

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION OF NAVIGATOR HEARTLAND
GREENWAY, LLC FOR A PERMIT UNDER THE SOUTH DAKOTA ENERGY
CONVERSION AND TRANSMISSION FACILITIES ACT TO CONSTRUCT THE
HEARTLAND GREENWAY PIPELINE IN SOUTH DAKOTA**

DOCKET NO. HP22-002

**Direct Testimony of Amy Cottrell
On Behalf of the Staff of the South Dakota Public Utilities Commission
May 25th, 2023**

1 **Q: Please state your name and business address.**
2
3 A: Amy Cottrell, ERM, 1155 Perimeter Center West, Atlanta, Georgia, 30338
4
5 **Q: Describe your educational background.**
6
7 A: B.S., University of Wisconsin-Green Bay; Biology major, Environmental Science
8 minor
9 M.S., Auburn University; Fisheries
10
11 **Q: By whom are you now employed?**
12
13 A: I have been employed by Environmental Resources Management, Inc. since
14 March 2023.
15
16 **Q: What work experience have you had that is relevant to your involvement on
17 this project?**
18
19 A: I have 10 years' experience as a fisheries biologist and aquatic ecologist for
20 academic institutions and federal, state, and tribal governments in the Midwest,
21 southeast, and pacific northwest. I have studied and implemented federal, state,
22 and tribal regulations relating to aquatic and terrestrial natural resources, fisheries
23 and wildlife management, and tribal treaty rights. I have experience working within
24 the Migratory Bird Treaty Act, Endangered Species Act, Clean Water Act, Dingell-
25 Johnson Act, Magnuson-Stevens Act, and state regulations. I have worked with
26 United States Fish and Wildlife Services (USFWS), National Oceanic Atmospheric
27 Administration (NOAA), Federal Energy Regulatory Commission (FERC), United
28 States Army Corps of Engineers (USACE), Bureau of Indian Affairs (BIA), United
29 States Environmental Protection Agency (USEPA), Bureau of Land Management
30 (BLM), United States Forest Service (USFS), Department of Transportation (DOT),
31 and state natural resource agencies.
32
33 **Q: What Professional Credentials do you hold?**
34
35 A: Certified Fisheries Professional, American Fisheries Society
36 Endangered and Threatened species handling permit, USFWS
37
38 **Q: What is the purpose of your testimony?**
39
40 A: To provide an assessment of the completeness and adequacy of the Aquatic
41 Impacts sections of the Navigator Heartland Greenway Pipeline System
42 application, specifically Section 6.6 – Aquatic Wildlife and Ecosystems. To assess
43 that all reasonable ecological measures have been accounted for, and that
44 remediation plans are wholistic and reasonable for aquatic ecosystems in the
45 application. To provide professional recommendations of the proposed activities,

46 mitigation measures and identify potential concerns assessed from review of the
47 application.
48

49 **Q: What methodology did you employ?**

50
51 A: I reviewed the application and associated components (Exhibit A – Project
52 Mapping, Exhibit C – Supplementary Tables, Exhibit E – Environmental
53 Construction Guidance, and applicant direct testimonies) and supplemental
54 materials (applicant’s responses to staff’s first through sixth set of data requests)
55 for completeness and accuracy, and consulted external resources, including:

- 56 • South Dakota Administrative Rules
- 57 • South Dakota Game, Fish and Parks (SDGFP) Fisheries Management Area
58 Strategic Plans
- 59 • USACE Wetlands Delineation Manual
- 60 • U.S. Endangered Species Act species distribution and abundance list
- 61 • USGS National Land Cover Database
- 62 • Government agency rules in the Federal Register
- 63 • USFWS policy and regulations
- 64 • SDGFP Aquatic Invasive Species laws and regulations

65
66 **Q: Did you review section 6.6 of Navigator’s Application?**

67
68 A: Yes. I reviewed Section 6.6 – Aquatic Wildlife and Ecosystems of the Navigator
69 application and cross checked with external resources.
70

71 **Q: Please summarize what information was included in section 6.6 of**
72 **Navigator’s Application.**

73
74 A: Aquatic habitats and wildlife that will be impacted by the Project either by direct
75 crossing or proximity to, including standalone waters and wetlands. Section 6.6
76 further describes the flora and fauna assumed to be impacted, and measures that
77 will be taken to avoid, minimize, and/or mitigate impacts. The methodology of
78 pipeline construction across waterbodies and how the Project will impact aquatic
79 habitats and wildlife is detailed.
80

81 **Q: In your opinion, did Navigator’s Application adequately address ARSD**
82 **20:10:22:17 (Effect on aquatic ecosystems)? Please explain.**

83
84 A: Not to date. Application is missing biological survey data, including a complete
85 wetland delineation and inland waterbody documentation, and federally
86 (Endangered Species Act) listed and state species of concern. These data are
87 needed to properly identify and quantify aquatic flora and fauna that may be
88 affected within the proposed pipeline construction and operation site, to analyze
89 impacts of construction and operation on the entire biotic environment, and thus to
90 fully identify measures to ameliorate negative biological impacts of construction
91 and operation. In the Applicant’s Responses to Staff’s First Set of Data Requests,

92 the Applicant states that they will perform biological surveys before June 2023 to
93 collect aforementioned data. Applicant needs to then perform potential impact
94 analyses and finalize an action plan to avoid, minimize, and/or mitigate negative
95 impacts to aquatic flora, fauna, and habitats. It is my understanding that this will
96 be completed before permit approval.
97

98 **Q: In your opinion, did section 6.6.3 of Navigator’s Application properly**
99 **identify the potential impacts to wetlands and waterbodies? Please explain.**
100

101 A: No. To-date, the Applicant provides the total number of waterbody crossings
102 located within the Project boundary and provides supplemental data for these
103 waterbodies in Exhibit C, Table C-2; however, the application does not list or define
104 potential impacts to these waterbodies. The Applicant defines wetland types and
105 lists their ecological services. Table 6.6-1 (Summary of Wetlands Crossed by the
106 Project by County) lists total miles of each wetlands type impacted within the
107 project area. Table 6.6-2 (Horizontal Directional Drill Locations) lists the Horizontal
108 Directional Drilling (HDD) locations and length (in feet) of waterbodies impacted.
109 Aside from the following sentence in Section 6.6.2 – Wetlands, ‘...permanent
110 conversion of some PFO [palustrine forested] and PSS [palustrine scrub shrub] to
111 PEM [palustrine emergent] will be necessary to conduct the required pipeline
112 inspections and pipeline integrity’, there are no details in the application defining
113 specifics of any other potential impacts. The only mention of potential impacts is
114 that they will be avoided. It is impossible to say impacts will be avoided without first
115 identifying what the potential impacts are. Potential impacts to wetlands and
116 waterbodies need to be defined.
117

118 **Q: Do you agree with the mitigation measures Navigator plans to implement to**
119 **minimize the potential impacts to wetlands and waterbodies? Please**
120 **explain.**
121

122 A: No, I do not agree. In Section 6.6.3 – Impacts to Wetlands and Waterbodies and
123 Mitigation Measures, the application states, ‘a majority of wetlands and large
124 waterbodies within the Project area will be crossed via HDD, therefore avoiding
125 impacts to these wetlands. Negative impacts of HDD are addressed in Exhibit E
126 Section 5.4.3 – Inadvertent Releases. However, the mitigation measures should
127 be restructured to include more preventative BMPs when crossing waterbodies
128 instead of reactive measures to a release. In-stream sediment barriers (i.e., silt
129 screens or small coffer dam type structures) are mentioned in the application as a
130 response to a release; however, they should be deployed prior to construction to
131 minimize potential negative impacts. Given the installation time for both types of
132 barriers, deploying mitigation measures after an unexpected release would
133 potentially increase the negative impacts to waterbodies. The application should
134 also include mitigation measures for aquifer breaching, a known risk of HDD.
135

136 Mitigation measures for the Open Cut method, which is being used to cross most
137 waterbodies, are presented in the application and in Exhibit E. Section 6.6.3 of the

138 application lists best management practices (BMPs), which are discussed in
139 Exhibit E; however, these are preventative measures. Neither the application nor
140 Section 5.3.4 – Open Cut Crossing Method in Exhibit E discuss remediation for
141 potential negative impacts.

142
143 **Q: Do you have any recommendations for additional mitigation measures in**
144 **order to minimize impacts to wetlands and waterbodies? Please explain.**

145
146 A: See previous two answers for more detail. Table 6.6-1 needs to include total
147 estimated acreage of impacts, not just linear impacts as wetlands are not strictly
148 linear systems – especially the prairie pothole-type wetlands located within the
149 proposed Project area. Crossing a wetland linearly is going to have radiating
150 effects on the entire wetland and surrounding watershed. Wetland impacts and
151 mitigation are calculated in acres, and any temporary or permanent wetland
152 impacts would need to be confirmed and quantified. This acreage can easily be
153 added to Table 6.6-1 after wetland delineations are completed during field surveys
154 prior to June 2023. Table 6.6-1 should include potential impacts to the water table,
155 local hydrology, and soil compaction within and around wetlands and waterbodies
156 crossed. Lastly, this section should include impacts from access roads, contractor
157 yards, and above ground facilities mentioned in the application, including proximity
158 of roads to wetlands and waterbodies, estimated frequency of use by construction
159 vehicles and other heavy equipment, and how post-construction clean-up will
160 operate to avoid additional negative impacts.

161
162 Applicant needs to better describe wetland crossing methods. While the
163 application lists BMPs for both waterbodies and wetlands, the Open Cut method
164 section focuses almost exclusively on waterbody crossing impacts, while making
165 minor mention of mitigation measures for wetland crossings.

166
167 In the application, construction methods and mitigation measures are described ‘to
168 best ability’ for waterbodies; for example, ‘Pipeline trench will be dug immediately
169 before installation to limit duration of construction within/near waterbody.’ Applicant
170 also lists BMPs here and in Exhibit E that will be employed to prevent or minimize
171 negative impacts. Construction methods and mitigation measures may need to be
172 updated after wetland delineations are performed, as is mentioned in Section 6.7
173 – Threatened and Endangered Species of the application, ‘Pending final results of
174 field surveys and input from resource agencies, appropriate mitigation and
175 protection measures will be implemented to minimize potential impacts.’ Applicant
176 needs to follow the USACE Midwest Regional Supplement (USACE 2010) to
177 complete prairie pothole wetland delineations in the project boundary.

178
179 **Q: In your opinion, did section 6.6.4 of Navigator’s Application properly**
180 **identify the potential impacts to aquatic fauna? Please explain.**

181
182 A: Not completely. As is, the application describes ecosystem types and species
183 potentially present, defines categorical fishery waters present and notes the project

184 will not cross any high-quality fisheries within South Dakota according to the South
185 Dakota Water Quality Standards, crossing only warmwater fish life propagation
186 waters. According to the Fisheries Management Strategic Plan for the East River
187 Fisheries Management Area, the Project would not cross any stocked lakes or
188 ponds. The application does not identify potential impacts to other species that
189 potentially use these waterbodies or wetlands other than fishes. Presence,
190 abundance, and potential impact data for other aquatic species need to be
191 included. It is my understanding that the applicant will complete biological field
192 surveys by June 2023, and an assessment of the survey results will need to be
193 performed to determine completeness and accuracy of potential impacts
194 identification to aquatic fauna.

195
196 **Q: Do you agree with the mitigation measures Navigator plans to implement to**
197 **minimize the potential impacts to aquatic fauna?**

198
199 A: Not completely. I do agree with the Applicant's plan to continue consulting with
200 USFWS and SDGFP to assist with mitigation measures and any necessary permits
201 needed prior to Project approval. However, no species-specific baseline data are
202 provided; these data are necessary to fully identify potential impacts and thus
203 mitigation measures for aquatic fauna.

204
205 It is my understanding that the Applicant will complete biological field surveys by
206 June 2023 to fully identify potential impacts and complete their mitigation plan.
207 Because these surveys have yet to be completed, an assessment of the survey
208 results will need to be performed to determine completeness and accuracy of
209 mitigation measures to potential impacts to aquatic fauna.

210
211 **Q: Do you have any recommendations for additional mitigation measures to**
212 **minimize impacts to aquatic fauna? Please explain.**

213
214 A: Applicant needs to define proximity of the Big Sioux River to neighboring
215 waterbodies in order to properly identify threats of aquatic invasive species,
216 specifically silver carp and bighead carp.

217
218 The invasive species prevention plan needs to extend past general equipment
219 cleaning and needs to include steps that are proven to be preventative. Refer to
220 the SDGFP Aquatic Invasive Species Strategic Management Plan (AIS SMP) 2023
221 and perhaps consult with USFWS and SDGFP for guidance (attached; Exhibit_AC-
222 2).

223
224 Applicant needs to consult with USFWS SD Ecological Services and SD Game,
225 Fish, and Parks for BMPs relating to the endangered Topeka Shiner.

226
227 Since the biological field surveys are yet to be completed, an assessment of the
228 survey results will need to be performed to determine completeness and accuracy
229 of mitigation measures to potential impacts to aquatic fauna.

230
231 **Q: Are Navigator’s proposed construction techniques for waterbody**
232 **crossings consistent with industry standard practices?**
233
234 A: Yes. Applicant states BMPs will be implemented to minimize wetland and/or
235 waterbody impacts and will be used to facilitate post-construction restoration.
236 BMPs are discussed in detail in Exhibit E.
237
238 **Q: Do you have any concerns with the proposed waterbody crossing**
239 **construction techniques proposed by Navigator? If so, please explain and**
240 **provide any recommendations you have for addressing your concerns.**
241
242 A: Yes; see previous response addressing waterbodies and wetlands. The HDD
243 section in Exhibit E should describe when mitigation or remediation measures
244 would be deployed. The Open Cut Method needs to include potential negative
245 impacts of construction failures and a phase mitigation plan for all potential
246 negative impacts. These sections should provide post-construction remediation
247 plans for temporarily impacted waterbodies, wetlands, and aquatic fauna.
248
249 **Q: Did you review Navigator’s Horizontal Directional Drill (HDD) Contingency**
250 **Plan?**
251
252 A: No. The applicant has not yet provided an HDD Contingency Plan.
253
254 **Q: Did you review Navigator’s Spill Prevention, Control, and Countermeasures**
255 **Plan (SPCC Plan)?**
256
257 A: No. The applicant has not yet provided a SPCC Plan.
258
259 **Q: What is an SPCC Plan and how would it help protect the aquatic**
260 **environment?**
261
262 A: A Spill Prevention, Control, and Countermeasure (SPCC) Plan is utilized to help
263 prevent the discharge of oil into waterbodies and surrounding shorelines. A
264 properly defined SPCC plan defines measures to both help prevent spills, and in
265 the event a spill was to occur, it defines control measures should one occur. A
266 project-specific SPCC plan would identify all potential waterbodies in relation to
267 the Project and proposed project activities. Proper spill plan and control
268 measures would be thoroughly defined by a licensed engineer thus minimizing
269 potential impacts to the aquatic environment.
270
271 **Q: Is Navigator required by law or regulation to maintain an SPCC Plan for**
272 **both construction activities and operation of the pipeline?**
273
274 A: U.S. Pipeline and Hazardous Materials Safety Administration (PHMSA)
275 regulations govern the spill responses for the pipeline during operation. This

276 would typically be covered under an emergency response plan, which the
277 application states will be completed prior to commencing operation. The
278 Applicant should develop a SPCC Plan for construction if it meets the USEPA
279 requirements of (1) storing more than 1,320 gallons total of oil products (e.g.,
280 diesel fuel, gasoline, lube oil, hydraulic oil, etc.) at a location, and (2) if a release
281 occurs, the oil products could reasonably be expected to discharge to navigable
282 waters of the U.S. or adjoining shorelines. Based on the information provided in
283 the application, I could not reasonably determine the applicability of this.
284

285 **Q: Does this conclude your testimony?**

286
287 **A: Yes.**