JAMES RIVER WATER AUTHORITY BOARD OF DIRECTORS SPRING CREEK SPORTS CLUB, 109 CLUBHOUSE WAY ZION CROSSROADS, VIRGINIA February 25, 2020 11:00 A.M.

Present: D. D. Watson (Chairman), Mark Dunning (Vice Chairman), Joe Chesser (Treasurer) Troy Wade, Eric Dahl, and Christian Goodwin

Absent: (none)

Others Present: Brendan Hefty (Hefty, Wiley, and Gore); Justin Curtis (Aqualaw); Pam Baughman (Louisa Water Authority); Joe Hines, Eli Wright and David Saunders (Timmons Group); Helen Phillips and Andy Wade (Louisa County); Greg Krysiniak (Faulconer Construction)

CALL TO ORDER

Chairman Watson called the meeting of the James River Water Authority (JRWA) Board of Directors to order at 11:13 a.m., and led the Board in the Pledge of Allegiance.

ADOPTION OF AGENDA

On the motion of Mr. Goodwin, seconded by Mr. Dahl, which carried by a vote of 6-0, the agenda was adopted.

ITEMS FROM THE PUBLIC

(none)

APPROVAL OF MINUTES OF PRECEDING MEETING

On the motion of Mr. Dunning, seconded by Mr. Dahl, which carried by a vote of 6-0, the Board approved the minutes of the January 8, 2020 meeting.

FINANCIAL REPORT

Mr. Chesser stated that the Authority's beginning balance was \$504,595.35 and reviewed the bills in the Board packet. He noted that a wire fee would also be necessary for the debt service payment, and that payment of the bills would leave a balance of \$326,206.52. Mr. Dahl reminded those present that the JRWA would seek reimbursement from the Counties for the debt service in accordance with the Authority's agreements. On the motion of Mr. Dahl, seconded by Mr. Dunning, which passed by a vote of 6-0, the Board approved the payments and the Treasurer's report.

DISCUSSION/INFORMATION ITEMS

Information – Revised Corps of Engineers Permit Application

Mr. Justin Curtis provided introductory remarks for the presentation, stating that the process for obtaining necessary permits is back on track. He reviewed the process to date for the burial permit which will be considered for issuance by the state Department of Historic Resources (DHR), and discussed a reasonable path forward which has been agreed to by both DHR and the Office of the Attorney General. He said that GAI Consultants had been retained to review prior archeological work, and that the process was proceeding smoothly with completion anticipated in as soon as 4-6 weeks. Regarding the Corps of Engineers (COE) permit, he stated that Timmons has been working through a detailed alternatives analysis and other information necessary for the revised application which would be the subject of a summary presentation today. He stated that numerous siting options have been evaluated from a logistical, technical, and financial aspect, and that the final application will likely run in the hundreds of pages due to the depth of the required analysis. He noted that Board action was not necessary at this time and turned the presentation over to Mr. Joe Hines.

Mr. Joe Hines stated that options evaluated included 6 general pump station locations ranging along the James River from Bremo Bluff to Goochland, 12 waterline routing alternatives, 5 alternative (non-James River) water sources, and the "no-build" option. He said that the effort has been robust, thorough and independent, and that available resources had been employed to a full extent in the process. He stated that the exhaustive nature of the effort was intended to ensure that any reasonable engineer or engineering firm would reach a similar logical conclusion. He stated that Alternative 6, the currently proposed site, is the only practicable alternative which would meet the JRWA's purpose and need.

Mr. Hines then provided an overview of the factors which would be reviewed for each site, and provided a timeline for the project to date. He stated that the initial joint permit application was made in March 2014, with Department of Environmental Quality issuing the withdrawal permit in November 2015 after performing detailed modeling to ensure that the watershed could support the JRWA's needs at this location. He stated that the Virginia Marine Resources Commission issued their permit in 2017. Mr. Hines noted that in September of 2019, the COE requested the revised application under the Individual Permit Process which led to the analysis being presented today. Mr. Hines reviewed the project's purpose and need: to provide a reliable raw water supply of sufficient quantity to meet the short and long term needs of the member Counties. He also briefly reviewed relevant portions of federal law setting forth the requirement to evaluate a reasonable range of options in order to identify the Least Environmentally Damaging and Practicable Alternative (LEDPA).

Mr. Hines reviewed several issues which could be generally encountered to varying degrees in the various alternatives, including CSX's rail line which parallels the river throughout Fluvanna County; the need for suitable and sufficient water; proximity to homes and other resources; access to power; the height of the floodplain; rock and rock outcroppings; and environmental impacts such as historic resources, streams and wetlands. Mr. Curtis summarized the methodical process for evaluating each alternative: Does the alternative meet the project purpose and need;

what are the logistical and practical considerations; what are the costs; and what are the environmental impacts? Mr. Curtis then reviewed a summary slide comparing cultural resources in proximity to the various alternatives. He stated the slide highlighted the fact that finding a site which avoids all cultural and historic resources is not feasible.

Mr. Eli Wright then reviewed the detailed process for determining the location of wetlands and other environmental impacts in the various alternatives under consideration. The analysis included topographic features, stream and soil data, LiDAR datasets and aerial imagery, and threatened and endangered species including the Northern Long-Eared Bat, James Spiny Mussel, and the Atlantic Pigtoe.

Mr. Hines showed an overview map of the 6 different alternative locations and 12 routing options which were considered. Mr. Watson asked if a location in Goochland was chosen, would the JRWA have to engage that locality, and Mr. Curtis responded that the Code of Virginia would require the express approval of any such locality. Mr. Hines noted that the Dominion wastewater treatment plan and coal ash storage upstream at Bremo Bluff created upstream challenges, and discussion ensued over these constraints. The furthest upstream pump station alternative is upstream of Bremo Bluff, the next is the Forsyth property, three are in the vicinity of Point of Fork and Columbia including the proposed alternative, and another two are downstream in Goochland County. Mr. Goodwin asked Mr. Hines to identify the Cobbs Creek Reservoir project on the map. Mr. Hines described the Cobbs Creek project and its close proximity to the JRWA intake, and Mr. David Saunders described its size as enormous. General discussion ensued regarding the overview map.

Mr. Hines reviewed Alternative 1 (Forsyth Property, 2.3 miles upstream of river confluence) and its three associated waterline routing options. He stated that permanent and temporary easement acreages comparable to those contemplated in the current site were used for all sites to ensure consistency. The waterline routes would range from 2.75 - 4.03 miles, and would be within existing utility easements for 0-19% depending on route. 11-26 easements would be required. Mr. Hines reviewed stream and wetland impacts for the alternative's routing options, noting that this option may impact the most previously recorded archeological sites. According to Mr. Hines, Alternative 1 does not meet the availability / practicability threshold due to significant cost increases and site-specific challenges associated with required construction/improvement within the railroad right of way.

Mr. Hines reviewed Alternative 2 (Bremo Bluff, 0.35 miles upstream of Rt. 15 bridge) and its two waterline routing options. Waterline lengths are both in the 10.5 mile range and due to the length, a pipe size increase (from 24" to 30") would be required to offset head challenges. The line could be collocated in existing utility easements for 0-4% of the route. 73-81 easements would be required for these routing options. Mr. Hines reviewed stream and wetland impacts for the alternative's routing options, noting that the proposed habitat delineating for the Atlantic Pigtoe falls within this corridor. According to Mr. Hines, Alternative 2 does not meet the availability / practicability threshold due to significant cost increases, a potential requirement to construct within actual VDOT roads, and site-specific challenges associated with required construction/improvement within the railroad right of way.

Mr. Hines reviewed Alternative 3 (Columbia) and its 1 mile waterline routing. He noted the unique challenges of the Columbia area, including historic property and multiple owners, proximity to the bridge and railyard facilities, and the flow into the river from an adjacent stream. He stated that the sediment plume often carried by the Rivanna into the James at this junction is a concern. The line could not be collocated in existing utility easements for any of the route, and 16 easements would be required. Mr. Hines discussed the unique landform challenges and viewshed impacts, and the fact that the bore from the intake to the pump station would likely be through rock in its entirety. Mr. Hines reviewed stream and wetland impacts for the alternative's routing options. According to Mr. Hines, Alternative 3 does not meet the availability / practicability threshold due to significant cost increases, constructability issues, and site-specific challenges associated with required construction/improvement within the CSX railyard in this area.

Mr. Hines reviewed Alternative 4 (Goochland, ½ mile downstream of Columbia) and its waterline routing which would total 1.61 miles. The line could not be co-located in existing utility easements for any of the route, and 18 easements would be required. Mr. Hines reviewed stream and wetland impacts for the alternative's routing options. According to Mr. Hines, Alternative 4 does not meet the availability / practicability threshold due to significant cost increases, a potential requirement to construct within actual VDOT roads in Columbia, and site-specific challenges associated with required construction/improvement within the railroad right of way.

Mr. Hines reviewed Alternative 5 (Goochland, 1 mile downstream of Columbia) and its two waterline route options, which would range from 2.12 - 2.31 miles. The line could not be collocated in existing utility easements for any of the route, and 19-23 easements would be required. Mr. Hines reviewed stream and wetland impacts for the alternative's routing options. According to Mr. Hines, Alternative 5 does not meet the availability / practicability threshold due to significant cost increases, a potential requirement to construct within actual VDOT roads in Columbia, and site-specific challenges associated with required construction/improvement within the railroad right of way.

Mr. Hines reviewed Alternative 6, the project's currently proposed location roughly 0.4 miles upstream of the river confluence. He also discussed two sub-alternatives which are in very close proximity to the current location: Alternative 6-1 is the original application's pump station's location which was moved very slightly upstream from an adjacent parcel; and Alternative 6-2, which would have kept the line within more existing utility easements but which was ultimately ruled out due to concerns associated with rock removal adjacent to the Colonial Gas Pipeline. Alternative 6's pipeline (0.97 miles) could be co-located in existing utility easements for more than 60% of the route, and would require 5 easements. Mr. Hines reviewed stream and wetland impacts for the alternative's routing options. Mr. Hines stated that Alternative 6-1 does not meet that threshold due to landowner concerns, and Alternative 6-2 does not meet it due to concerns regarding construction and rock removal in the river adjacent to the gas pipeline. According to Mr. Hines, Alternative 6 meets the availability and practicability threshold.

Mr. Hines then reviewed a summary table of project costs on a per option basis. Total project costs ranged from \$24,019,000 for Alternative 6 to \$93,540,000 for one of the Alternative 2

routing options. Mr. Curtis discussed the estimates for cultural resources costs, noting that to maintain the consistency of the analysis only estimates of Phase 1 archeological costs were used. According to Mr. Curtis, cost estimates associated with additional phases of archeological work are not feasible to determine for the alternatives because there is no reasonable basis to estimate the cost of Phase 2 and 3 work at any location until the preceding phase is complete. Mr. Hines noted that consistent financing costs were included in the analysis, and summarized the methods used to arrive at the various cost types.

Mr. Hines reviewed five alternative water sources included in the analysis, noting that: the Rivanna River does not meet the quality or quantity needs of the project; the use of water from Lake Anna is prohibited; water from Cobb's Creek Reservoir is currently unavailable and would come at a prohibitive cost based on forecast needs; sufficient groundwater sources are not available; and acquiring water from neighboring localities would involve extensive construction and piping. He also reviewed the No Action / No Permit Alternative, which was eliminated because the project's purpose cannot be met without the COE permit.

Mr. Hines then reviewed a summary LEDPA determination table, noting for the reasons reviewed in the presentation, it was determined that Alternative 6 was the least environmentally damaging practicable alternative.

Mr. Wright reviewed approaches to mitigation, noting that the project had been adjusted to minimize environmental impacts and discussing the use of wetland and stream credits. Mr. Curtis then briefly covered the 21 different public interest review factors used by the COE in determining whether a project is in the public interest. Mr. Curtis stated that historic properties would be central in this consideration, and that the purpose of the 106 process was intended to reach an appropriate way to mitigate impacts. Mr. Curtis also stated that the nature of the project, to provide a responsible and reliable source of water, was strongly in support of the project's public need.

Mr. Hines also reviewed the Public Involvement to date, including the numerous monthly JRWA meetings, 15 community meetings, Public Hearings and other meetings since 2014. He noted that there had been a concerted and purposeful effort to engage the public from the beginning of the process to this point.

Mr. Hines again summarized the reasoning that Alternative 6 is the preferred alternative: it is the LEDPA, it avoids and minimized impacts to the extent practicable, it has strong public benefit and environmental impacts can be mitigated; and it has the lowest cost, the shortest route, the most existing utility route co-location. Mr. Hines said the disadvantage to Alternative 6 is its third-party opposition. Mr. Hines then reviewed next steps, and Mr. Curtis provided further procedural details.

Mr. Dunning asked if the application and materials were public, and Mr. Curtis responded that it was and that there would be a public comment period on the process.

Mr. Dahl if construction and support costs as summarized in the comparative table were available in further detail, and Mr. Hines said they were, and briefly discussed more of the

process used in generating estimates to ensure that any reasonable engineer with similar experience would reach similar results.

Mr. Hines again noted the robust and good faith effort employed by Timmons in the extensive evaluation, stating that the intent was to be thorough, fair and unbiased. Mr. Hines opened the floor up to further questions.

Mr. Chesser asked what would happen when the permit was issued. Mr. Hines and Mr. Curtis briefly reviewed what the archeological and construction schedule would comprise, as well as other issues which would need to be addressed.

Mr. Watson asked if archeological work would have to be performed again, and Mr. Curtis discussed the differences between Phase 1, Phase 2, and Phase 3 efforts. Mr. Curtis also emphasized that cost comparisons had to be consistent; for that reason cost comparisons were calculated as though the project was starting from scratch at all evaluated alternatives, including the current one.

Mr. Goodwin noted the length of the James River in Fluvanna and asked how the alternative locations were chosen. Mr. Hines and Mr. Saunders reviewed various reasons, including proximity to Cobbs Creek, being upstream of Bremo Bluff, pipeline routing and length, and others. He noted that other locations could be chosen, but that pipeline length would increases and that other historical resources, railroad considerations, and other concerns could come into play.

Mr. Dahl asked how construction times varied across the alternatives. Mr. Hines and Mr. Krysiniak responded that some of this would depend on archeological efforts, and that pipeline length and rock encountered would impact the current 24 month estimates. Mr. Hines also discussed time of year restrictions for working in the river. Mr. Wright discussed permits and their time requirements. Mr. Goodwin asked if any of the alternatives had been permitted, and Mr. Wright responded that they were not. Mr. Hines noted that construction costs were assumed to increase 5-8% annually, and general discussion ensued regarding increases.

Mr. Wade asked if an addendum could be included regarding costs associated with construction delays, and Mr. Curtis responded that it could.

Mr. Chesser asked about further legal challenges when the permit is issued. Mr. Curtis stated the JRWA has been told in public forums that the permit would be challenged. He stated that a challenge has always been based on the assumption that Rassawek is in a precise and known area. He said that, when opponents have been asked on several occasions where the project could be moved to avoid Rassawek, they have not be able to answer. He said this is because Native American settlements were more like regions than towns. He noted that the John Smith map was based on third-party information and was imprecise. For these and other reasons, he said, we could face opposition here, but also in other locations as well. Mr. Curtis also noted that a permit challenge does not necessarily stop construction while the challenge plays out, and reviewed a relevant example.

ACTION ITEMS

(none)

CONSENT AGENDA

(none)

CLOSED SESSION

(none)

ADJOURNMENT

On the motion of Mr. Goodwin, seconded by Mr. Dahl, which carried by a vote of 6-0, the Board voted to adjourn the meeting at 12:51 p.m.

BY ORDER OF:

D.D. WATSON, CHAIRMAN BOARD OF DIRECTORS JAMES RIVER WATER AUTHORITY