 15, 18-20 (2015), *available at* [http://www.minneapolismn.gov/cped/resources/reports/cped\\_trends\\_reports\\_home](http://www.minneapolismn.gov/cped/resources/reports/cped_trends_reports_home).

<sup>61</sup> *Id.* at p. 20, table 6 (This figure was calculated by adding the projected construction costs used for permitting purposes for projects in the Downtown East neighborhood in the first, second, third, and fourth quarters of 2015. This figure is a conservative representation of new construction in the Downtown East neighborhood as it only captures projects with a construction cost greater than \$1,000,000 dollars for which a permit was granted.)

<sup>62</sup> *Id.* at p. 35.

<sup>63</sup> *Human Environment*, 40 CFR § 1508.14 (2016).

<sup>64</sup> The National Parks’ Mississippi National River and Recreation Area leads daily tours of the Lock in the summer. These tours attract individuals from both the immediate area and the many suburban communities outside the City. In this regard, the Lock provides a relationship between citizens from the seven counties in the Twin Cities’ metropolitan area and hydrologic engineering. The Crown Hydro project would change the nature of the National Parks’ Mississippi National River and Recreation Area’s Lock tours and it would truncate the suburban reach of the St. Anthony Falls.

enjoy access to the Upper Lock’s benign water that can be paddled.<sup>65</sup> The Lock as it currently exists supports relationships between seasoned recreationalists and their home river, and it fosters relationships between beginner or novice paddlers and the mighty Mississippi. The Lock as it currently exists allows small businesses like Above the Falls Sports to promote safe guided recreational tours. The Project therefore has the potential to have significant impacts on specific recreational aspects of the Lock and Dam site, and these potential related effects on recreational opportunity and economic opportunity were not sufficiently analyzed in the EA. To be sure, the EA made passing reference to the residencies, small business, and parkland near the Project site.<sup>66</sup> However, this recognition does not cure the EA’s failure to address socio-economic impacts to any great degree. The EA’s lack of analysis of the Project’s impact on socio-economic resources is not explained or rationally connected to the facts in the record or the social and economic realities surrounding the proposed Project site.<sup>67</sup>

#### **d. Potential Impacts on Aesthetic Flows**

Now that the Upper St. Anthony Falls Lock is closed to navigation,<sup>68</sup> it primarily serves as a potential flood control facility. The Lock also serves historic and aesthetic purposes and provides a scenic outlook point overlooking the St. Anthony Falls. Although difficult to quantify,

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<sup>65</sup> Comments of Robert Maynard Schmitz, Above the Falls Sports, Docket No. P-11175-025 (Accession No. 20161006-5112) (Oct. 6, 2016).

<sup>66</sup> EA at p. 64.

<sup>67</sup> In *Public Utility District No. 2 of Grant County*, 143 FERC ¶ 61,046 (2013), FERC authorized a shoreline management plan for a hydroelectric project reasoning that, in part, the EA included an extensive analysis of the effects on socio-economics. The order noted that economic or social effects are not *by themselves* intended to require preparation of an EIS. That point does not pertain to this matter because, as discussed in these EA comments, the Crown Hydro Draft EA lacks multiple necessary analyses and otherwise contains several defects. In *Elkem Metals Co.*, 45 FERC ¶ 61,044, at n. 13 (1988), the Commission recognized, “The Commission must consider socio-economic impacts in making its licensing decisions, since it is required to consider all aspects of the public interest under Section 10(a)(1) of the FPA.” (citing *Udall v. FPC*, 387 U.S. 428 (1987)).

<sup>68</sup> Water Resources Reform and Development Act of 2014, Pub. Law 113-121§ 2010 (June 10, 2015).

Minnesotans have appreciated the St. Anthony Falls for generations and the natural river environment from the vantage point of the Lock is a source of local pride and relaxation. The extent of the Project's limitation on the visual value of the St. Anthony Falls has potentially significant social and economic implications, but is currently unknown. In 2005, the Commission ordered Northern States Power Company (Xcel Energy) to develop an aesthetic flow study that involves monitoring flows over the St. Anthony Falls at a range of flow increments from 100cfs to 2,000cfs.<sup>69</sup> The need for adequate flows is a crucial operation determinant for the Crown Hydro Project and, with respect to Xcel's operations at the Upper Dam, the appropriate level of spillage over the St. Anthony Falls appears to be in dispute. The Park Service maintains that a minimum surface flow of 100cfs is inadequate, and the Park Board maintains that flows over St. Anthony Falls should not fall below 2,000cfs.<sup>70</sup> Northern States Power Company's (Xcel Energy) aesthetic flow has not been submitted to the Commission, but it will provide valuable and directly relevant information that Staff should consider in this proceeding. Because the Aesthetic Flow Study will not be completed for several months, the draft EA does not contain the results. That, of course is curable. Additionally, a study has never been conducted regarding the potential economic and social cost of a dewatered St. Anthony Falls, even if a dry period were temporary.<sup>71</sup>

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<sup>69</sup> *Northern States Power Company*, 133 FERC ¶ 62,215, at p. 2 (Dec. 15, 2005) (Order Modifying and Approving Aesthetic Flow Adequacy Plan Pursuant to Article 403).

<sup>70</sup> EA at p. 32.

<sup>71</sup> Crown Hydro's original license provided that the project will operate between December 15 and March 15 "with whatever flows are available even if it dries up the falls"; additionally, in July and August, "the project will operate with up to 500 cfs during daylight hours even if it dries up the falls and up to 1,000 cfs from nightfall until dawn." *Crown Hydro Company*, 86 FERC ¶ 62,209, at Article 404 (1999).

## C. Unsupported Conclusions

### 1. Need for Power

The EA concludes that the Crown Hydro Project “would help meet both a short-term and long-term need for power based on an unsupported estimate from the licensee that it would generate 19,183 MWh of electricity annually, based presumably on its nameplate rating.”<sup>72</sup> However, the EA also finds that minimum flows of water at the Upper St. Anthony Falls Dam that would be necessary for Project operations “would be equaled or exceeded 68 percent of the time.”<sup>73</sup> We have no basis for challenging the Staff’s expertise in this area, except to say that in its view Crown’s generation output could be affected by more than 25% by flow conditions on the Mississippi as well as competing needs for water. The EA’s statements and lack of further explanation is nevertheless valuable to the extent the Commission is engaged in balancing the region’s “need” for, or benefit from, this source of power versus the costs to ratepayers and irretrievable damage to the Minneapolis riverfront. That balancing is regrettably absent here.

Although the EA’s conclusion is unassailable in the sense that even 1 MWh would “help” meet local demands for electricity, the generating capacity of the Crown Hydro Project is dwarfed by the other sources of power available to residential and commercial customers in the region, including from a 12.4 MW hydroelectric plant directly across the Mississippi River from the Upper Lock.<sup>74</sup> If, however, the argument is that the Crown Hydro Project will supply renewable energy that supports State public policies, such as a renewable portfolio standard, or

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<sup>72</sup> EA at p. 2.

<sup>73</sup> EA at p. 32.

<sup>74</sup> Additionally, Northern States Power Company (Xcel Energy) is actively soliciting wind generation to meet its goal of adding up to 1,500 MW of wind generation in the 2018 to 2020 timeframe. Northern States Power Company, 2016 Wind Solicitation: Wind Resources Request for Proposals, at p. v (2016), available at <https://www.xcelenergy.com/staticfiles/xcel-responsive/Working%20With%20Us/Renewable%20Developers/Wind-generation-RFP-2016-NSP-Wind.pdf>.

the Federal Clean Power Plan propounded by the Environmental Protection Agency, then the Commission's balancing of interests should account for the amount of renewables that would otherwise be available to Minnesota customers from other sources. We find no such analysis. Nevertheless, the facts again demonstrate how much change is occurring in the area. For example, Minnesota Power and Manitoba Hydro have received regulatory approvals to import large amounts of Canadian hydropower into Minnesota over a new 500 kV transmission line that is close to being constructed.<sup>75</sup> In addition, the CapX2020 coalition of companies and municipalities have completed a major expansion of new transmission line capacity for the purpose of delivering renewables to major demand centers like Minneapolis.<sup>76</sup> The CapX2020 projects will both enhance reliability as well as help the State comply with its renewable energy standards. Finally, we are aware of growing commitments to distributed solar installations in the area. In this light, the Crown Hydro Project is not needed and the EA should not assume that it is.

## **2. Consideration of Alternatives**

The Commission has not adequately discharged its NEPA obligation to consider alternatives to the Crown Hydro Project as proposed. NEPA Section 102(2)(E) requires the Commission to “study, develop, and describe appropriate alternatives” to a project that “involves

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<sup>75</sup> *Midcontinent Independent System Operator, Inc.*, 149 FERC ¶ 61,161 (Nov. 25, 2014) (Order on Facilities Construction Agreement); *Midcontinent Independent System Operator, Inc. and ALLETE, INC.*, 153 FERC ¶ 61,296 (Dec. 17, 2015) (Order on Transmission Rate Incentives). More information is available at <http://www.greatnortherntransmissionline.com/>.

<sup>76</sup> The CapX2020 Coalition is strengthening Minnesota's and the region's transmission backbone with the following projects: Bemidji-Grand Rapids 230 kV Project; Big Stone South-Brookings County 345 kV Project; Brookings County-Hampton 345 kV Project; Fargo-St. Cloud 345 kV Project; Hampton-Rochester-La Crosse 345 kV Project; and Monticello-St. Cloud 345 kV Project. More information is available at <http://www.capx2020.com/>.



unresolved conflicts concerning alternative uses of available resources.”<sup>77</sup> NEPA’s requirement that the Commission consider alternatives is based on the “rule of reason” that “ensures that agencies determine whether and to what extent to prepare an EIS based on the usefulness of any new potential information to the decision making process.”<sup>78</sup> In *National Parks Conservation Association v. United States*, the D.C. District Court recently held that evaluation of alternatives is the heart of the EIS or the EA.<sup>79</sup> The court stated that federal agencies must consider important aspects of the problem.<sup>80</sup>

Crown Hydro’s previous inability to obtain property rights was an important aspect of the problem that has delayed Project construction at a prior site. In fact, the EA recognizes this:

“Other than the **original proposed project** that was originally licensed, and the **revised proposed project** that is the subject of the license amendment application, no other viable alternatives were considered for additional study. Given the reasons that lead to the inability of the licensee to develop the project as originally licensed, . . . engineering foundation issues and difficulty in obtaining the necessary property rights . . . we only evaluate the project as currently proposed.”<sup>81</sup> (emphasis added)

These are clearly not the only alternatives.<sup>82</sup> The EA should consider objectively feasible alternatives<sup>83</sup> and should not consider an iteration of the same project as an alternative.<sup>84</sup>

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<sup>77</sup> 42 U.S.C. § 4332(2)(E) (2016), implemented at 40 CFR § 1508.9(b) (2016).

<sup>78</sup> *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 754 (2004); *Sierra Club v. Watkins*, 808 F.Supp. 852 (D.D.C. 1991).

<sup>79</sup> *Nat’l Parks Conserv. Ass’n v. United States*, Civ. No. 15-cv-01582, Slip Op., 2016 WL 1273190, at \*9 (D.D.C. Mar. 31 2016).

<sup>80</sup> *Id.* at \*18.

<sup>81</sup> EA at pp. 12, 1 n. 1.

<sup>82</sup> Consideration of new and pertinent information ensures that the agency will “not act on incomplete information, only to regret its decision after it is too late to correct.” *Marsh v. Oregon Nat’l Resource Council*, 490 U.S. 360, 371 (1989); *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1216 (9th Cir. 1998).

<sup>83</sup> *Nat’l Parks Conservation Ass’n*, 2016 WL 1273190, at \*10 (agencies must consider all alternatives that are “objectively feasible” as well as reasonable).

Given the unique change in circumstances that has occurred since Crown Hydro received its license in 1999, Staff should consider an alternative site location that places the Project on the St. Anthony Falls on the east side of the Mississippi river.<sup>85</sup> Additionally, Staff should consider the no-action alternative as a viable alternative, and not only as the baseline environmental condition. The importance of alternatives to good NEPA analysis means that consideration of these alternatives would not “waste the agency’s time[.]”<sup>86</sup> On the other hand, we recognize that the law does not require analysis of every alternative that could be thought of.<sup>87</sup>

### **3. The Type of NEPA Analysis for the Original License No Longer Works**

Staff’s descriptions and analyses in its EA are highly informative, even if incomplete. But, in tone and substance the EA essentially resurrects the NEPA opinions expressed in the 1997 Draft EA on the Crown Hydro Project, as it was originally configured. An EA may have been appropriate when Crown Hydro’s original license was granted in 1999, but it is no longer appropriate given the changed circumstances at the proposed Project site. As FL&D has argued above and in its filed Intervention and Protest in this case, several facts on the ground are different from what they were two decades ago. Even the current EA acknowledges that the

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<sup>84</sup> In *Western Watersheds Project v. Abbey*, 719 F.3d 1035 (9th 2013), the Ninth Circuit found an EA deficient because there was “no meaningful difference between the four alternatives considered . . . each alternative considered would authorize the same underlying action[.]” *Id.* at 1051.

<sup>85</sup> In *Public Util. Dist. No. 1 of Snohomish County, Washington*, 149 FERC ¶ 61,206 (2014), FERC Staff considered alternative sites within a 2,000 meter radius of the proposed site. *Id.* at P 77. The alternative offered by FL&D is well within a 2,000 meter radius of the proposed site. In *NE Hub Partners, L.P.*, FERC Staff considered several site alternatives to a project’s proposed method of construction that were proposed two months after the EA was completed and issued. *NE Hub Partners, L.P.*, 90 FERC ¶ 61,142, at p. 55 (2000).

<sup>86</sup> *Sierra Club v. Watkins*, 808 F.Supp. 852, 873 (D.D.C. 1991).

<sup>87</sup> The alternate site suggestion is distinguishable from that proposed in *Idaho Power Co.*, 110 FERC ¶ 61,345 (2005), where the Commission declined to consider extensive alternatives on the grounds that the EA considered various alternative development scenarios and recommendations from various entities. The EA at issue does not consider alternatives outside of the original licensed site and Staff’s alternative.

demographics have changed so that the City and its citizens are more proximate to the Upper Lock and the proposed site of the Project than before.<sup>88</sup>

While developments at and surrounding the Lock and Dam, as well as various plans for the riverfront and this stretch of the River have become more complex, FERC's analysis has not.<sup>89</sup> Prior to granting Crown Hydro's original license, Commission Staff recognized that everything in the Project area was going to change:

“Since the 1970's, the City of Minneapolis and public agencies have undertaken the redevelopment of the Minneapolis central riverfront. Considerable progress has been made, including completing substantial portions of the Central Riverfront Park. The Park Board owns lands around the proposed project where it intends to develop the Mill Ruins Park in cooperation with the Historic Preservation Commission (HPC).”<sup>90</sup>

Those planned redevelopments, foreseeable in 1997, have since occurred. At that time, Mill Ruins Park and the Central Riverfront Park were in the final planning and early implementation stages, much like Water Works park and The Falls are today. Yet the EA argues that foreseeable events cannot be accounted for under NEPA.<sup>91</sup>

FL&D thinks it's critical to understand the long-term impacts of the Crown Hydro Project and the barrier it would create between the City and the river. Naturally, FL&D believes

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<sup>88</sup> EA at pp. 64-65.

<sup>89</sup> The “Consistency With Comprehensive Plans” section for both the 1997 Draft EA for Crown Hydro's original License and the 2016 Draft EA for the Second License Amendment cite to many of the same sources and reach the same cursory conclusion. See EA, at p. 83; Draft EA for Hydropower License, Docket No. P-11175, at p. 33 (Accession No. 19970311-0002) (Filed Mar. 3, 1997, Dated Feb. 1997). In *Public Employees*, the D.C. District Court invalidated an EA on the grounds that, among other things, the EA at issue contained a carbon copy of analysis from a previous EA for the same Federal action. *Public Employees*, Civ. No. 14-1807, Slip Op., 2016 WL 1254214, at \*4 (D.D.C. Mar. 29, 2016). A similar “defect” is present in the 2016 Draft EA's analysis for consistency with comprehensive plans.

<sup>90</sup> Final Environmental Assessment for Hydropower License, Crown Mill Hydroelectric Project, Docket No. P-11175, at p. 24 (Accession No. 19970915-0444) (Sept. 1997).

<sup>91</sup> “Because the Water Works site has yet to be developed, overall effects from project operation are currently unknown.” EA at p. 61.

that “The Falls” would be a more optimal use of this uniquely valuable parcel of land on the riverfront and the Upper Lock itself than a small hydroelectric project. Those merits aside, however, the EA lacks any appreciation of the fact that the analysis no longer can be just about mitigating the immediate impacts of the Project; it should additionally be about the preclusion of better alternatives. The EA or preferably an EIS should examine all alternatives including, The Falls, and siting option for the Crown Hydro Project.

Respectfully Submitted,

**FRIENDS OF THE LOCK AND DAM**



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*Attorneys for Friends of the Lock and Dam*

Date: October 20, 2016

**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in these proceedings.

Dated at Washington, D.C., the 20th day of October 2016.

/s/ Jesse Jacobs  
Jesse Jacobs

**ATTACHED: APPENDIX A**

106 Group Cultural Resources Compliance

September 2016



**106GROUP**

# CULTURAL RESOURCES COMPLIANCE AND THE CROWN MILL HYDROELECTRIC PROJECT ENVIRONMENTAL ASSESSMENT

**Minneapolis, Hennepin County, Minnesota**

September 30, 2016



# CULTURAL RESOURCES COMPLIANCE AND THE CROWN MILL HYDROELECTRIC PROJECT ENVIRONMENTAL ASSESSMENT

**Minneapolis, Hennepin County, Minnesota**

106 Group Project No. 915-1933

**SUBMITTED TO:**

Friends of the Lock and Dam  
900 N 3rd Street  
Minneapolis, MN 55401

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## EXECUTIVE SUMMARY

The 106 Group Ltd. (106 Group) has been retained by the Friends of the Lock and Dam to evaluate cultural resources issues in relation to the Crown Mill Hydroelectric Project (proposed project). The purpose of this document is to (1) evaluate the project's compliance with applicable cultural resources laws, regulations, and other authorities, and (2) provide technical information and expert opinion regarding the potential impacts of the proposed project to cultural resources.

Crown Hydro, LLC (Crown Hydro; the applicant) has submitted an application to the Federal Energy Regulatory Commission (FERC) for an amended license to construct and operate the proposed project. The proposed project would involve the construction of a hydroelectric generating facility with a 3.4-megawatt capacity on 4.336 acres of lands owned and administered by the United States Army Corps of Engineers (USACE). FERC issued a draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) pursuant to the National Environmental Policy Act (NEPA) on September 2, 2016.

In order to analyze the proposed project's compliance status and to identify cultural resources that may be affected by the proposed project, qualified professionals from the 106 Group reviewed publically available project-related documents, including the draft EA issued by FERC in 2016, Crown Hydro's amended license application, and other documents included in FERC's project docket. In addition, 106 Group staff conducted research at the Minnesota State Historic Preservation Office (MnHPO), the Minnesota Historical Society (MNHS), and the Office of the State Archaeologist (OSA) for information on previously recorded archaeological sites and architecture/history properties within the study area. In addition, historical maps, historical aerial photographs, previous cultural resources studies, and secondary sources were reviewed.

This report breaks the analysis of Crown Hydro's cultural resources compliance activities into two discussions: (1) consultation with MnHPO, federally-recognized Indian tribes, local governments, and other interested parties as required by Section 106 of the National Historic Preservation Act (NHPA) and (2) efforts undertaken to identify cultural resources and historic properties, analyze potential effects, and develop mitigation strategies. The review of project compliance with federal, state, and local laws found there is no evidence in the EA or public record that FERC has conducted formal Section 106 consultation with MnHPO, Indian tribes, or local governments, or that it has sought or considered the views of the public prior to issuing the FONSI. In addition, although FERC has issued a FONSI, effects to cultural resources and historic properties have not yet been fully identified, as required by NEPA and NHPA.

The incomplete process of identifying and evaluating impacts to cultural resources and historic properties is inconsistent with federal law, regulations, and agency guidance. The implementing regulations for both Section 106 and NEPA emphasize that the process of identifying and assessing effects to cultural resources and historic properties must be completed before a federal agency's decision to approve an undertaking. The Section 106 regulations state that "the agency official must complete the section 106 process 'prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the



issuance of any license” (36 CFR § 800.1(c)). In addition, NEPA regulations require that NEPA procedures “must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken” (40 CFR § 1500.1(b)).

Specific project effects to historic properties and other cultural resources cannot be determined at this time because potentially affected resources have not yet been identified. A large number of cultural resources and historic properties have been previously documented in the vicinity of the proposed project, including: St. Anthony Falls Historic District, the Falls of St. Anthony, the Stone Arch Bridge, the Upper St. Anthony Falls Lock and Dam, the St. Anthony Falls Lock and Dam Historic District, and numerous intact archaeological sites related to historical milling at the St. Anthony Falls. This report introduces these known resources and identifies essential questions regarding potential direct, indirect, and cumulative effects to these resources that require consideration as part of the assessment of effects required under applicable federal, state, and local laws prior to approval of the proposed project.

This report concludes that despite the proposed project’s location within a highly culturally significant area, FERC has neither engaged in adequate consultation with state, local, or tribal governments, nor has it made a good faith effort to identify and assess potential effects on cultural resources. More information is needed before any conclusions can be reached regarding potential effects to cultural resources. Comprehensive studies designed to identify cultural resources and historic properties, and to evaluate potential effects to these resources, should be completed as part of the permitting and environmental review process so that appropriate mitigation strategies can be identified prior to the issuance of a FONSI. All of this work needs to occur in close consultation with the appropriate agencies and consulting parties, and take into consideration public views as required by NEPA and Section 106 of the NHPA.

## ABOUT THE 106 GROUP

The 106 Group is a nationally-recognized leader in cultural and environmental planning, resource management, interpretation, and design. Founded in 1992, the 106 Group currently employs more than 25 core staff with expertise in a range of disciplines, and is based in St. Paul, Minnesota with offices in Boston, Richmond and Washington DC. All senior technical resources staff meet and exceed the *Secretary of the Interior’s Professional Qualifications Standards* in the fields of archaeology, architectural history, and history. Four staff are Registered Professional Archaeologists (RPA).

The 106 Group has been helping clients navigate the cultural resources compliance process for over 20 years. We specialize in leading highly technical and complex compliance projects. The majority of our compliance work relates to key federal and state statutes: the National Environmental Policy Act (NEPA), Sections 106 and 110 of the National Historic Preservation Act (NHPA), Section 4(f) of the Department of Transportation Act, the Minnesota Field Archaeology Act, the Minnesota Historic Sites Act, and the Minnesota Private Cemeteries Act. Over the last two decades, we have completed over 1,000 archaeological and architectural history projects for federal, state, local, and tribal governments.

Working with or on behalf of government agencies, private entities, communities, and Native American tribes, we deliver innovative solutions to complex cultural resources compliance issues. We have facilitated conversations, prepared programmatic agreements, and engaged stakeholders in planning that fosters participants' ownership of a process and its outcomes. Our approach to consultation ensures legal compliance while cultivating a communication dynamic that engages all stakeholders in a non-threatening, honest, and transparent forum, breaking down barriers of mistrust and fear. We work with the process sponsor to identify key stakeholders and develop thoughtful ways to engage them. This structure encourages dialogue and interaction among participants, while also eliciting input that facilitators and process sponsors will find adds value to decision making. Our approach entails structured brainstorming, documentation of all viewpoints, and processing and prioritizing the results of discussions.

## Anne Ketz, RPA, CIP: Principal Investigator

Anne Ketz is CEO & Services Director for the 106 Group. A recognized leader in guiding clients through the maze of federal, state, and local preservation legislation, Anne's diplomacy has brought successful resolution to complex and controversial projects. Since founding the 106 Group in 1992, she has worked with a broad range of stakeholders, including community activists, planners, and Native American leaders. Anne's formal education includes an M.A. in Historical Archaeology, University of Massachusetts, a Graduate Certificate in Museum Studies, University of Leicester, England, and a B.A. in Ancient History and Archaeology, University of Manchester, England.

Anne's career in cultural resources management and planning extends over 25 years and three continents. Anne has authored hundreds of cultural resources and historic preservation reports and papers. Her presence and commitment to the profession is further demonstrated through public speaking, scholarly publications, school programs, and training for volunteers and interns.

For the past 20 years, Anne has been actively involved in managing many cultural resources projects within the St. Anthony Falls Historic District. She brings unrivaled knowledge and expertise about the archaeological resources in and around the Minneapolis Riverfront.

Anne is honored to serve as Vice President for the International Committee on Interpretation and Presentation of Cultural Heritage Sites for International Council for Monuments and Sites (ICOMOS). Much of her career has been dedicated to increasing public access to and understanding of the world's cultural resources and sites.

## Madeleine Bray, RPA: Primary Author

Madeleine Bray is a cultural resources specialist and RPA with over 16 years of survey, excavation, and project management experience in the United States, Greece, and Israel. She is experienced in conducting

Phase I surveys, Phase II evaluations, prehistoric and historic archaeological site documentation, historical research, mitigation recommendations, and Native American outreach. With her extensive experience in cultural resources compliance, Madeleine authors and provides senior-level review of documents in support of Section 106 of the NHPA and NEPA.

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# 1.0 INTRODUCTION

The 106 Group Ltd. (106 Group) has been retained by the Friends of the Lock and Dam to evaluate cultural resources issues in relation to the Crown Mill Hydroelectric Project (proposed project). The purpose of this document is to (1) evaluate the status of the proposed project's cultural resources compliance process, and (2) provide technical information and expert opinion regarding the potential impacts of the proposed project to cultural resources.

## 1.1 Project Description

Crown Hydro, LLC (Crown Hydro; the applicant) has submitted an application to the Federal Energy Regulatory Commission (FERC) for an amended license to construct and operate the proposed project. The proposed project was originally licensed in 1999 for a location in the basement of the Crown Roller Mill Building; however, the applicant subsequently identified an alternative location on United States Army Corps of Engineers (USACE) property, and therefore an application for an amended license was filed on April 30, 2015 (Crown Hydro 2015). FERC subsequently issued an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) pursuant to NEPA on September 2, 2016 (FERC 2016).

The proposed project would involve the construction of a hydroelectric generating facility with a 3.4-megawatt capacity on 4.336 acres of lands administered by USACE. As described in the EA, the project would include (FERC 2016:9):

(1) a new intake structure in the existing headrace canal of the lock and dam that would extend 25 feet upstream of the powerhouse, containing two 14-foot-tall and 16-foot-wide trashracks with 1-inch clear spacing; (2) two new 50-foot-long, 8.5-foot-diameter turbine penstocks conveying water to the turbines; (3) a 88-foot-wide, 42-foot wide powerhouse that houses two new vertical axial flow turbine generating units with a total installed capacity of 3.4 MW; (4) two new discharge draft tubes to convey water from the turbines to the new tailrace tunnel; (5) a new 930-foot-long, 14-foot-wide by 10-foot-high tailrace tunnel that expands to 16-foot-wide and 14-foot-high downstream of the Stone Arch Bridge; (6) a new 700-foot-long underground transmission line that connects the project to the Xcel Energy electric grid at Portland Avenue.

## 1.2 Methodology

In order to identify the status of compliance with relevant cultural resources and preservation laws and to identify potential effects to cultural resources, a review was conducted of publically available project-related documents, including the draft EA (FERC 2016), Crown Hydro's amended application (Crown Hydro 2015), and other documents included in FERC's project docket.

Background research was conducted at the Minnesota State Historic Preservation Office (MnHPO), the Minnesota Historical Society (MNHS), and the Office of the State Archaeologist (OSA) for information on previously recorded archaeological sites and architecture/history properties within the proposed project's potential area of impact. In addition, historical maps, historical aerial photographs, previous cultural resources studies, and secondary sources were reviewed to verify MnHPO location data.

## 2.0 REGULATORY FRAMEWORK AND COMPLIANCE ANALYSIS

The following section provides a summary of federal, state, and local laws and regulations pertaining to cultural resources that are directly applicable to the proposed project.

### 2.1 Authorities

#### 2.1.1 FEDERAL

The proposed project will require licensing by FERC, will require a Section 404 Nationwide Permit from the USACE, and is located on land administered by the USACE. Therefore, the project must comply with federal laws and regulations governing cultural resources, including Section 106 of the NHPA of 1966, as amended, and NEPA. Summaries of key federal laws and regulations that apply to the proposed project are provided below.

#### **National Historic Preservation Act**

The principal federal law addressing historic properties is the NHPA, as amended (54 USC § 300101 et seq.). Section 106 and Section 110 of the NHPA, and the implementing regulations for Section 106 of the NHPA (36 CFR § 800 et seq.), which are most relevant to the proposed project, are discussed below.

#### ***Section 106***

Section 106 of the NHPA requires that prior to the approval of the expenditure of federal funds or to the issuance of any license or approval, federal agencies must consider the effects of their undertakings on historic properties, to provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment, and to resolve any adverse effects on historic properties through the process provided in the Section 106 regulations (36 CFR § 800 et seq.). Historic properties are defined as resources listed in or eligible for listing in the National Register of Historic Places (NRHP), and may include Traditional Cultural Properties of traditional religious and cultural significance to Indian tribes.

It is the responsibility of the federal agency to consult throughout the Section 106 process with the State Historic Preservation Officer (SHPO), federally-recognized Indian tribes, local governments, and other interested parties, commencing at the early stages of project planning. The goals of consultation are to identify historic properties potentially affected by the undertaking; to assess the undertaking's effects on identified historic properties; and to seek ways to avoid, minimize, or mitigate any adverse effects on historic properties. Consultation with Indian tribes conducted under Section 106 and other authorities (such as NEPA and Executive Order No. 13007) must recognize the government-to-government relationship between the Federal government and Indian tribes, as set forth in Executive Order 13175 (Nov. 6, 2000) and the Presidential Memorandum on Tribal Consultation of Nov. 5, 2009. In addition, the views of the public "are essential to informed decision making in the Section 106 process" and must be sought and taken into consideration by the federal agency (36 CFR § 800.2(d)).

The basic process for complying with Section 106 consists of the following steps, to be conducted by the lead agency in consultation with SHPO, Indian tribes, local governments, and interested parties (36 CFR § 800.4, 800.5):

1. Determine the Area of Potential Effects (APE). The APE is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist (36 CFR § 800.16(d));
2. Make a reasonable and good faith effort to identify historic properties located within the APE;
3. Assess whether the undertaking will result in adverse effects to historic properties; and if so,
4. Resolve the adverse effects by developing measures to avoid, minimize, or mitigate adverse effects to historic properties.

The Section 106 process is concluded when the federal agency, in consultation with the SHPO, Indian tribes and other consulting parties, makes a finding that either (1) no historic properties would be affected by the undertaking; (2) no historic properties would be adversely affected; or (3) historic properties would be adversely affected. If the agency makes a finding of adverse effect, the agency must continue to consult to resolve the adverse effect through avoidance, minimization, or mitigation (36 CFR § 800.6). The resolution of adverse effects is memorialized in an agreement document such as a Memorandum of Agreement (MOA) or Programmatic Agreement (PA).

Federal approvals are required for the proposed project from both FERC and USACE. The Section 106 regulations (36 CFR § 800.2(a)(2)) specify that if more than one federal agency is involved in an undertaking, that the agencies may choose to designate a lead federal agency who will act on their behalf to fulfill their collective responsibilities under Section 106. Consistent with the July 2016 Memorandum of Understanding between FERC and USACE, FERC has assumed the role of lead agency for NEPA compliance (FERC and USACE 2016). It is unknown whether USACE and FERC have agreed to designate a single lead federal agency under Section 106; however, for the purpose of this document, FERC, as the agency responsible for the publication of the EA, is also assumed to be the lead federal agency under Section 106.

### **Section 110**

Section 110 of the NHPA charges federal agencies with identifying and preserving historic properties that are owned or controlled by each agency, and further requires that each federal agency establish historic preservation programs, in consultation with the Secretary of the Interior. Because the USACE owns the property on which the proposed project is located, they would be responsible for complying with Section 110 of the NHPA.

### **National Environmental Policy Act**

NEPA establishes national policy for the protection and enhancement of the environment, and requires federal agencies to take a “hard look” at the impacts of federal actions on the environment. Part of the responsibility of the federal government in protecting the environment under NEPA is to “preserve important historic, cultural and natural aspects of our national heritage” (42 USC § 4331(b)) and to



provide for public participation in the consideration of effects to cultural resources, among other issues, during agency decision making.

Under NEPA, in determining whether a federal action “significantly” affects the quality of the human environment, federal lead agencies consider the unique characteristics of the affected geographic area such as proximity to “historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas” (40 CFR § 1508.27(b)(3)), or the degree to which the action may adversely affect “districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places” or may cause loss or destruction of “significant scientific, cultural, or historical resources” (40 CFR § 1508.27(b)(8)). The agency must consider the geographic, biophysical, and social context in which the effects will occur, and intensity (severity) of the impact (40 CFR § 1508.27). The analysis should take into account direct, indirect, and cumulative effects on cultural resources.

NEPA requires consideration of impacts to historic or cultural resources (40 CFR § 1508.27(b)(3); 40 CFR § 1508.27(b)(8)), including but not limited to NRHP-listed or eligible historic properties. Therefore, although NEPA does not explicitly define the term “cultural resources,” it covers a wider range of resources than “historic properties.” Cultural resources, broadly defined, may include, but are not limited to, expressions of human culture and history in the physical environment, such as archaeological sites, structures, and works of art, as well as culturally-significant natural features, landscapes, and places. Cultural resources need not be determined eligible for the NRHP to receive consideration under NEPA.

NEPA requires that federal agencies integrate the requirements of NEPA with other planning and environmental review processes and cooperate with state and local agencies in coordinating NEPA with similar state and local laws (40 CFR § 1500.2(c), 1506.2(d)). NEPA documents must include a discussion of the consistency of the proposed action with state or local plans or laws (40 CFR § 1506.2(d)). A summary of state and local laws pertaining to cultural resources is provided in Section 1.1.2.

### **Coordination of Section 106 of the NHPA and NEPA**

Many projects, including the proposed project, require compliance with both NEPA and Section 106 of the NHPA. The Section 106 regulations (36 CFR § 800.8(a)(1)) encourage agencies to coordinate the compliance processes for Section 106 and NEPA, and state that “[t]he determination of whether an undertaking is a ‘major Federal action significantly affecting the quality of the human environment,’ and therefore requires preparation of an Environmental Impact Statement (EIS) under NEPA, should include consideration of the undertaking’s likely effects on historic properties.” Similarly, CEQ’s NEPA implementing regulations require agencies to “integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays in the process, and to head off potential conflicts” (40 CFR § 1501.2).

In 2013, the CEQ and the ACHP published a guidance document entitled *NEPA and NHPA: A Handbook for Integrating NEPA and Section 106*. The document includes specific guidance on integrating the Section 106 process into the preparation of an EA (CEQ and ACHP 2013). Treatment measures for

adverse effects to historic properties should be referenced in the EA and documented in an agreement document such as a MOA or PA, which should be included in the final EA or FONSI in order to document the agency's fulfillment of its Section 106 responsibilities. In addition, "agencies that use a FONSI as a decision document for an undertaking must conclude the Section 106 process prior to issuing the FONSI" (CEQ and ACHP 2013:25).

The Section 106 regulations also permit the substitution of the NEPA process for Section 106 purposes, wherein the agency may use the procedures and documentation required for the preparation of an EA/FONSI or EIS/Record of Decision to comply with Section 106 (36 CFR § 800.8(c)). However, the agency must notify ACHP and SHPO if it intends to do so, and since there is no evidence or statement in the public record indicating that FERC is substituting NEPA for Section 106 compliance, this procedure is not discussed further in this document.

Consultation and public participation are essential parts of both the Section 106 and NEPA processes. Section 106 requires that agencies "provide the public with information about an undertaking and its effects and seek public comment" (36 CFR § 800.2(d)(2)) and also requires consultation with SHPO, Indian tribes, state and local agencies, and other interested parties. NEPA requires varying levels of public involvement, based on the level of review, and encourages federal agencies to consult with Indian tribes early in the planning process (40 C.F.R. §§ 1501.6, 1508.5). Federal agencies are encouraged to create public and stakeholder engagement strategies that meet all NEPA and Section 106 requirements, and to begin public and stakeholder involvement early in the process (CEQ and ACHP 2013).

### **Executive Order 13007**

Executive Order 13007 (61 FR 26771; May 29, 1996) directs federal agencies with statutory or administrative responsibilities for managing federal lands to accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners, and to avoid adversely affecting the physical integrity of sacred sites. It also requires agencies to maintain the confidentiality of sacred sites, where appropriate. Because the USACE owns the property on which the proposed project is located, they would be responsible for complying with Executive Order 13007.

### **FERC guidelines**

FERC's policy regarding consultation with Indian tribes (18 CFR § 2.1(c)) states that FERC "will endeavor to work with Indian tribes on a government-to-government basis, and will seek to address the effects of proposed projects on tribal rights and resources through consultation pursuant to the Commission's trust responsibility, the Federal Power Act, the Natural Gas Act, the Public Utility Regulatory Policies Act, section 32 of the Public Utility Holding Company Act, the Interstate Commerce Act, the Outer Continental Shelf Lands Act, section 106 of the National Historic Preservation Act, and in the Commission's environmental and decisional documents." The policy also states that FERC will notify potentially affected tribes about upcoming hydroelectric licensing processes (18 CFR § 2.1c(j)).

FERC also requires that prior to filing an application (including an amended application), an applicant must consult with "relevant Federal, State, and interstate resource agencies...and any Indian tribe that

may be affected by the proposed project” (18 CFR § 4.38). In filing the application, the applicant must include a report, prepared in consultation with the SHPO, that identifies historic properties that could be affected by the project and proposed measures to address those effects (18 CFR § 4.51).

FERC also maintains internal guidelines for the preparation of NEPA documents (FERC 2008). Specific to evaluating impacts to cultural resources, the guidelines recommend that the NEPA document include discussion of the APE; the eligibility status of properties located in the APE; results of any studies conducted by the applicant; arrangements between the applicant and Indian tribes to ensure confidentiality of information; the effects of the project on historic properties, including traditional cultural properties; and proposed mitigation measures.

The guidelines also reference compliance with Section 106 of the NHPA, and state that if there would be an adverse effect to historic properties, the applicant must prepare a historic properties management plan (HPMP), in consultation with SHPO, Indian tribes, and other consulting parties.

### **2.1.2 STATE**

Because the project requires permits or approvals from state agencies, including a 401 Water Quality Certification from the Minnesota Pollution Control Agency (MPCA) and a Work in Protected Waters Permit from the Minnesota Department of Natural Resources (MDNR), the project must comply with state laws pertaining to cultural resources.

#### **Minnesota Field Archaeology Act**

The Minnesota Field Archaeology Act, 1963 (Minnesota Statutes [M.S.] 138.31 – 138.42) established the OSA and directs the OSA and MNHS to make recommendations for the preservation of archaeological sites endangered by construction or development on all non-federal public lands. When a significant archaeological site is known or predicted to exist, the controlling agency must submit development plans to MNHS and OSA for review. The controlling agency, or responsible governmental unit (RGU), in consultation with MNHS and OSA, is directed to preserve such sites and is authorized to use its funds for such activities.

#### **Minnesota Historic Sites Act**

The Minnesota Historic Sites Act, 1965 (M.S. 138.661 – 138.6691) requires that state agencies and political subdivisions have a responsibility to protect the physical features and historic character of designated properties. If an undertaking affects properties listed in the NRHP and/or in the State Register of Historic Places, the state department or agency must consult with the MNHS to avoid or mitigate adverse effects. If the parties agree in writing to an appropriate course of action, the undertaking may proceed. If the parties cannot reach agreement, any of the parties may request that the governor appoint a mediation task force.

### **2.1.3 LOCAL**

The project is located within the boundaries of the St. Anthony Falls Historic District (SAFHD), which, in addition to being listed in the NRHP, is also a locally designated historic district.

The Minneapolis Historic Preservation Commission (HPC) reviews proposed changes to properties and sites within the SAFHD through applications for Certificates of Appropriateness. The HPC approves Certificates of Appropriateness when:

the alteration will not materially impair the integrity of the landmark, historic district, or nominated property under interim protection and is consistent with the applicable design guidelines adopted by the commission, or if design guidelines have not been adopted, is consistent with the recommendations contained in the *Secretary of the Interior's Standards for Rehabilitation* (Minneapolis Code of Ordinances, Title 23, Chapter 599.350).

The HPC adopted the *St. Anthony Falls Historic District Guidelines* in June 1980, and the design guidelines were updated in 2012 (HPC 2012). In addition to supporting the stated purpose of preserving, protecting, and perpetuating the historic district, the regulations set policy directions for future land use within the district.

The *St. Anthony Falls Historic District Guidelines* also provide a framework under which the HPC would evaluate proposals for new construction and the rehabilitation of existing buildings and structures within the historic district. The district was divided into 13 character areas, and guidelines were tailored to the various types of historic resources. The guidelines mandate that infill construction be visually compatible with historic structures in the sub-area with regard to a number of design elements.

## 2.2 Compliance Analysis

### 2.2.1 HISTORY OF PREVIOUS CULTURAL RESOURCES STUDIES

Although a wealth of information exists regarding cultural resources in the project vicinity, according to the EA, only two cultural resources studies have been prepared specifically in relation to the proposed project to date. The first, conducted in 2007, consisted of a review of previous reports and historical maps and photographs in order to assess the archaeological sensitivity of the project site (Bradley and Tidlow 2007). The report concluded that the former project site was unlikely to contain intact archaeological deposits. However, the project site assessed in the 2007 report is located south and west of, and does not overlap with, the current proposed project site.

In 2012, Westwood Professional Services conducted a literature review and monitored geotechnical borings within the proposed project site (Sather 2012). Although no map of the boring locations is included in the report, the description of the boring locations indicate that they occurred within the parking facility for the Upper St. Anthony Falls Lock and Dam and an area extending east along a paved roadway – this would place the 2012 study within the current proposed project site (Sather 2012:1). The literature review included a review of previous reports and site records, as well as a limited review of historical maps.

Excavation of seven two-inch soil borings, between 350 and 728 inches deep, was monitored. All seven borings produced cultural material, primarily building material such as brick, concrete, and wood, in what was interpreted as a disturbed context. However, the authors note that the amount of material increases in the westernmost three borings, possibly indicating closer proximity to intact deposits. In addition, a feature was identified in the westernmost boring that was tentatively identified as a possible historic-period tunnel. The feature was described as follows (Sather 2012:7):

A twenty inch layer of wood fragments was encountered immediately over a 24 inch void. This void has been interpreted as a tunnel remnant. Following the void is a series of depositional layers consisting of 80 inches of culturally sterile sandstone gravels underlain by a three inch layer of wood fragments. All of these layers were recovered beneath the intact weathered limestone layer. The upper wood fragment layer may represent debris associated with the construction of the tunnel. The lower layer containing wood fragments may represent debris deposited following the abandonment of the tunnel.

The authors admit that “the ability to assess and define cultural deposits from two inch bore cores is limited at best. However, there appears to be a potential amount of integrity of cultural materials in the western portion of the project area” (Sather 2012:6). The report recommends that once more well-defined project plans are identified, that additional work be conducted to fully identify the nature of the archaeological deposits, that the possible tunnel remnant be avoided, and that further project-related construction be monitored.

In addition to the two studies mentioned in the EA, two additional studies have been completed in relation to the proposed project; however, both studies examined the project in its former location to the south of the current proposed location. In 1994, a study of the project’s impact to the West Side Mill District tailrace tunnels was conducted (Crown Hydro 1994). At the time, Crown Hydro was proposing to use several of the tunnels to discharge water. In 2007, 106 Group completed a literature review and summary of potential effects to cultural resources as a result of the proposed Crown Hydro project, which was incorporated into the EAW prepared by the Minneapolis Park and Recreation Board. The study concluded that there were a number of cultural resources, including the SAFHD and archaeological resources associated with historical milling that could be affected by the project (Emmons & Olivier Resources Inc. 2007).

## **2.2.2 COMPLIANCE WITH FEDERAL LAWS AND REGULATIONS**

### **Federal**

#### ***NHPA***

#### **Section 106**

##### ***Formal Consultation and Public Involvement***

It is FERC's responsibility to consult throughout the Section 106 process with MnHPO, federally-recognized Indian tribes, local governments, and other interested parties. However, there is no evidence in the EA or public record that FERC has conducted formal Section 106 consultation with MnHPO<sup>1</sup>, Indian tribes, or local governments, or that it has sought or considered the views of the public consistent with 36 CFR § 800.2(d).

FERC designated Crown Hydro as its "non-federal representative" for the purposes of Section 106 consultation (Polardino 2016). The Section 106 regulations at 36 CFR § 800.2(c)(4) permit the federal agency to delegate to a non-federal representative to initiate consultation with the SHPO and others; however, the federal agency remains legally responsible for its findings and for their government-to-government relationships with tribes. The ACHP, in a guidance document, clarified that (ACHP 2011):

[t]he authorization to applicants to initiate Section 106 consultation does not apply to the initiation of consultation with Indian tribes unless expressly authorized by the Indian tribe to do so. Indian tribes may certainly choose to meet with applicants that would like to initiate Section 106 early in project planning. However, federal agencies cannot unilaterally delegate their tribal consultation responsibilities to an applicant nor presume that such discussions substitute for federal agency tribal consultation responsibilities.

There is no evidence in the public record that FERC has engaged in the required government-to-government consultation with Indian tribes. Tribal consultation is particularly important in the identification and assessment of effects to historic properties, as it is often the only means of identifying properties of traditional cultural significance to Indian tribes. All communication with Indian tribes to date has come from the applicant, Crown Hydro, and not from FERC; however, FERC, as the lead federal agency, is solely responsible for its government-to-government consultation obligations with Indian tribes consistent with Section 106 regulations (36 CFR § 800.2(c)(2)) and its own tribal consultation guidelines (18 CFR § 2.1(c)).

#### *The Section 106 Process*

The table below summarizes the status of the Section 106 process for the Crown Hydro project, based on information available in the public record, and each step is discussed in detail below.

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<sup>1</sup> As part of its pre-filing requirements, Crown Hydro conducted preliminary communication with MnHPO, local governments, and Indian tribes (see FERC 2016, section 1.4). However, this appears to have been conducted to fulfill the applicant's responsibilities per FERC application guidelines (18 CFR § 4.38), and not as part of Section 106 consultation.

Table 1: Status of the Section 106 Process for the Crown Hydro Project

Section 106 Process	Crown Hydro Status
Determine the APE	Not yet initiated
Identify historic properties located within the APE	Geotechnical core samples monitored in 2012; identification not yet completed.
Assess effects to historic properties	Not yet initiated
Resolve adverse effects	Not yet initiated

Determination of the Area of Potential Effects

As described in the regulatory framework section above, the first step in the Section 106 process is to establish the APE. According to the EA, the APE for the Crown Hydro project has not yet been defined (FERC 2016:68).

Identification of Historic Properties

The second step in the Section 106 process is the identification of historic properties within the APE. Based on the information available in the public record, identification of historic properties that may be affected by the proposed project has not been completed. The EA does mention several resources that could be affected by the project, including the Stone Arch Bridge, the Upper St. Anthony Falls Lock and Dam, the SAFHD, and the archaeological features identified during monitoring in 2012. However, the EA states that despite requests by FERC and USACE that, prior to filing their amended application, the applicant conduct studies necessary to identify effects to cultural resources, “in its application, Crown Hydro does not identify any specific project effects on historic properties within the APE because all cultural resources studies have not yet been completed, and effects are unknown” (FERC 2016:72). The 2012 literature search and monitoring report, which appears to be the only cultural resources study conducted for the proposed project in its current location, is not likely to be considered a reasonable and good faith effort to identify historic properties as required under 36 CFR § 800.4(b)(1). The EA itself concludes that “no standard archaeological analysis was completed” and “no formal architectural inventory report was prepared that discusses and evaluates all historic structures within the APE that could potentially [be] affected by the proposed project” (FERC 2016:74). In addition, no consultation with Indian tribes appears to have been conducted, which is often the only way to identify resources of traditional cultural importance to tribes that may be affected by a project.

Assessment of Effects

Because historic properties have not been identified, it is not yet possible to fully identify and characterize project effects on such resources. The EA states that “Crown Hydro’s identification of historic properties within the APE, assessment of effects, and identification of measures to resolve adverse effects have not yet been completed” (FERC 2016:75).

### Resolution of Adverse Effects

Because identification of historic properties that could be affected by the project has not been completed, and adverse effects to historic properties have not yet been assessed, no measures have yet been taken to resolve adverse effects. A PA was developed in 1998 during Section 106 consultation for Crown Hydro's original license application; however, because the amended application is considered a new undertaking, a new agreement document (MOA or PA) would need to be developed if adverse effects are identified. FERC indicates that a PA may be prepared (FERC 2016:75). A draft PA was not appended to the EA; the status of the preparation of the PA is unclear and no timeline is given for its preparation or execution. The EA does provide a description of what the PA "could include," such as requirements to complete cultural resources studies within the APE; evaluate identified resources for eligibility to the NRHP; assess effects to historic properties; specify management and mitigation measures; provide for the use of the Secretary of the Interior's Standards for Rehabilitation in the design of the powerhouse; include a detailed schedule for completing requirements; and include documentation of agency and interested party correspondence.

The activities described above do not currently meet the requirements of Section 106 of the NHPA, and the process does not appear to have been initiated. The Section 106 regulations require that the lead federal agency complete the Section 106 process prior to the approval of any license or approval (36 CFR § 800.1(c)).

### **Section 110**

In order to meet the requirements of Section 110, USACE would need to ensure that historic resources within its property have been identified and any effects resolved. Based on the information presented in the EA, and as discussed above, historic resources have not yet been identified for this project. Therefore, the identification of historic properties that may be within USACE property and effects to those historic properties may need to be resolved for the USACE to comply with the requirements of Section 110 of the NHPA.

### **NEPA**

NEPA requires consideration of impacts to historic properties and cultural resources (40 CFR §1508.27(b)(3); 40 CFR §1508.27(b)(8)). Although the process for identifying such resources and potential effects to them is not laid out in the NEPA regulations, in practice it is very similar to the Section 106 process, with one difference being that NEPA analysis must include effects to cultural resources as well as NRHP-listed or eligible historic properties. As discussed above in relation to Section 106, the process of identifying cultural resources and historic properties that could be affected by the proposed project, evaluating the severity of project effects to resources, and resolving significant effects, has not yet been initiated.

This lack of information is especially problematic given that FERC has issued a draft EA and FONSI. Under NEPA, federal agencies prepare an EA in order to determine whether a federal action constitutes a "major Federal action significantly affecting the quality of the human environment" and therefore requires preparation of an EIS (40 CFR §1508.9). In determining whether a federal action "significantly" affects the quality of the human environment, federal agencies must consider impacts to cultural resources



and historic properties, including proximity to “historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas” (40 CFR §1508.27(b)(3)), or the degree to which the action may adversely affect “districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places” or may cause loss or destruction of “significant scientific, cultural, or historical resources” (40 CFR §1508.27(b)(8)). A FONSI is issued when a federal agency can demonstrate that project effects do not rise to this level of significance. With regard to the proposed project, as the analysis of cultural resources and historic properties has not yet been completed, it is not possible to consider whether the project will constitute a major federal action significantly affecting the quality of the human environment at this time.

In terms of coordinating the NEPA and Section 106 processes, the Section 106 regulations (36 CFR § 800.8(a)(1)) state that “[t]he determination of whether an undertaking is a ‘major Federal action significantly affecting the quality of the human environment,’ and therefore requires preparation of an environmental impact statement (EIS) under NEPA, should include consideration of the undertaking’s likely effects on historic properties.” Similarly, CEQ and ACHP guidance indicates that “agencies that use a FONSI as a decision document for an undertaking must conclude the Section 106 process prior to issuing the FONSI” (CEQ and ACHP 2013:25). Treatment measures for adverse effects to historic properties should be referenced in the EA and documented in an agreement document (MOA or PA), which should be included in the final EA or FONSI in order to document the agency’s fulfillment of its Section 106 responsibilities. A Section 106 agreement document was not included with FERC’s EA. It does not appear that the NEPA and Section 106 processes for the Crown Hydro project have been coordinated, and the Section 106 process has not been concluded prior to issuing a FONSI, as recommended by CEQ and ACHP.

### **FERC Guidelines**

As discussed above, there is no evidence of formal government-to-government consultation between FERC and Indian tribes. This conflicts with FERC’s policy regarding consultation with Indian tribes (18 CFR § 2.1(c)). The lack of information in the EA regarding effects to cultural resources and historic properties also appears to conflict with the recommended contents of NEPA documents per FERC internal guidance (FERC 2008).

### **Federal Compliance Summary**

The incomplete process of identifying and evaluating impacts to cultural resources and historic properties is inconsistent with federal law, regulations, and agency guidance. Effects to cultural resources and historic properties have not yet been identified, nor has the Section 106 consultation process been initiated. The implementing regulations for both Section 106 and NEPA emphasize that the process of identifying effects to cultural resources and historic properties must be completed before a federal agency’s decision to approve an undertaking. The Section 106 regulations state that the Section 106 process, including identification of effects to historic properties and consultation with interested parties, must be complete prior to a federal agency’s issuance of a permit or approval (36 CFR § 800.1(c)). In addition, NEPA regulations require that NEPA procedures “must insure that environmental information is

available to public officials and citizens before decisions are made and before actions are taken” (40 CFR § 1500.1(b)).

### **2.2.3 COMPLIANCE WITH STATE LAWS**

Based on information available in the public record, the extent to which state laws regarding cultural resources have been complied with is unclear. Because the project requires permitting from state agencies (MDNR and MPCA), and because the project may potentially affect the SAFHD, which is listed in the NRHP, and the Falls of St. Anthony, which is listed in the State Register of Historic Places, the state agencies must consult with MNHS under the Minnesota Historic Sites Act regarding ways to avoid or mitigate adverse effects to these resources. In addition, if significant archaeological resources are suspected to exist, the state agencies must consult with MNHS and OSA under the Minnesota Field Archaeology Act.

It is unknown whether MDNR or the MPCA have consulted with MNHS and OSA as required by these state laws.

### **2.2.4 COMPLIANCE WITH LOCAL LAWS**

It is currently unknown whether the Minneapolis HPC has reviewed the proposed project for consistency with the St. Anthony Falls Historic District design guidelines or the *Secretary of the Interior’s Standards for Rehabilitation*.

## **3.0 SETTING**

The following section provides (1) a brief cultural context for the project area and (2) a description of changes to the project area since the original license was issued by FERC in 1999.

### **3.1 Cultural Context**

#### **3.1.1 PRECONTACT PERIOD (10,000 BC–1750 AD)**

For thousands of years prior to the arrival of Europeans, ancestors of the Siouan people, including the Missouri, Ojibwe, Ioway, and Dakota, were living in the land that would later become known as Minnesota. During the early Holocene, Native people lived in mobile, compact bands of hunter-gatherers. By the fifth century AD, they adapted to climatic and environmental changes by settling into more densely populated villages in which they practiced corn-based horticulture in addition to harvesting wild rice and hunting bison, subsistence patterns that continued into the late 18th century (Dobbs 1989, Wedel 1986, Anfinson 1989, Gibbon 2012).

#### **3.1.2 CONTACT PERIOD (1750 AD–1850)**

In the mid-17th century, the westward expansion of the fur trade and a growing European presence, as well as conflict between tribes, resulted in the migration of the Ioway and Ojibwe south and west into Iowa and Nebraska. During this time, the Dakota more permanently settled in southeastern Minnesota, due in part to the establishment of the Ojibwe in northern and central Minnesota, and maintained a strong presence until treaties, war, disease, and forced removal diminished their numbers (Anfinson 2003).

During the Contact Period, there was a permanent Dakota settlement on the shores of Lake Calhoun as well as a seasonal encampment near St. Anthony Falls. Dakota, Ojibwe, and Ho-Chunk also portaged around the Falls on their journeys through the area (Stevens 1890:29). Local Dakota bands sugared on Nicollet Island during the spring and, even after they had been removed to the reservations, returned to the Minneapolis area on gathering forays (Two Pines Resource Group LLC, 2016:22).

In 1680, Father Louis Hennepin observed a Dakota man praying and making a sacrifice for safe passage at St. Anthony Falls (Hennepin [1683] 1938:117), and in 1766, explorer Jonathan Carver documented an offering made to the Great Spirit of the Falls by a Ho-Chunk man he witnessed while on an expedition (Two Pines Resources LLC 2016). In addition, another nearby named Dakota place was Spirit Island, or *Wanagi Wita*, which was known as a place where eagles gathered (Two Pines Resources LLC 2016).

### **3.1.3 POSTCONTACT PERIOD (1850–1970)**

Following forced removal of Dakota populations to reservations in neighboring states and Canada in the mid-1850s and 1860s, settlement of the area around the Falls by Euro-American immigrants rapidly commenced. The towns of St. Anthony and Minneapolis were incorporated in 1855 and 1857, respectively, on either side of the Falls. While the U.S. Dakota War of 1862 and the Civil War were disruptive and brought high civilian casualties (in the case of the former war, of both whites and Dakota), the populations of the cities continued to grow, with Minneapolis outpacing, and eventually subsuming, St. Anthony in 1872.

The earliest industry of Minneapolis and St. Anthony was sawmilling, which began in the 1820s with a government-owned gristmill and sawmill at the Falls, followed by private lumber, flour, paper and wool milling operations beginning in earnest in the 1860s. In the 1870s and 1880s, railroads replaced residences along the central riverfront as waterpowered industry expanded. While Minneapolis was a leader for lumber production during the early decades of sawmilling, the introduction of steam power in the 1870s provided an alternative to water power, expanding the potential locations of sawmills across the state and country. The arrival of steam power, coupled with the denuding of the northern Minnesota forests, eventually pushed the lumber industry westward. As a result, many of the Minneapolis sawmills were converted to, or replaced by, flour and grist mills, and from the 1880s to 1930 Minneapolis was known as the Flour Milling Capital of the world (Mill City Museum 2016). In the first part of the 20th century, Dakota began to return to Minnesota, forming four federally-recognized Dakota communities: the Lower Sioux Indian Community, Prairie Island Indian Community, Shakopee Mdewakanton Sioux Community, and Upper Sioux Community. American Indian neighborhoods such as Franklin Avenue in Minneapolis grew and expanded as a number of Native Americans relocated to urban areas during the 1950s and 1960s, prompted in part by the Indian Relocation Act of 1956.

By 1930, Buffalo, New York surpassed Minneapolis in flour production, and over the next two decades the vast majority of mills along the Minneapolis riverfront were dismantled. From 1959 to 1963 the Upper St. Anthony Falls Lock and Dam was constructed at the central riverfront, replacing the platform that once housed sawmills and the city's first hydroelectric plant. In the 1960s and 1970s a number of

industrial buildings in the area were razed and railroad tracks removed as part of urban renewal projects, making way for new kinds of development, including housing, retail, and office spaces (Anfinson 1989).

### 3.2 Evolution of the Project Vicinity Prior to and Since the 1999 License

The redevelopment of the central Minneapolis riverfront currently underway can trace its roots back to the St. Anthony Falls Historic District's listing to the NRHP and its designation as a local Minneapolis district in 1971. The following master and interpretive planning efforts were undertaken between the 1971 and 1999:

- *Mississippi/Minneapolis: A Plan and Program for Riverfront Development*, Minneapolis Riverfront Planning Team, 1972
- *Report of the Long Range Regional River Development and Acquisition Committee to the Minneapolis Park and Recreation Board*. Minneapolis Park and Recreation Board, 1977
- *Central Riverfront Open Space Master Plan for Riverfront Development Coordination Board*, Sasaki Associates, 1977
- *Mills District Plan*, Office of the City Coordinator, 1983
- *Guidelines and Criteria: Ewald Dairy, Flour Exchange, Grain Belt Brewery, Hennepin Ave, Heritage Landing, Holmes/Greenway*, Department of Community Planning and Economic Development, 1983
- *Report to the City of Minneapolis*, Riverfront Recreation Entertainment and Cultural Committee, 1987
- *St. Anthony Falls Heritage Zone Interpretive Plan, Commission Number 8984-891*, Ellerbe Becket, Inc., February 1990
- *Historic Mills District Master Plan*, Prepared for the Minneapolis Community Development Agency by Urban Design Associates, 1998

The original Crown Hydro license was issued by FERC in 1999. The master and interpretive planning momentum introduced above continued on after 1999 with the following efforts:

- *Above the Falls: A Master Plan for the Upper River in Minneapolis*, Prepared for the Minneapolis Park and Recreation Board, 1999
- *Update to the Historic Mills District Master Plan*, Prepared for the Minneapolis Community Development Agency by Urban Design Associates, 2001
- *American Indian Interpretive Programs: Minneapolis Central Riverfront*. Minnesota Historical Society and Minneapolis Park and Recreation Board, August 2004
- *Mississippi River Critical Area Plan*, City of Minneapolis, 1988, revised 2006
- *Minneapolis Plan for Sustainable Growth*, City of Minneapolis, 2008
- *Power of the Falls: Renewing the Vision for St. Anthony Falls Heritage Zone*, St. Anthony Falls Heritage Board, December 2009

- *Above the Falls Regional Park Master Plan (Draft)*, Minneapolis Park and Recreation Board, 2013
- *Changing Relationships to the Power of the Falls: An interpretive vision for the East Bank of St. Anthony Falls*, St. Anthony Falls Heritage Board, Minneapolis, MN, November 2013
- *Changing Relationships to the Power of the Falls: An interpretive vision for the West Bank of St. Anthony Falls*, St. Anthony Falls Heritage Board, Minneapolis, MN, December 2014
- *St. Anthony Falls Regional Park Master Plan*, Minneapolis Park and Recreation Board, 2015
- *Central Mississippi Riverfront Regional Park Master Plan*, Minneapolis Park and Recreation Board, 2015. This plan will go before the Metropolitan Council for regional approval in October 2016.

Broadly speaking, a common theme among these plans is a move away from the central Minneapolis riverfront as a predominantly industrial location, to a place offering historical, cultural, and recreational resources and experiences that enhance the quality of life for both Minneapolis residents and visitors to the area. This guiding vision is visible in the development over the past two decades within the area surrounding St. Anthony Falls.

The planning efforts introduced above led to significant redevelopment of this area since the issuance of the original Crown Hydro license. Development over the past 17 years has included the expansion of a system of parks offering opportunities to recreate and engage with the natural beauty as well as the rich history of the area, including Mill Ruins Park and Gold Medal Park, established in 2001 and 2007 respectively. The development of Mill Ruins Park is viewed by the Minneapolis Park and Recreation Board as the centerpiece of its effort to revitalize the city's central riverfront. The park features significant excavated and restored remnants of the district's milling, waterpower, and railroading infrastructure. To date, excavations have uncovered the buried foundations of seven mills, the main tailrace canal and headrace canals, and iron-and-stone railroad trestle supports. Flowing water has been reintroduced into two tailraces, while circulation, interpretive features, and other site amenities have been installed. The park board operates an active interpretive and school program in and around the park.

Additional opportunities for the enrichment of residents and visitors are found in historical and cultural programming such as the Mill City Museum, which opened in 2003, the MacPhail Center for Music, which opened its Mill District location in 2008, and the Guthrie Theater which relocated to the riverfront in 2006. Developments also include an extraordinary increase in urban housing options immediately adjacent to the proposed Crown Hydro project location. These include both new construction, such as the Washburn Lofts and Stone Arch Lofts built in 2000, the Bridgewater Lofts built in 2007, and Zenith Condominium Building built in 2008, and the rehabilitation of existing historic structures, such as the Whitney Lofts, the result of a 2007 conversion of the NRHP-listed Standard Mill. Residential offerings also include the creation of artist residences, such as the A-Mill Artist Lofts, the result of a 2014 conversion of the historic NRHP-listed, NHL Pillsbury A-Mill. In addition, leading medical organizations have relocated to the Mill District, such as the American Academy of Neurology, which relocated to the area in 2012, and the University of Minnesota Physicians Mill City Clinic, which is now housed in the

Zenith Condominium Building. There has also been a plethora of restaurants offering diverse dining options, including those at the historic St. Anthony Main, which have opened along the central Minneapolis riverfront since the late 1990s. These developments are all consistent with the vision put forth in the planning efforts for the central riverfront – of an area transformed from industrialism to one of high quality experiences and programming that enhance the lives of both area residents and visitors.

## 4.0 POTENTIAL EFFECTS TO CULTURAL RESOURCES

### 4.1 Introduction

As discussed above, the identification of historic properties and cultural resources that could be affected by the proposed project is incomplete. Additional studies to identify resources and potential effects to those resources need to be undertaken prior to project approval. The discussion below is intended to provide an overview of known archaeological and architecture/history properties within the study area, as well as a discussion of possible project effects to those resources. This study should not be construed as a comprehensive inventory of all resources within the study area, nor is it intended to serve as part of the project-specific identification of effects to historic properties and cultural resources that is required under NEPA and Section 106 of the NHPA.

### 4.2 Study Area

The APE for the proposed project has not yet been established; however, FERC states that “the APE would normally include lands within the project boundary as depicted in the revised exhibit G filed with the application, and all lands outside the project boundary where project construction, operation, or maintenance activities may directly or indirectly affect historic properties” (FERC 2016:68).

For the purpose of this study, the study area was designed to be consistent with this definition of a potential APE and includes all areas where the proposed project could potentially affect cultural resources, including visual, noise, and vibration effects. Potential direct effects could include ground-disturbing construction that might impact known cultural resources and hidden and as yet unknown archaeological resources. Potential indirect effects could include potential visual effects to surrounding resources, as well as potential noise and vibration that may be associated with construction and operation of the project. The study area includes an area bound on the southwest by Washington Avenue, on the northwest by the Burlington Northern Santa Fe (BNSF) tracks, on the southeast by I-35W, and on the northeast by the distance equivalent of one block north of the Mississippi River.

### 4.3 Known Resources

A large number of cultural resources are known to exist within the study area. As a result of the literature review, 27 previously identified archaeological sites, 250 architecture/history properties, and four historic districts were identified within the study area. The historic districts include the NRHP-listed SAFHD, the NRHP-listed Minneapolis Warehouse District (MWHF), the NRHP-eligible Gateway Historic District,

and the NRHP-eligible St. Anthony Falls Locks and Dams Historic District (SAFLDHD). Figure 1 shows the proposed project relative to key known cultural resources.

Of the 27 archaeological sites, 23 are considered contributing resources to the NRHP-listed SAFHD, one consists of structural ruins associated with an NRHP-listed property, and three have not been evaluated for NRHP eligibility. Of the 250 previously inventoried architecture/history properties within the study area, six are individually listed in the NRHP; of these six, two are also designated National Historic Landmarks (NHLs). Of the remaining 244 architecture/history properties, 72 are contributing resources and 33 are non-contributing resources to the SAFHD, 41 are contributing resources and seven are non-contributing resources to the MWHD, and 17 are contributing resources to the SAFLDHD. Two architecture/history properties are individually eligible for listing, and 78 architecture/history properties have not been evaluated for NRHP eligibility.

Summaries of the known resources that could potentially be affected by the proposed project are introduced below.

#### **4.3.1 ST. ANTHONY FALLS HISTORIC DISTRICT**

The proposed project area is within the SAFHD, which is listed in the NRHP and is a locally designated historic district by the Minneapolis HPC. Both the Minneapolis HPC and the MnHPO have regulatory oversight of the district. The proposed project area is located in the St. Anthony Falls Waterpower Area, which is the most historically significant portion of the SAFHD district.

The NRHP nomination for the SAFHD was originally written in 1971. The district was identified as having significance in the areas of Architecture, Commerce, Industry, and Transportation. In 1991, the boundary of the SAFHD and a coherent theme and statement of significance for the district were clarified. The 1991 revisions identified a single unifying theme for the district—waterpower development and use—and provided a significance statement for an area within the district identified as the St. Anthony Falls Waterpower Area. Specifically, the 1991 revised nomination form captures the district's significance as follows:

By virtue of its engineering and industrialization, the St. Anthony Falls Waterpower Area was the apotheosis of nineteenth-century, American, direct-drive waterpower development. Beginning in 1858 with the completion of the Falls of St. Anthony Dam, the developers of the falls adapted a waterpower distribution system first implemented three decades before at Lowell, Massachusetts. By the end of the century, they had created the country's greatest waterpower industrial district, which was also the country's leading flour milling center from 1880 to 1930 (Hess and Kudzia 1991: 8-1).

The period of significance for the St. Anthony Falls Waterpower Area is from 1858 to 1941. The St. Anthony Falls Waterpower Area contains 68 contributing resources and 22 non-contributing resources. The contributing resources comprise 20 buildings, 15 structures, and 33 archaeological sites that relate to the water-powered industrial activity during this time period (Hess and Kudzia 1991:7-3). The

architectural and archaeological resources that survive in the SAFHD represent the noteworthy history of waterpower and mills that resulted in the formation of Minneapolis as a major metropolitan area in the Midwest.

#### **4.3.2 FALLS OF ST. ANTHONY**

The Falls of St. Anthony are listed in the State Register of Historic Places (M.S. 138.664). The only naturally occurring waterfall on the Mississippi River, the Falls are approximately 35 feet high. The Falls were a place of importance for many Native American peoples prior to European exploration of the area. Further discussion with Native American communities with ancestral connections to this area is necessary to better understand the historical, cultural, and spiritual significance of this place.

Father Louis Hennepin was the first European to encounter the falls, and he named it after St. Anthony of Padua. “The Falls of St. Anthony were instrumental in the development of Minnesota’s largest city in all its stages of growth. The natural beauty of the falls was a wilderness landmark, attractive to both tourists and settlers. The falls furnished direct power to the lumber and flour industries which stimulated the development of the new city. Finally, the falls provide electric power for industrial and residential use” (Coddington 1971). Due to their integral role in the history and development of Minneapolis, the Falls are a contributing resource to the SAFHD.

The significance of the Falls of St. Anthony to the past, present, and future development of Minneapolis is clear: “No place anchors the upper Mississippi's historical significance like St. Anthony Falls. No place matches its regional, national, even international importance” (Anfinson 2003:253).





#### **4.3.3 STONE ARCH BRIDGE**






The Stone Arch Bridge was constructed by railroad baron James J. Hill in 1882 for his Great Northern Railroad to facilitate the transfer of goods and people across the Mississippi River. The bridge is constructed of granite and limestone and is 2,100 feet long by 28 feet wide. Its Romanesque Revival architecture consists of 23 massive arches that span across the Mississippi River, just below the Falls of St. Anthony (Coddington 1971). The bridge is a Historic Civil Engineering Landmark and was listing in the NRHP in 1971 as a contributing resource to the SAFHD. The bridge stood unaltered until 1962 when two arches were replaced with a steel truss to accommodate river traffic (Coddington 1971). Today the bridge serves as a pedestrian and bicycle path in downtown Minneapolis, and is part of the St. Anthony Falls Heritage Trail, a walking and biking trail focused on the historic heritage of the St. Anthony Falls area.

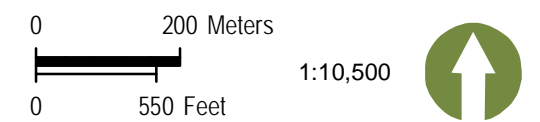


Cultural Resources  
Compliance and the  
Crown Mill Hydroelectric  
Project Environmental  
Assessment  
Minneapolis, Minnesota

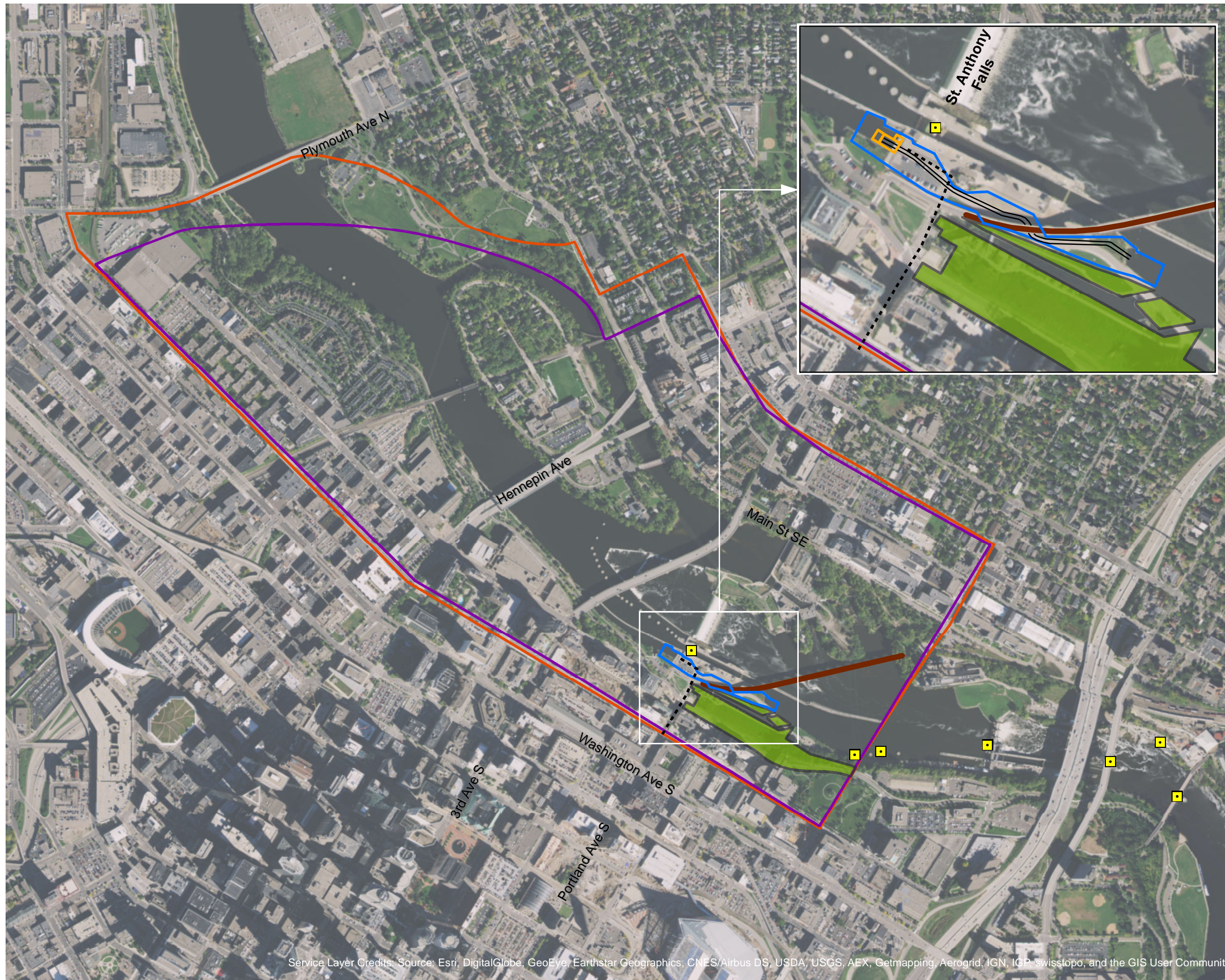
**Proposed Crown Hydro Project**

-  Project Boundary
-  Powerhouse
-  Tailrace
-  Transmission Line

-  St. Anthony Falls Locks and Dams Historic District (NRHP eligible) \*This district is depicted by points because district boundaries are not available.
-  St. Anthony Falls Historic District (NRHP listed)
-  St. Anthony Falls Historic District (Locally designated)
-  Mill Ruins Park
-  Stone Arch Bridge



Proposed Crown Hydro Project Area



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, Swisstopo, and the GIS User Community

Figure 1

#### **4.3.4 ST. ANTHONY FALLS LOCK AND DAM COMPLEX AND ST. ANTHONY FALLS LOCK AND DAM HISTORIC DISTRICT**

The Upper St. Anthony Falls Lock and Dam consists of a concrete horseshoe dam and a 400 foot by 56 foot lock structure with a bottom lateral hydraulic system and miter gates at both ends. The lock has a 49.2 foot lift, which is the highest on the Mississippi River. A three-story brick control tower building with a third floor enclosed observation deck is located along the southwestern side of the structure, along with two one-story control buildings.

The Upper St. Anthony Falls Lock and Dam complex, which was constructed in 1963, has been determined eligible for individual listing in the NRHP. The Upper St. Anthony Falls Lock and Dam facility is locally and nationally significant as it facilitated the extension of water traffic on the Mississippi River above St. Anthony Falls to the Upper Harbor. The lock and dam complex meets NRHP Criterion A in the areas of Commerce, Industry, Maritime History, and Transportation. The lock and dam also meet Criterion C in the area of Engineering (Berg and Roise 2007).

The Upper St. Anthony Falls Lock and Dam is also a contributing resource to the St. Anthony Falls Locks and Dams Historic District (SAFLDHD), which has been determined eligible for listing in the NRHP. This historic district includes the Upper and Lower St. Anthony Falls Lock and Dam complexes and other nearby resources associated with the Upper Mississippi Harbor Development, such as the Cedar Avenue and lower Northern Pacific Railroad Bridges, the University of Minnesota Dock, and the mooring cells and dock wall at the lower lock. The SAFLDHD meets NRHP Criterion A in the areas of Commerce, Industry, Maritime History, and Transportation, and Criterion C in the area of Engineering (Berg and Roise 2007).

#### **4.3.5 WALL REMNANT IN THE USACE LOCK AND DAM PARKING LOT**

A portion of the ruins of a historical wall is integrated into the existing northwestern wall of the USACE Upper St. Anthony Falls Lock and Dam parking lot. This resource has been interpreted as a remnant of the 1857 v-shaped dam that spans the river north of St. Anthony Falls (Kudzia 1988). The resource has not been evaluated for significance, either individually or as a contributing resource to the SAFHD.

#### **4.3.6 MINNEAPOLIS MILL COMPANY GATEHOUSE, POWER CANAL, AND 1<sup>ST</sup> STREET TUNNEL**

Typically, a mill drew its waterpower from a power canal by means of a short headrace, and returned the spent flow to the river by means of a longer tailrace that tunneled beneath the canal to the inshore area and the river. The main headrace in the West Side Milling District is known as the Power Canal. The main tailrace in the West Side Milling District runs beneath the Power Canal, or the headrace, and then begins to angle out to the river just before Portland Avenue to outlet in what is now Mill Ruins Park. This tailrace is known as the 1<sup>st</sup> Street Tunnel.

In 1857, the Minneapolis Mill Company built the Power Canal, or headrace, along 1<sup>st</sup> Street in an effort to expand the waterpower generation potential of the mills on the west side of the Mississippi and covered it with wooden planks to allow for street traffic. The original Power Canal terminated at 6<sup>th</sup> Avenue (current Portland Avenue), and was subsequently extended in 1865. In 1885, the Power Canal was again

lengthened, as well as widened and deepened (Anfinson 1989). The canal was tunneled through hard limestone, whereas the tailraces, including the 1<sup>st</sup> Street Tunnel, were cut out of an earlier deposit of softer sandstone located below the limestone. The tailraces were lined with brick, stone, or wood to prevent erosion.

Although covered and filled in during construction of the Upper St. Anthony Falls Lock and Dam in the early 1960s, the Power Canal and 1<sup>st</sup> Street Tunnel are still extant beneath Portland Avenue.

Archaeological investigation in 1986 confirmed that the Power Canal and 1<sup>st</sup> Street Tunnel remain in relatively good condition (Anfinson 1990). The Minneapolis Mill Company Power Canal and 1<sup>st</sup> Street Tunnel are considered contributing properties to the SAFHD.

#### **4.3.7 ARCHAEOLOGICAL RESOURCES**

##### **Known Archaeological Resources**

The archaeological remains of three mill complexes have been recorded adjacent to or within the proposed project area along Portland Avenue: the Russell/Dakota/King Midas Flour Mill, the Cataract Mill Complex, and the Clapp Woolen Mill/Empire Mill/Pillsbury B Elevator. Each of these is described briefly below. All of these archaeological sites are contributing properties to the SAFHD.

Cataract Mill was constructed in 1859 and was a three-story limestone building, with a fourth story added in 1875. It was the first privately-built flour mill on the west side. The structure was torn down in 1929, but its foundations are still visible along the west side of Portland Avenue (Anfinson 1989).

The Russell Mill was a two-story wood frame flour mill constructed in 1868. The name was changed to the Dakota Mill in 1879 and to the King Midas Mill in 1923. A third story was added to the building in 1892, and the building was faced with corrugated iron. The mill was abandoned in 1961 and burned down in 1967 (Anfinson 1989).

The Clapp Woolen Mill was constructed in 1865 as a four-story stone woolen mill. It was purchased by C.A. Pillsbury and Company in 1872 and converted into a flour mill named the Empire Mill. This mill was destroyed by a fire in 1881. In 1888, the Pillsbury Company built a brick elevator on the site, which was connected to the Pillsbury B Mill. In 1929 the elevator changed ownership and was known as the King Midas Elevator. The elevator burned in 1969 (Anfinson 1989).

Archaeological features associated with these mills are, in the cases of the Cataract Mill and Clapp Woolen Mill/Empire Mill/Pillsbury B Elevator, still visible and are a part of Mill Ruins Park. These features are contributing elements of the SAFHD. In addition, other milling-related archaeological features are located adjacent to the project area within Mill Ruins Park, many of which are also contributing elements of the SAFHD.

##### **Potential Undiscovered Archaeological Resources**

Archaeological features associated with the three mill complexes described above are likely still present beneath the current ground surface, and possibly beneath Portland Avenue. Mills typically consisted of a

multi-story superstructure as well as a masonry substructure that extended 30 to 40 feet below grade. The substructure could include not only building foundations and structural features, but also specialized features such as wheel pits, headraces, and tailraces. The NRHP continuation sheet for the SAFHD indicates that “since the area’s significance primarily derives from its waterpower engineering, any archaeological information concerning the design and operation of these abandoned substructures will contribute to an understanding of the district’s significance” (Hess and Kudzia 1991:8.10).

In addition to the three previously documented mill complexes, the proposed project could encounter resources related to timber milling at the falls. Prior to the construction of the USACE Upper St. Anthony Falls Lock and Dam, the proposed project site was the location of a wooden platform sawmill. First constructed in 1858 immediately behind the St. Anthony Falls v-shaped dam and straddling the falls themselves, it originally housed the Pioneer Sawmill and Champion Sawmill (Anfinson 1989). By 1873, historic maps show at least nine sawmills and planing mills on the platform (Fuller 1873). The wooden platform foundation was replaced with stone in 1881. The platform sawmills began to be demolished in the 1880s, and much of the site was likely destroyed during construction of the Upper St. Anthony Falls Lock and Dam in 1959. However, as demonstrated during archaeological monitoring of geotechnical borings in 2012, some subsurface features associated with the platform mill may still survive.

As described above in Section 2.1.1, monitoring of the excavation of seven soil borings within the proposed project area, along the USACE Upper St. Anthony Falls Lock and Dam parking lot and access road, resulted in the observation of cultural material, primarily building material such as brick, concrete, and wood, in all seven borings (Westwood 2012). The amount of material increases in the westernmost three borings, possibly indicating closer proximity to intact deposits. In addition, a feature was identified in the westernmost boring that was tentatively identified as a possible historic-period tunnel. This feature could be associated with the platform mills that occupied the site between 1858 and 1959.

#### **4.3.8 TRADITIONAL CULTURAL PROPERTIES**

As described in section 3.1.2 and 4.3.2 above, the historical record suggests that St. Anthony Falls was a place of importance for multiple Native American tribes. It is unknown whether any Traditional Cultural Properties of importance to native people exist in the vicinity of the proposed project because tribal consultation does not appear to have been conducted.

### **4.4 Potential Effects**

Specific project effects to historic properties and other cultural resources cannot be completely determined at this time, because full identification of potentially affected resources has not been completed. However, current plans for the proposed project as published in the amended application and EA, combined with what is known about the historical significance and high archaeological sensitivity of the project vicinity, raise the following questions that should be considered as part of the assessment of effects required under NEPA, Section 106 of the NHPA, and applicable state laws prior to approval of the proposed project.

#### **4.4.1 CONSTRUCTION OF THE PROPOSED PROJECT**

The proposed project would include excavation for the proposed powerhouse, tailrace canal, and underground transmission line (FERC 2016). The powerhouse would be approximately 88 by 42 feet in area. The tailrace tunnel would be 930 feet long, 14-16 feet wide and 10-14 feet tall. The underground transmission line would be 760 feet long; however, the specific dimensions of the trench that would be excavated to install the transmission line are not provided in the application or EA. Neither the EA nor the amended application explicitly state the depths at which the facilities would be located or the depth of excavation that would be required to install them; however, based on project plans included as an attachment to a response to requests for additional information after the filing of the application, it appears that the powerhouse would extend to a depth of approximately 40 feet below grade, and the bottom of the tailrace tunnel would be located between approximately 50 feet below grade and 20 feet below grade (Crown Hydro 2016).

Key questions yet to be analyzed:

- How would the limestone dam or wall remnant visible in the west wall of the USACE parking lot be affected by construction of the powerhouse?
- To what extent do archaeological resources related to historic milling remain, and what is the condition of the remains? How will proposed ground-disturbing activities impact these resources? Could impacts to resources associated with historic milling affect the integrity of the NRHP-listed SAFHD?
- Could the operation of heavy machinery and increased vehicle traffic during project construction affect nearby archaeological sites?
- How wide and deep will the trench excavated for installation of the underground transmission line be? Does the trenching have the potential to impact buried archaeological resources?
- Would direct effects to the NRHP-eligible Upper St. Anthony Falls Lock and Dam as a result of project construction adversely affect the historic integrity of the structure?
- The proposed tailrace would be excavated under the Stone Arch Bridge. Although current plans indicate that the excavation would not directly impact the bridge's foundations, could excavation of the tailrace destabilize the underlying sandstone and limestone geology, which may already have been compromised by previous construction, and impact the stability of the foundations of the Stone Arch Bridge? How could this affect the integrity of the bridge and the SAFHD, to which the tailrace is a contributing resource?

#### **4.4.2 VISIBLE PRESENCE OF THE POWERHOUSE STRUCTURE**

As part of the proposed project, an 88-foot by 42-foot powerhouse is proposed to be constructed at the northwest end of the parking lot associated with the Upper St. Anthony Falls Lock and Dam. The powerhouse would stand approximately 17 feet high relative to the USACE Lock and Dam parking lot, and would be approximately comparable in height to the West River Parkway parking lot to the south (Crown Hydro 2015). Few design specifications are included in Crown Hydro's application or FERC's EA.

Key questions yet to be analyzed:

- Would the design of this building meet the *Secretary of Interiors Standards for Rehabilitation* and the Minneapolis HPC's SAFHD design guidelines?
- Would this building incorporate into its design, alter, or otherwise demolish the existing historic wall already extant in this location?
- What effects – direct or indirect – would this structure have on the NRHP-eligible Upper St. Anthony Falls Lock and Dam, as the proposed structure is to be built on portions of the lock?
- What are the visual effects of this new-construction building on the setting and historical integrity of the surrounding NRHP-listed and determined-eligible properties, including the Stone Arch Bridge, the SAFHD, and the SAFLDHD?
- What effects would this structure have on historic properties not yet identified within the APE?

#### **4.4.3 REDUCED FLOW OF WATER OVER ST. ANTHONY FALLS**

The volume of water flowing over the Falls of St. Anthony would be reduced during operation of the proposed project plant. As stated in the EA, the project would draw between 150 and 1,000 cubic feet per second (cfs) from the Mississippi River, and assumes that a minimum flow of 100 cfs would need to flow over the St. Anthony Falls dam (FERC 2016:9) to maintain the Falls' aesthetics. The applicant assumes that the 100 cfs would only be required during certain times of the year and day: there would be no minimum flow requirement during nighttime hours, or between November 15 and March 15 (FERC 2016:22). However, there is disagreement among various resource agencies, including the Minneapolis Park and Recreation Board and the National Park Service, regarding whether 100 cfs is an acceptable minimum flow to maintain the aesthetics of St. Anthony Falls. To date, no studies have yet been completed that document the aesthetic impact of the reduced flow over the Falls.

Key questions yet to be analyzed:

- What would be the aesthetic impact, both visual and auditory, of a 100 cfs minimum flow over the Falls? What would be the aesthetic impact, both visual and auditory, of a zero cfs flow over the Falls at night and between November 15 and March 15?
- Could changes in water flow over the falls adversely affect the setting, feeling, and integrity of the Falls of St. Anthony, which is a significant contributing resource to the NRHP-listed SAFHD, or to the SAFHD itself?
- Could a reduction, or elimination at certain times of the day and year, of flow over the Falls have indirect or cumulative socioeconomic effects? Would the aesthetic impact of the proposed flow reduction, and resulting impacts to the SAFHD and the general setting and historic character of the area, have an impact on community identity, tourism, or property values?
- If Traditional Cultural Properties are identified in the vicinity of the proposed project, what effect would reduced flow, or no flow at certain time of the day and year, have on these places?

#### **4.4.4 CONSTRUCTION AND OPERATIONAL NOISE AND VIBRATION**

Key questions yet to be analyzed:

- Would the proposed powerhouse be generating operational noise that may be heard from the outside of the structure? If so, what effect will the operational noise have on the surrounding

NRHP-listed and determined eligible properties? Would shorter-term noise from construction have any adverse effect?

- Would the flow and volume of water traveling through the powerhouse and the tunnel generate operational vibration? If so, how will this operational vibration affect known and unknown surrounding cultural resources? Specifically, will there be any impact to the Stone Arch Bridge, the dam/wall remnant in the USACE parking lot west wall, and the exposed and unexposed mill ruins immediately south/southeast of the proposed project?

#### **4.4.5 PRECLUSION OF REDEVELOPMENT OPPORTUNITIES**

As described in section 3.2, the neighborhood surrounding the project area has undergone dramatic redevelopment in recent years, transitioning from a predominantly industrial location to a place offering historical, cultural, and recreational resources and experiences that enhance the quality of life for both Minneapolis residents and visitors to the area. The closure of the Upper St. Anthony Falls Lock in 2015 created an opportunity to continue the redevelopment of this neighborhood by repurposing the lock and adjacent facilities. The proposed project would likely preclude any below-grade or above-grade redevelopment of the parking lot adjacent to the lock which may make any large-scale redevelopment of the site impossible. The preclusion of redevelopment is potentially an NHPA issue as reduced access to historic properties (in this case the Upper St. Anthony Falls Lock), and the resulting lack of appropriate reuse and/or maintenance of historic properties, could result in a potential adverse effect. Also, in the context of NEPA, socioeconomic changes of this nature could be considered an adverse effect.

Key questions yet to be analyzed:

- What impact would the presence of the proposed Crown Hydro project have on other redevelopment opportunities of the lock site?
- Is the Crown Hydro project realizing the full redevelopment potential of the lock site?
- What redevelopment opportunities would the proposed project prevent?
- Would the presence of the proposed Crown Hydro project preclude appropriate reuse and/or maintenance of the NRHP-eligible Upper St. Anthony Falls Lock?
- How do the socioeconomic benefits of the proposed project compare to the socioeconomic benefits of other redevelopment opportunities?

#### **4.4.6 CUMULATIVE EFFECTS**

A consideration of cumulative effects takes into account a proposed project's impacts in combination with those of other past, present, and reasonably foreseeable future actions, and considers not only cultural resources within the project area, but also on other cultural resources within the cumulative impact analysis area. The EA does not contain a discussion of cumulative effects to cultural resources, nor does it define a cumulative impact analysis area.

Key questions yet to be analyzed:

- How would a geographic area of analysis for cumulative effects to cultural resources be defined?

- What kind of effects would the proposed project have, in combination with other past, present, and reasonably foreseeable projects, on cultural resources, including the SAFHD, SAFLDHD, the Stone Arch Bridge, the Falls of St. Anthony, the many nearby archaeological sites, and any potential Traditional Cultural Properties that may exist?

## 5.0 CONCLUSION

This report concludes that despite the proposed project's location within a highly culturally significant area, FERC has neither engaged in adequate consultation with state, local, or tribal governments, nor has it made a good faith effort to identify and assess potential effects on cultural resources. More information is needed before any conclusions can be reached regarding potential effects to cultural resources or before it is appropriate to issue a FONSI. Comprehensive studies designed to identify cultural resources and historic properties, and to evaluate potential effects to these resources, should be completed as part of the permitting and environmental review process so that appropriate mitigation strategies can be identified prior to the issuance of a FONSI. All of this work needs to occur in close consultation with the appropriate agencies and consulting parties, and take into consideration public views as required by NEPA and Section 106 of the NHPA.



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