

United States District Court, E.D. Virginia,
Norfolk Division.
PRECON DEVELOPMENT CORPORATION, INC.,
Plaintiff,
v.
UNITED STATES ARMY CORPS OF
ENGINEERS, Defendant.

Civil No. 2:08cv447.
Nov. 18, 2013.

Douglas Eugene Kahle, Glen Michael Robertson,
Wolcott Rivers Gates P.C., Mark Randolph Baumgartner,
Pender & Coward PC, Virginia Beach, VA,
for Plaintiff.

Austin David Saylor, U.S. Department of Justice,
Washington, VA, Kent Edmund Hanson, U.S. Department
Of Justice, Washington, DC, Craig Paul Wittman,
United States Attorney's Office, Norfolk,
VA, for Defendant.

OPINION AND FINAL ORDER

REBECCA BEACH SMITH, Chief Judge.

This matter comes before the court on cross motions for summary judgment filed by Plaintiff Precon Development Corporation Inc. ("Precon") on March 28, 2013, and Defendant United States Army Corps of Engineers ("Corps") on April 22, 2013. The motions were referred to United States Magistrate Judge Tommy E. Miller by Order of May 5, 2013, pursuant to the provisions of 28 U.S.C. § 636(b)(1)(B) and Federal Rule of Civil Procedure 72(b). The Magistrate Judge heard oral argument on the motions on May 23, 2013, and the Magistrate Judge's Report and Recommendation ("R & R") was filed on July 25, 2013.

The Magistrate Judge recommended granting the Corps' Motion for Summary Judgment and denying and dismissing Precon's Motion for Summary Judgment. By copy of the R & R, the parties were advised of their right to file written objections thereto. On August 12, 2013, Precon filed objections to the R & R, to which the Corps responded on August 29, 2013. As discussed *infra* in Part III, the court, having examined the objections and response to the objections to the R & R, and having made *de novo* findings with respect thereto, does hereby **GRANT** the Corps' Motion for Summary Judgment and **DENY** Precon's Motion for Summary Judgment.¹

I. The Fourth Circuit's Remand for Reconsideration

Without belaboring the procedural history and factual background as recounted in the R & R, this matter is before the court on remand from the United States Court of Appeals for the Fourth Circuit for "the Corps' reconsideration of its significant nexus determination." *Precon Development Corp., Inc. v. U.S. Army Corps of Engineers*, 633 F.3d 278, 297 (4th Cir.2011) ("*Precon* "). In *Precon*, the Fourth Circuit found that, although the Corps properly aggregated, and found to be "similarly situated" for jurisdictional analysis purposes, 443 acres of wetlands adjacent to Precon's 4.8 acres of wetlands, the administrative record contained "insufficient information to assess the Corps' conclusion" that a significant nexus exists

¹ In its brief, Precon requests a hearing on its objections to the R & R. After full examination of the briefs and the record, the court has determined that a hearing is unnecessary, as the facts and legal arguments are adequately presented, and the decisional process would not be aided significantly by oral argument. *See* Fed.R.Civ.P. 78(b); Local Civ. R. 7(J).

between the wetlands and a navigable body of water. See *Precon*, 633 F.3d at 290, 293.

The Fourth Circuit provided guidance as to the nature of the record the Corps should create in reconsidering the significant nexus determination, which it stated is a “flexible ecological inquiry into the relationship between the wetlands at issue and [the Northwest River,] the traditional navigable water.” *Id.* at 294 (citing *Rapanos v. United States*, 547 U.S. 715, 770–80, 126 S.Ct. 2208, 165 L.Ed.2d 159 (2006)). First, the inquiry “does not require laboratory tests or any particular quantitative measurements in order to establish significance.” *Precon*, 633 F.3d at 294. Qualitative evidence, such as expert testimony, may support a significant nexus determination. *Id.* Second, the Fourth Circuit, discussing Sixth and Ninth Circuit Courts of Appeals decisions, provided examples of the germane types of quantitative or qualitative evidence: (1) evidence of the functions of the relevant wetlands and their adjacent tributaries; and (2) evidence of the condition of the relevant navigable water. *Id.* at 296.

Specifically, the appellate court expressed concern that the record did not adequately address (1) the condition of the Northwest River; (2) the actual flow rates of the tributaries—Saint Brides Ditch and the 2,500-foot Ditch; and (3) the significance of that flow. *Id.* at 294–95. In explaining that the burden placed upon the Corps is not an “unreasonable” one, the Fourth Circuit requested, in accordance with *Rapanos*, that “the Corps pay particular attention to documenting why such wetlands significantly, rather than insubstantially, affect the integrity of navigable waters.” *Precon*, 633 F.3d at 297.

II. Standard of Review of the Corps' Determination

The Fourth Circuit articulated that the Corps' factual findings are entitled to deference under the “arbitrary and capricious” standard of the Administrative Procedure Act, 5 U.S.C. § 706(2), *Precon*, 633 F.3d at 296; and the agency's “legal determination” as

to whether a significant nexus exists is entitled to deference “to the extent that the interpretation has the power to persuade.” *Id.* at 291 (quoting *U.S. Dep't of Labor v. N.C. Growers Ass'n*, 377 F.3d 345, 353–54 (4th Cir.2004) (citing *Skidmore v. Swift*, 323 U.S. 134, 140, 65 S.Ct. 161, 89 L.Ed. 124 (1944)); *Precon*, 633 F.3d at 296.²

III. Analysis of the Report and Recommendation and Precon's Objections Thereto

Simply put, the question before this court on remand is: Does the administrative record support the Corps' determination that the relevant 448 acres of wetlands have a significant nexus to the Northwest River? The answer, simply put, is that the record does

² The Corps argues in its Motion for Summary Judgment that because a significant nexus determination involves application of the agency's regulatory definition of “waters of the United States,” which is a mixed question of fact and law, and requires special technical agency expertise, the reasoning of the agency and its ultimate determination should be reviewed under a deferential “arbitrary and capricious” standard. Mem. Supp. Mot. Summ. J. at 13; Reply in Supp. Mot. Summ. J. at 3 (citing *Deerfield Plantation Phase II–B Prop. Owner's Assoc. v. U.S. Army Corps of Engrs*, 501 F. App'x 268, 274 (4th Cir.2012) (“We will set aside a challenged agency action if it is ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.’ 5 U.S.C. § 706(2)(A).”). Although discussed at length in the first Report and Recommendation, the court does not address this argument due to the Fourth Circuit's clear pronouncement of the appropriate standard of review in *Precon*, 633 F.3d at 291. See R & R, Aug. 19, 2009 (ECF No. 54).

so support the nexus. The Corps' post-remand jurisdictional finding and supporting documentation, its response to Precon's experts' reports, and the administrative appeal decision explore each of the areas raised by the Fourth Circuit and conclusively determine that a significant nexus exists.

Precon's objections to the findings in the R & R largely reargue its position as stated in its Motion for Summary Judgment and Reply Brief, with respect to (1) the condition of the Northwest River (objections 1, 2, 3, 4, 6, 7, 9); (2) the flow of the relevant tributaries (objections 19, 20); and (3) the function of the wetlands in relation to these tributaries and the Northwest River (objections 8, 10, 11, 13, 14, 16, 17, 18). The court will address each of these areas of objection in turn.

A. The Condition of the Northwest River

The Northwest River is an impaired water body due to low dissolved oxygen (“DO”) levels. *See* Administrative Record (“AR”) 438 (citing the Virginia Department of Environmental Quality (“DEQ”) Final 2010 305(b)/303(d) Water Quality Assessment Integrated Report at 3.3a–59). Low DO conditions are attributable, generally, to high levels of nitrogen and/or phosphorous. AR at 438, 447. Precon strenuously objects to any suggestion that the river suffers from excessive nitrogen, arguing this claim is false and unsupported by the evidence. Obj. at 9–12. Precon argues that the record solely supports that phosphorous is a nutrient of concern, as evidenced by the fact that DEQ developed a total maximum daily load (“TMDL”) for phosphorous, but not for nitrogen. *Id.* at 12. Precon thus concludes that any role the Precon wetlands and the similarly situated wetlands play in nitrogen cycling does not significantly impact the chemical or biological quality of the Northwest River. *Id.* at 9.

This chain of logic collapses under scrutiny. First, as the Corps explained, the fact that DEQ developed a TMDL for phosphorous rather than nitrogen, as noted

in the record, is because phosphorous is less soluble than nitrogen and attaches to sediment more readily. *See* Resp. to Obj. at 8; AR at 328. Such is the norm in a water body with impaired DO segments. *Id.* Excess nutrient inputs cause eutrophication, which contributes to the low DO levels that make the Northwest River an impaired water body. Precon does not contest the basic scientific fact that both phosphorous and nitrogen are nutrients which contribute to low DO levels. The Fourth Circuit, prior to remand, stated that “we know that the wetlands and their adjacent tributaries trap sediment and nitrogen.” *Precon*, 633 F.3d at 295.³ Thus, the Corps' factual finding that the wetlands prevent additional nutrients from reaching the Northwest River is not arbitrary and capricious, and Precon's devotion of almost half of its objections to a lack of proof that the river suffers from high nitrogen levels is perplexing. While the Fourth Circuit did query as to whether the river suffers from high levels of nitrogen, it in no way indicated that this issue is dispositive as to whether a significant nexus exists. *Id.* Moreover, the record abundantly supports that both nitrogen and phosphorous are important to downstream water quality. *See e.g.*, AR at 5, 8, 438, 447.

Second, Precon's objections misunderstand the Corps' task on remand. It is not necessary for the Corps to show that there are high nitrogen levels in the Northwest River and its relevant tributaries. *See Precon*, 633 F.3d at 294 (emphasizing that the significant nexus standard “does not ... require any particular quantitative measurements in order to establish significance”). A water body need not even be impaired in order to identify significant benefits wetlands serve in preventing deterioration of the river. This, of course, effectuates the purpose of the Clean

³ Indeed, the record is rich with support for the Fourth Circuit's statement that wetlands act as a sink for nitrogen. *See, e.g.*, AR at 12–14, 447.

Water Act “to restore and *maintain* the chemical, physical, and biological integrity of the Nation's waters.” 33 U.S.C. § 1251 (emphasis added). Here, as Precon concedes, the Corps has considerable evidence from both DEQ and its own experts that the Northwest River is, in fact, an impaired body of water, suffering from low DO levels. Thus, the Fourth Circuit's mandate to the Corps to consider “the condition of the relevant navigable water,” as exhibited in the exemplary Sixth and Ninth Circuit cases,⁴ is satisfied. *Precon*, 633 F.3d at 296.

B. The Flow of the Tributaries

Precon characterizes the Magistrate Judge's evaluation of the significant nexus determination in

⁴ Precon attacks the Magistrate Judge's discussion of these two cases, arguing that the qualitative evidence in *United States v. Cundiff*, 555 F.3d 200 (6th Cir.2009), and the quantitative evidence in *Northern California River Water v. Healdsburg*, 496 F.3d 993 (9th Cir.2007), is lacking in the Corps' record. See Obj. at 15–16. Precon is correct that the evidence here does not precisely mirror that in *Cundiff* and *River Watch*, nor would one expect it to. Not only were those enforcement cases, in which the addition of pollutants to the water body was more readily ascertainable, but such evidence is not necessary for a significant nexus determination. Moreover, the record here reflects that the Corps amassed the type of relevant and determinable comparative information to which the Fourth Circuit nodded in its discussion of the Sixth and Ninth Circuit decisions. See *Precon*, 633 F.3d at 296. As Justice Kennedy stated in *Rapanos*, the significant nexus determination must be made on a “case by case basis,” given the specific wetlands and water body at issue. 547 U.S. at 718.

relation to the evidence of flow in the Saint Brides Ditch as “meaningless.” Obj. at 19. Cutting through the rhetoric, the objection appears to be that because the Corps' stream flow gauge data, as provided by the City of Chesapeake Public Works Department, is hypothetical flow rate data during various storm events, rather than “actual” flow rates, it is meaningless. It is not. It is entirely appropriate and rational for the Corps' experts to evaluate the information it has regarding flows and draw scientific conclusions therefrom. As the Corps acknowledges, there are no flow gauges on the Northwest River; thus, “direct comparison of the flows in the river to those in Saint Brides Ditch is not possible.” Mem. Supp. Mot. Summ. J. at 19, n. 14. In the absence of a perfectly refined calculation of the flow rates in either the relevant reach or the navigable water, the Corps appropriately analyzed the (uncontested) data points it has and incorporated this information into its significant nexus determination. AR at 8–9 (addressing Precon's expert's calculations), 432–34, 440; Resp. to Obj. at 16 (“There is no evidence to support Precon's assertion or to otherwise suggest that the engineering estimates performed by the City's expert staff were unreliable.”).

The Fourth Circuit explicitly stated that it was not placing an “unreasonable burden” on the Corps, *Precon*, 633 F.3d at 296, and the Corps' reasoning, based on analysis of the hypothetical flow rates and its import to the Northwest River, warrants *Skidmore* deference, as it “has the power to persuade.” *Skidmore*, 323 U.S. at 140; see also *United States v. Mead Corp.*, 533 U.S. 218, 234, 121 S.Ct. 2164, 150 L.Ed.2d 292, (2001) (“[A]n agency's interpretation may merit some deference whatever its form, given the ‘specialized experience and broader investigations and information’ available to the agency.”)(quoting *Skidmore*, 323 U.S. at 139).

C. The Functions of the Wetlands

Precon lobs a series of critiques of the Corps' determination that the 448 acres of wetlands perform significant ecological functions in relation to the

Northwest River, alleging that while its own experts “provided quantitative and qualitative *evidence* [...] ... the Corps' experts simply expressed their *opinions* that a significant nexus exists.” Obj. at 12–13 (emphasis in original). This claim is meritless. Precon proceeds in Objections 11 and 13 to summarize, yet again, the report of its consultant, Chester Cahoon, III, of Bay Environmental Inc. The Corps properly considered and indeed engaged in a lengthy discussion of the scientific validity of Dr. Cahoon's statements and the conclusions he draws therefrom. *See* AR at 3–21 (analyzing “inconsistencies and misinterpretations” in Dr. Cahoon's report, including the limited statistical underpinnings supporting his conclusions, the inappropriateness of his reliance upon linear regression analysis, and evidentiary support in the record which undercut various claims).

Precon fundamentally misinterprets the role the court plays at this juncture in approaching the developed, analytically robust, and detailed administrative record before it on the specific factual findings with which it takes issue.⁵ In the face of divergent expert opinions on factual issues, “[b]ecause analysis of the relevant documents ‘requires a high level of technical expertise,’ we must defer to ‘the informed discretion of the responsible federal agencies.’” *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 377, 109 S.Ct. 1851, 104 L.Ed.2d 377 (1989) (quoting *Kleppe*

⁵ One factual statement in the R & R which the parties agree is a misstatement, is that “there are ‘uplands’ areas in the drainage zone that are twenty feet above the wetlands.” R & R at 21; *see* Obj. at 14, 16–17; Resp. at 11 (“While the Magistrate Judge's statement ... is not accurate [...] the underlying principle that the wetlands receive runoff from uplands is accurate”). However, this minor mischaracterization of the record does not undermine the ultimate finding of the Magistrate Judge that the record supports the Corps' finding of a significant nexus.

v. Sierra Club, 427 U.S. 390, 412, 96 S.Ct. 2718, 49 L.Ed.2d 576 (1976)). “When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.” *Marsh*, 490 U.S. at 378.

Although the court does not apply a more deferential standard of review to the legal determination that the wetlands have a significant nexus to the Northwest River, *Precon*, 633 F.3d at 290, the court's analysis of the record compels the conclusion that the Corps reasonably and amply provided persuasive support for its significant nexus determination through detailing the functions the wetlands play with respect to the Northwest River. *See* Resp. to Obj. at 18–19 (explaining that the Corps “documented field conditions, gathered available data, ... examined aerial photographs, historical soil surveys, and national wetland inventory maps, and conducted on-the-ground site inspections” in reaching its significant nexus determination). In response to Precon's objections regarding the functions of the wetlands, the Corps, again, pointed to evidence in the record regarding the wildlife connection Precon alleged was lacking, and the role tributaries play in regulating water flows and quality. *See* Resp. at 9–10 (citing AR at 4–7, 15–16, 466–494). Evaluating the full record, including Precon's experts' factual findings and conclusions to the contrary, the court finds that the Corps' extensive factual findings supporting its significant nexus determination were not arbitrary and capricious, and that the Corps' ultimate determination that the relevant wetlands have a significant nexus to the Northwest River is highly persuasive.

IV. Conclusion

Having fully considered and reviewed the Administrative Record, the pleadings, the Report and Recommendation, and the objections and responses thereto *de novo*, together with the Fourth Circuit's mandate on remand, the court **ADOPTS** the Magis-

trate Judge's Report and Recommendation,⁶ and hereby **GRANTS** the Corps' Motion for Summary Judgment and **DENIES** Precon's Motion for Summary Judgment. The Clerk shall forward a copy of this Opinion and Final Order to counsel for the parties.

IT IS SO ORDERED.

⁶ As noted by the Corps, the Magistrate Judge's findings are limited due to the procedural posture of the case. Resp. at 6 n. 8. The Magistrate Judge reviewed the record and appropriately concluded that there "is more than enough evidence to support the Corps' finding that a significant nexus exists between the wetlands and the Northwest River." R & R at 31. This court agrees with that finding, and with the Magistrate Judge's recommendation as to disposition of the case. *See supra* note 5.

REPORT & RECOMMENDATION

TOMMY E. MILLER, United States Magistrate Judge.

On May 23, 2013, the Court held a hearing on cross motions for summary judgment, (ECF Nos. 77 & 91), for purposes of making a report and recommendation. Plaintiff was represented by Douglas Kahle, Esq. Defendant was represented by Kent Hanson, Esq., Austin Saylor, Esq., and Craig Wittman, Esq. The official court reporter was Jody Stewart.

For the reasons set forth in this Report, the Court RECOMMENDS that Defendant's Cross-Motion for Summary Judgment be GRANTED and Plaintiff's Motion for Summary Judgment be DENIED and DISMISSED.

I. Procedural History

This case comes to the Court on cross-motions for summary judgment, (ECF Nos. 77 & 91), following remand by the Fourth Circuit Court of Appeals. *See Precon Development Corp., Inc. v. United States Corps of Engineers*, 633 F.3d 278 (4th Cir.2011) (*Precon*).

The case was originally filed on September 18, 2008, (ECF No. 1), and the parties subsequently filed cross-motions for summary judgment, (ECF Nos. 39 & 41), which were referred to the undersigned for a Report and Recommendation. The undersigned heard arguments and filed a Report and Recommendation in favor of Defendant on August 19, 2009. ECF No. 54. The District Court adopted the Report and Recommendation and granted summary judgment in favor of Defendant on September 4, 2009. ECF No. 56.

Plaintiff then appealed to the Fourth Circuit Court of Appeals, which heard argument and

reversed and remanded the case in accordance with its opinion. *Precon*, 633 F.3d 278 (ECF No. 63). The District Court remanded the case to the Corps of Engineers for consideration of its jurisdiction in accordance with the Court of Appeals' decision. ECF No. 66 & 67.

Plaintiff filed a Motion to Reopen the case on April 24, 2012. ECF No. 68. The District Court denied that motion to allow the administrative review process to finish. ECF No. 73. On February 28, 2013, Plaintiff filed a second Motion to Reopen the case, (ECF No. 74), which the District Court granted. ECF No. 76. The parties filed cross-motions for summary judgment, (ECF Nos. 77 & 91), and the District Court referred those motions to the undersigned for a Report and Recommendation.

The undersigned held oral argument on May 23, 2013, and as the motions have been completely briefed, the motions are ripe for a Report and Recommendation.

II. Background

The present issue before the Court is narrow and asks only whether the administrative record contains sufficient evidence to find a significant nexus exists between the subject wetlands and a navigable waterway, which in this case is the Northwest River. This is required to uphold the Corps of Engineers' finding that it has jurisdiction under the Clean Water Act (CWA) over Plaintiff's wetlands. In reviewing this issue, the Court must look to the Fourth Circuit's decision for guidance, and based on that guidance the Court must determine if the Corps' exercise of jurisdiction is proper.

Before going into the analysis, a discussion of the background of this case and the issue presented is required. The Court will first look at the factual history of this case, then discuss Justice Kennedy's opinion in *Rapanos*, and finally discuss the Fourth

Circuit's opinion in this case.

(a) Factual History

This case revolves around 4.8 acres of wetlands (“subject wetlands”) in the Edinburgh Planned Unit Development (PUD) located in Chesapeake, Virginia, which Plaintiff seeks a permit to develop. Administrative Record 424 (ECF Nos. 81–85) (hereinafter AR).¹ The PUD contains approximately 658 acres. *Id.* Prior to 2001, the PUD had approximately 342.42 acres of wetlands. However, in 2001, the previous owner of the property, RGM Corporation, used fill material to facilitate development in a portion of the property. *Id.* This action was not authorized by the Corps, but the Corps provided after-the-fact authorization for about 75 acres. *Id.* Of the remaining wetlands, approximately 166 acres flow into St. Brides Ditch, including the subject wetlands. *Id.* Although the 4.8 acres of subject wetlands are separated at the ground level from the rest of the 166 acres of wetlands by an unpaved road, the Corps found that all 166 acres act as one ecological system. *Id.* Further, in utilizing the *Rapanos* Guidance² to determine the relevant reach of the tributary, the Corps found that the 166 acres of wetlands in the PUD are part of a much larger wetlands system. *Id.* at 424–25. The Corps concluded that the 166 acres is part of a larger system that is comprised of 448 acres of wetlands. *Id.* at 425. As

¹ A map of the land in question is attached to this Report as Attachment A.

² The *Rapanos* Guidance is a joint memorandum by the Corps and EPA to provide guidance to Corps Districts and EPA regions in determining proper jurisdiction under the Clean Water Act. The Guidance is part of the Administrative Record at AR 423. *See also* ECF No. 93–1.

will be discussed later, these 448 acres of “similarly situated wetlands” are what the Corps must analyze to determine if the wetlands has a significant impact on the water quality of the Northwest River. *See infra* Part II(c).

Two tributaries run alongside Edinburgh PUD. The first, St. Brides Ditch, runs along the western boundary of the PUD for approximately 2,967 linear feet and is approximately twenty-five feet wide. AR 427. Additionally, a seasonal relatively permanent water (RPW) runs in the southwest corner of the PUD. This RPW flows into St. Brides Ditch. It should be noted that the 4.8 acres of subject wetlands are adjacent to the seasonal RPW, and most of the 166 acres of wetlands in the PUD are adjacent to St. Brides Ditch. *Id.* at 427–28.

St. Brides Ditch starts north of the PUD in Caroon Farms, a neighborhood. It then flows southward past the PUD and connects with Hickory Ditch. *Id.* at 429. This confluence is approximately 30,590 feet from the start of St. Brides Ditch. *Id.* St. Brides Ditch and Hickory Ditch combine to form a larger stream that flows 8,300 feet into the Northwest River. *Id.*

The seasonal RPW drains into an upstream portion of St. Brides Ditch. *Id.* At that point St. Brides Ditch flows south to Pleasant Grove Swamp, a topographically defined natural wetland drainage system. *Id.* The stream then continues and joins a second tributary and then joins the confluence with Hickory Ditch before entering the Northwest River. *Id.* Additional features of the wetlands, tributaries, and the Northwest River will be discussed in the analysis.

(b) The Rapanos Decision

As the parties discussed in their briefs, the jurisprudence on the CWA is voluminous. However, the Fourth Circuit's remand directs that the Court

should review the case under Justice Kennedy's standard, referred to as the “significant nexus” test. See *Precon*, 633 F.3d at 293, 297. Further, in the original litigation both parties agreed that the applicable test in this case is Justice Kennedy's concurring opinion from *Rapanos v. United States*, 547 U.S. 715, 126 S.Ct. 2208, 165 L.Ed.2d 159 (2006). See *Precon*, 633 F.3d at 289 (discussing how the parties agree on this point). With this in mind, rather than going through the long history of the Act, the Court will focus only on Justice Kennedy's approach in *Rapanos*.

The *Rapanos* case began when John Rapanos backfilled wetlands that were part of a piece of land he wished to develop in Michigan. *Id.* at 719–720. The wetlands were at least eleven miles away from the nearest navigable water. *Id.* at 720. After being informed that these wetlands were “waters of the United States” by the applicable government agencies, and therefore, required a permit to develop, Mr. Rapanos filed suit. *Id.*

Justice Kennedy, in concurring with the judgment, wrote that the proper standard for a case with adjacent wetlands is the significant nexus test from *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers*, 531 U.S. 159, 121 S.Ct. 675, 148 L.Ed.2d 576 (2001) (*SWANCC*), rather than the standard applied by either the plurality or dissent. *Rapanos*, 547 U.S. at 759. To that end, Justice Kennedy opined that for jurisdiction over wetlands to be proper for purposes of the Clean Water Act, there must be a “significant nexus” between the wetlands and a navigable waterway. See *id.* (citing *SWANCC*, 531 U.S. at 167).

In discussing what the term “significant nexus” meant, Justice Kennedy wrote that “[t]he required nexus must be assessed in terms of the statute's goals and purposes.” *Id.* at 779. As for goals, Justice Kennedy pointed out that the CWA was enacted to “restore and maintain the chemical, physical, and

biological integrity of the Nation's waters.” *Id.* (quoting 33 U.S.C. § 1251(a)). Further, in citing to regulations, Justice Kennedy noted “that wetlands can perform critical functions related to the integrity of other waters—functions such as pollutant trapping, flood control, and runoff storage.” *Id.* at 779–780 (citing 33 CFR § 320.4(b)(2)).

After this discussion, Justice Kennedy defined the term “significant nexus” to be when “the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable.’” *Id.* at 780.

(c) The Fourth Circuit's Decision

The Fourth Circuit addressed two issues in its opinion; the first was whether “the Corps' decision to label the 448 acres of surrounding wetlands as ‘similarly situated’ wetlands for purposes of its significant nexus determination” was appropriate, and the second was whether the Corps “adequately established the existence of a significant nexus between the site wetlands—along with the similarly situated wetlands—and the Northwest River.” *Precon*, 633 F.3d at 290, 293.

In analyzing whether it was appropriate for the Corps to aggregate the 448 acres of surrounding wetlands with the 4.8 acres of subject wetlands, the Court of Appeals upheld the District Court's ruling. Although the Court of Appeals did not decide whether the Corps adhered to the *Rapanos* Guidance, the court held that it did not matter whether the Corps followed the *Rapanos* Guidance fully because “[e]ven if the Corps deviated from its guidance, it provided reasoned grounds for doing so.” *Id.* at 292.

With its holding, the Court of Appeals allowed the Corps to “aggregate the wetlands surrounding both the 2,500—foot Ditch [the seasonal RPW] and

the Saint Brides Ditch because the two ditches were, historically, part of the same naturally defined wetlands drainage feature.” *Id.* Since the Court of Appeals upheld the district court on this issue, the question of whether aggregation was appropriate is not before this Court on remand. Therefore, the Court will analyze the issue of significant nexus using the 448 acres of wetlands.

The Court of Appeals reversed the District Court with regards to “whether the Corps’ record contained enough physical evidence—quantitative or qualitative—to allow [the court] to uphold [the Corps’] determination that a significant nexus [and therefore jurisdiction] existed.” *Id.* at 294. The Court of Appeals held that the Corps’ record was insufficient. *Id.* at 295. The Court of Appeals remanded the case so the Corps could develop the record further. *Id.*

The Fourth Circuit’s decision discusses specific concerns regarding the Corps’ exercise of jurisdiction and overarching parameters with which courts should analyze the *Rapanos* and *Precon* decisions. The court made clear “the significant nexus test does not require laboratory tests or any particular quantitative measurements in order to established significance.” *Id.* at 294. Further, the court cited to three examples, provided by Judge Kennedy in his *Rapanos* opinion, of what an “adequate record might include.” *Id.* (citing *Rapanos*, 547 U.S. at 784, 786) (Kennedy, J., concurring)). These include “documentation of ‘the significance of the tributaries to which the wetlands are connected,’ a ‘measure of the significance of [the hydrological connections] for downstream water quality,’ and/or ‘indication of the quantity or regularity of flow in the adjacent tributaries.’ “ *Id.* (quoting *Rapanos*, 547 U.S. at 784, 786) (Kennedy, J., concurring)). The Court of Appeals also indicated that the Corps needed to include information that discussed “the condition of the relevant navigable waters.” *Id.* at 296.

Finally, and in some ways most importantly, the court made clear that this was not to be an insurmountable hurdle for the Corps to reach. The Court wrote,

We do not intend to place an unreasonable burden on the Corps. We ask only that in cases like this one, involving wetlands running alongside a ditch miles from any navigable water, the Corps pay particular attention to document why such wetlands significantly, rather than insubstantially, affect the integrity of navigable waters. Such documentation need not take the form of any particular measurements, but should include some comparative information that allows us to meaningfully review the significance of the wetlands’ impacts on downstream water quality.

Id. at 297 (emphasis added).

Along with these guideposts, the court cited two cases from other circuits with approval. The first, *Northern California River Watch v. City of Healdsburg*, 496 F.3d 992 (9th Cir.2007) (*NCRW*), is an example of the Corps using quantitative data to provide sufficient support that a significant nexus exists between the wetlands and the navigable waters. The second, *United States v. Cundiff*, 555 F.3d 200 (6th Cir.2009), serves as an example of the Corps using qualitative data to support its jurisdictional determination.

In *NCRW*, the Ninth Circuit held that the Basalt Pond, where the City of Healdsburg was discharging sewage from its waste treatment plant, was subject to the CWA. 496 F.3d at 1002–03. This holding was based on finding a significant nexus existed between the wetlands that Basalt Pond was part of and the Russian River. *Id.*

The Corps was able to present quantifiable data to support its significant nexus determination. First,

there were two actual surface connections between the wetlands and the navigable waterway. The evidence showed that water from the Pond would overflow into the river from a levee, and it also showed there was a hydraulic connection between the Pond and River so that a change in the water level of one would impact the other. *NCRW*, 496 F.3d at 1000. The Corps was able to show that approximately twenty-six percent of the water from the Pond drained into the River. *Id.* The district court also found that along with a water connection, the two bodies had a significant ecological connection as the bird, mammal, and fish populations of both bodies were shared. *Id.* at 1001.

Finally, the district court found that the river's chloride levels increased as a result of the discharge of sewage into the pond, and this was supported by quantitative testing. *Id.* The Corps presented this evidence through an expert, who testified that when comparing the chloride concentration upstream from the Basalt Pond with the downstream concentration, there was a significantly higher concentration downstream of the Pond. *Id.* This showed that the Pond's increase in chloride was impact the River's impact. *Id.* The Fourth Circuit highlighted this finding in its discussion of *NCRW* in the *Precon* decision. See 633 F.3d at 296.

In *United States v. Cundiff*, 555 F.3d 200 (6th Cir.2009), a father/son team insisted on ignoring all orders, requests, etc., from the EPA and most every governmental agency. *Id.* at 203. Instead the defendants excavated drainage ditches, cleared trees on the wetlands, and drained significant portions of the wetlands. *Id.* at 204–205. The defendants argued there was no significant nexus with a navigable water source, but the district court found that the defendants' wetlands had a significant nexus with the Green River via two tributary creeks. *Id.* at 210–11.

Specifically, the court found the wetlands were connected to the River's ecological functions because

they aided with temporary and long-term water storage, filtering of the acid runoff and sediment from the nearby mine, and providing a habitat for plants and wildlife. *Id.* at 211. Utilizing a government expert's testimony, the court also found that the defendants' unlawful acts had undermined the wetlands ability to aid the river and “affected the frequency and extent of flooding, and increased the flood peaks in the Green River.” *Id.* Further, the court cited another government expert and found that efforts taken by the father defendant had even allowed acid mine runoff to bypass the wetlands all together and flow directly into the river, contributing to sediment accumulation in the River. *Id.*

These conclusions followed from the testimony of government experts. The defendants argued that expert testimony was insufficient and that only quantitative data was acceptable to find a significant nexus. *Id.* The Sixth Circuit held that nothing in the *Rapanos* decision required laboratory or quantitative data, rejected the defendants' argument and upheld the district court's decision. *Id.*

One important aspect of both *NCRW* and *Cundiff* is that both cases dealt with situations where the harm had already occurred. In *NCRW*, the City of Healdsburg had already dumped waste into Basalt Pond, 396 F.3d at 996, and in *Cundiff*, the defendants, for years, had defied government orders and dumped fill material, cut down trees, and developed the land, 555 F.3d at 204–05. In both of these cases, the damage from developing or utilizing the wetlands could be easily seen and measured because the damage had been done. The present case presents a different challenge because the Corps is not looking to restore the wetlands. Instead the Court must decide whether the record contains enough evidence to demonstrate a significant nexus, absent actual damage caused by developing the subject wetlands.

III. Standard of Review

As this is an agency review under the CWA, a number of different standards of review apply. As stated by the Fourth Circuit, this case centers around “a matter of statutory construction, as Justice Kennedy established that a ‘significant nexus’ is a statutory requirement for bringing wetlands adjacent to non-navigable tributaries within the CWA’s definition of ‘navigable waters.’” *Precon*, 633 F.3d at 296 (citing *Rapanos*, 547 U.S. at 779–80 (Kennedy, J., concurring)). According to the Fourth Circuit, the Corps’ findings with regard to the significant nexus test are to receive *Skidmore* deference. *Id.* However, “[s]ome indicia of reliability and reasonableness must exist in order for [the Court] to defer to the agency’s interpretation.” *Shipbuilders Council of Am. v. U.S. Coast Guard*, 578 F.3d 234, 245 (4th Cir.2009). Under *Skidmore* deference, “[t]he weight accorded to an administrative judgment in a particular case will depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.” *United States v. Mead Corp.*, 533 U.S. 218, 228, 121 S.Ct. 2164, 150 L.Ed.2d 292 (quoting *Skidmore v. Swift & Co.*, 323 U.S. 134, 140, 65 S.Ct. 161, 89 L.Ed. 124)(internal quotations omitted)).

Further, the Administrative Process Act (APA) requires the Corps’ factual findings be deferred to unless those facts are “arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A); *see also Precon*, 633 F.3d at 296.

Therefore, any factual findings made by the Corps will be given deference unless they are arbitrary or capricious. This level of deference does not apply to the ultimate question of jurisdiction, because if the Corps has exceeded its lawful jurisdiction, then such a finding is not entitled to the deference provided for in the APA. *See Mead Corp.*, 533 U.S. at 227 n. 6 (citing 5 U.S.C. § 706(2)(C)).

However, the Court, as directed by the Fourth Circuit, will apply *Skidmore* deference to the question of whether a significant nexus exists, if there is “some indicia of reliability,” *see Shipbuilders Council of Am.*, 578 F.3d at 245, and if the record has the “power to persuade,” *see Mead Corp.*, 533 U.S. at 228. To reach that point, the Court must find that the Corps’ record contains sufficient physical evidence to establish a significant nexus between the subject wetlands and the Northwest River. *See Precon*, 633 F.3d at 294.

IV. Analysis

The Fourth Circuit’s charge to this Court is to determine whether there is physical sufficient evidence on the record to establish that the 448 acres of similarly situated wetlands, including the 4.8 acres of subject wetlands, have a significant impact on the water integrity of the Northwest River. The Corps argues it has provided sufficient physical evidence to establish jurisdiction, and that its findings are entitled to deference under the Administrative Process Act. *Precon* counters with two arguments; first, that the Corps provided no evidence to support its findings, and second, that the expert reports, measures and opinions offered by *Precon* are superior to the Corps’, and therefore, should be controlling.

To examine this issue, the Court will first look at the current administrative record and how parts of the record directly address specific concerns raised by the Fourth Circuit. Then the Court will discuss whether the record provides the type of evidence that both the Fourth Circuit and Justice Kennedy seek in cases like these. The Court will also examine a number of arguments made by the Plaintiff before making a final recommendation regarding the sufficiency of the record.

A. The Administrative Record in Response to the Fourth Circuit’s Opinion

On remand, the Corps of Engineers undertook a new jurisdictional determination and developed a

new administrative record. The Corps addressed a number of specific concerns outlined in the Fourth Circuit's decision.

(i) *The Condition of the Northwest River*

One concern of the Fourth Circuit's was whether evidence existed to show that the wetlands in question performed significant functions to benefit the Northwest River, the navigable waterway in question. *Precon*, 633 F.3d at 295. To that end the Fourth Circuit expressed concern that “although we know that the wetlands and their adjacent tributaries trap sediment and nitrogen and perform flood control functions, *we do not even know if the Northwest River suffers from high levels of nitrogen or sedimentation, or if it is ever prone to flooding.*” *Id.* (emphasis added). This follows from Justice Kennedy's concern in *Rapanos* that simply finding a hydrologic connection between the wetlands and the navigable water was insufficient, “[a]bsent some measure of the significance of the connection for downstream water quality.” *Rapanos*, 547 U.S. at 784 (J. Kennedy, concurring).

The Corps of Engineers, in the updated administrative record, addressed this issue of the Northwest River's condition. The Corps included that “[s]ince 1998, the Northwest River has been listed as impaired due to the fact that it exceeds Virginia's minimum dissolved oxygen (DO) water quality standard (4.0 mg/l).” AR 438. This finding was based on a report completed by the Environmental Protection Agency (EPA) and the Virginia Department of Environmental Quality (DEQ). *Id.*³

³ These quotations are the Corps' synthesis of the Report. The Report can be found online at <http://www.deq.virginia.gov/ProgramsAVaterQualityInformationTMDLsAVaterQuality/2010305b303dIntegratedReport.aspx>. Also, Precon expressed concern that this

According to the Corps, the Report found that “[a]reas of the Northwest River downstream of the Saint Brides Ditch outlet have been specifically identified as having excessively high loads of agricultural nitrogen and phosphorous,” and identified “the lower portion of the Northwest River as in need of a high level of public water supply protection due to potentially high non-point source pollution loads.” *Id.* The Report concluded “the low DO condition is likely a result of excessive plant growth (eutrophication) which is typically triggered by excessive nutrient (nitrogen and/or phosphorus) inputs.” *Id.*

Further, the Corps included in the administrative record data from a 2011 DEQ draft report titled “Total Maximum Daily Load Development for the Northwest River Watershed, A Total Phosphorus TMDL Due to Low Dissolved Oxygen Impairment.” *Id.* In gathering information for this report, DEQ included DO measurements from 1997 to 2010, taken near the outlet of Saint Brides Ditch. Samples taken at this location were in violation of the

report was being relied on by the Corps. *See* Pl.'s Reply Br. at 8, n. 3. In its Reply Brief, Precon informed the Court that this report was not part of the record that the Corps relied on in making its final agency decision. *Id.* This Report, however, was discussed by the Corps in great detail in the “Addendum to Approved Jurisdictional Determination Form for the Edinburgh PUD,” *see* AR438, and is part of the Administrative Record before the Court. The Corps relied on this report in making the determination of jurisdiction. Therefore, the Court believes this is an important part of the Record to consider and the Court must make its Recommendation based on the Record before it.

Commonwealth's water quality standard fifty-six percent of the time. *Id.* Additionally, samples were taken from seven locations at the Northwest River between 1990 and 2010. *Id.* At six of those sites, the water was found to be in violation of the water quality standards more than fifty percent of the time, and at the seventh site, the water quality was in violation about forty percent of the time. *Id.*

In an effort to remedy the water quality issue in the Northwest River, DEQ concluded a Total Maximum Daily Load (TMDL) for phosphorus was required.⁴ *Id.* DEQ proposed that the TMDL for phosphorus in the Northwest River be 9,627 kg/yr. *Id.* At the date of the report, the Northwest River was well-above that amount with a total phosphorus load of approximately 15,917 kg/yr, which requires a reduction of forty percent to achieve the Commonwealth's goal. *Id.*

The Corps of Engineers addressed the Fourth Circuit's concern regarding the condition of the Northwest River with quantitative data that shows that the River suffers from low DO and needs a significant reduction in phosphorous inputs. Virginia DEQ's report makes clear that the Commonwealth of Virginia is concerned about the health of the Northwest River, and that it is currently in a compromised state.

This does not address the issue of whether the River is prone to flooding. See *Precon*, 633 F.3d at 295. Plaintiff, however, notes that the River has flooded twice in the last fifteen years, but its experts argue both were instances of tidal flooding. See PL's

⁴ According to the Corps, a TMDL “is a pollution budget that determines a maximum limit of pollutant the water body can receive in a given period of time and still meet the intended water quality standard.” AR 438.

Br. 17 (ECF No. 78). The issue of flooding is not dispositive, and is only one issue the Court must look at when deciding whether the evidence is sufficient. Nevertheless, the Court finds that the Corps record regarding the condition of the Northwest River is both thorough and valid in its reasoning. See *Mead Corp.*, 533 U.S. at 228. The Record provides more than sufficient physical evidence that the River is impaired and in poor condition.

(ii) *Potential vs. Actual Flow*

The Fourth Circuit also specifically pointed out that the administrative record did not “contain any measurements of actual flow.” *Precon*, 633 F.3d at 294. “Instead, the record reflects measures of the water storage *capacity* and the resultant *potential* flow rates of the Saint Brides Ditch and the 2,500-foot Ditch, without any indication of how often this capacity is reached or how much flow is typically in the ditches.” *Id.* at 294. As the Army Corps did with the other concerns discussed, the Corps' new administrative record addressed the issue of actual flow of St. Brides Ditch.

There are two waterways in this case: (1) the 2,500 foot seasonal RPW, which the Corps found to have seasonal flow into St. Brides Ditch, and, (2) St. Brides Ditch, with 2,967 linear feet abutting the western Edinburg PUD boundary, which the Corps found to have perennial flow downstream to the Northwest River. AR 432. To support these findings, the Corps provided additional data.

As for the seasonal RPW, the Corps found that it has flow from at least “the late winter to the early spring when rainfall and the water table are highest.” *Id.* at 432–33. To support this conclusion, the Corps provided data from a City of Chesapeake study conducted by the Public Works Department. The city gathered data at the intersection of the seasonal RPW and Saint Brides Ditch using a node. *Id.* The City concluded that at that intersection the flow rate would be 24 cubic feet per second (cfs) during a two-year

storm, 58 cfs in a ten-year storm and 84 cfs in a fifty-year storm event. *Id.*⁵

Additionally, the Corps observed and photographed water in the seasonal RPW on numerous dates between February 2002 and April 2002, *see* AR 433 (citing Ex. 32, A2 photographs 5–10 of the Administrative Record), and standing water was observed and photographed in 2008 while the area was under drought conditions, *see id.* (citing Figure O, Photographs 1 and 2 of Administrative Record). One of these photos showed evidence of a sediment plume from the seasonal RPW to Saint Brides Ditch, which provided additional evidence of actual seasonal flow. *Id.* Finally, the photographs show “the lack of terrestrial vegetation within the RPW channel bottom, the presence of a clear line or water mark on the bank of the RPW and the changes in soil type and characteristics from the bank to the bottom of the RPW,” along with evidence of “[w]ater staining, litter, debris, sediment dams and leaf packs.” *Id.* The various photographs presented, which are qualitative evidence, show that water actually flows through the seasonal RPW, which flows in to St. Brides Ditch. When taken together with the quantitative data, the Corps has presented evidence of actual flow, and provided rates of flow based on data taken from the seasonal RPW. This provides the Court with both evidence of regular and actual flow.

As for Saint Brides Ditch, the Corps concluded that the ditch qualifies as “a perennial system with flow present for the majority of the year.” *Id.* The Corps supported this conclusion with a variety of evidence. First, the Corps used photographs from five

⁵ The Court acknowledges that these findings are conclusions, not raw data. However, these conclusions are based on data from the node and are helpful in quantifying actual flow at particular times.

site visits during 2002. *Id.* These photographs show water present each time. *Id.* An additional site visit was done in 2012 and water was observed in the ditch both upstream and downstream of the Edinburg PUD. *Id.* Photographs also showed water staining on the vegetation in the ditch and blackened leaves, which provided additional evidence of regular flow. *Id.*

Although no stream flow gauges are in Saint Brides Ditch or the Northwest River, the City of Chesapeake provided flow data from two nodes in the Saint Brides Ditch. The data from a node located 2,250 feet downstream of Edinburg PUD, estimated the flow to be twenty-eight cubic feet per second (cfs) during a two-year storm event, sixty cfs during a ten-year storm event and eighty-nine cfs during a fifty-year storm event. *Id.*

Additionally, Plaintiff’s expert, Dr. Cahoon, concedes that rainfall from a ten-year storm on the 448 acres of wetlands over four days would be sufficient to raise the Northwest River by 2.14 inches. AR 480. This admission provides expert evidence that there is substantial actual flow between the subject wetlands, St. Brides Ditch and the Northwest River, during these storms.

Finally, human observation witnessed regular flow. Michael Anderson, who lived adjacent to St. Brides Ditch for fourteen years, testified that he has never seen the Ditch dry and that even in the most dry parts of the year, the Ditch had water in it. *Id.* at 433–34. He also has observed the Ditch at multiple points. *Id.* Similarly, Corps personnel observed water in the Ditch on multiple site visits. *Id.*⁶

⁶ The Fourth Circuit expressed a concern that the witness testimony from the original record was inconclusive, because standing water was witnessed and witnesses could not identify which way the water was flowing. *See Precon*, 633 F.3d at 294, n. 13. In the

Plaintiff argues that “[f]or the most part, the [Corps’] Decision relies on information that was already contained in the Record at the time this matter was considered by the Fourth Circuit in 2011,” and specifically points to the photographic evidence and similar testimony. PL’s Br. at 14. However, the Court must make its recommendation based on the information before it, and there are a couple of key pieces of evidence in addition to the photograph and human testimony. The first is the City of Chesapeake study. This study provides quantitative data to show what the actual flow of St. Brides Ditch is during different storms, and is indicative of flow through the applicable portions of St. Brides Ditch. Plaintiff does not discuss this evidence in either its initial brief or its reply brief, and the Court knows of no reason to doubt this evidence. Second, is the testimony from Plaintiff’s expert, Dr. Cahoon, regarding how rainfall over the 448 acres of wetland would impact the Northwest River. AR 480. These are important pieces of evidence in looking at the actual flow and the actual impact of water on the subject wetlands.

Further, it is hard to envision what more the Corps could have provided insofar as evidence of actual flow. Plaintiff argues that the Corps should have done what it did and taken physical measures. See PL’s Br. 16–19. However, as pointed out by the Corps, Plaintiff’s measurements were restricted to a

current administrative record, this concern is dealt with because the Corps has provided historical evidence including expert testimony and mapping to show that St. Brides Ditch is a drainage ditch that flows to the Northwest River. See *infra* Part IV(A)(3)(a). With that in mind, the witness testimony is important to show that the drainage features are being utilized with water in the St. Brides Ditch.

three-month time frame, and occurred during a time with below average rainfall. See Def.’s Br. 25–26 (ECF No. 92). This limitation casts great doubt on the measurements provided by Plaintiff. More importantly, the Fourth Circuit is clear that quantitative evidence, like measurements, is not required. See *Precon*, 633 F.3d at 294. Nevertheless, the Corps provided quantitative evidence. Further, the qualitative evidence of testimony, photographs, and site visits showed that water actually flows through each tributary. When taken with the quantitative evidence, the Corps has shown that water flows through the tributaries and has been able to give an idea of flow rates, based on actual data.

(iii) Justice Kennedy’s Examples

In the *Precon* decision, the Fourth Circuit cited to Justice Kennedy’s opinion in *Rapanos* for examples of the type of evidence required for a sufficient record. See *Precon*, 633 F.3d at 294. The Fourth Circuit’s concern was that without sufficient evidence “it would be impossible to engage meaningfully in an examination of whether a wetland had ‘significant’ effects or merely ‘speculative or insubstantial’ effects on navigable waters.” *Id.* In citing to Justice Kennedy’s examples, the Fourth Circuit stated, an “adequate record might include documentation of ‘the significance of the tributaries to which the wetlands are connected,’ a ‘measure of the significance of [the hydrological connection] for downstream water quality,’ and/or [an] ‘indication of the quantity and regularity of flow in the adjacent tributaries.’” *Id.* (quoting *Rapanos*, 547 U.S. at 784, 786 (Kennedy, J., concurring) (emphasis added)).

Again, the Corps’ administrative record includes evidence that goes directly to each of these potential types of documentation. Plaintiff objects to all of this as findings by the Corps without evidentiary support. See PL’s Br. at 14.

(a) Significance of Tributaries to which Wetlands are Connected

The first example provided by Justice Kennedy is documentation of the “significance of the tributaries to which the wetlands are connected.” *Rapanos*, 547 U.S. at 784 (Kennedy, J., concurring). In the present case, the tributaries are St. Brides Ditch and the seasonal RPW. In its administrative findings, the Corps discusses the importance of St. Brides Ditch and the seasonal RPW. In discussing the tributaries it is important to remember that the 4.8 acres of subject wetlands are adjacent to the seasonal RPW and the seasonal RPW flows into St. Brides Ditch.

In reference to the PUD, the Corps points to a drainage study completed by the City of Chesapeake. AR 427. This study found that a “drainage divide runs from the northwest portion of the site to the southeast portion of the site. The east/northeast portion of the property drains north to the Intracoastal Waterway via Coopers Ditch and the western/southern portion drains to the Northwest River via the Saint Brides Ditch.” *Id.* The Corps also presented the testimony of Robert Berg, an Environmental Scientist with the Corps. AR 426. Mr. Berg's testimony supported the drainage study's findings. *Id.* This study and expert opinion shows the first significance of St. Brides Ditch, which is that the western/southern portions of the PUD drain into St. Brides Ditch and ultimately to the Northwest River.

Along with this physical overview, the Corps looked at the historical drainage of the area. A 1953 Norfolk County Soil survey, 1937 Natural Resources Conservation Service (NCRS) Aerial photographs, 1989 aerial photographs, and a 1994 color infrared aerial photograph of the area showed “historic natural geographically defined drainage routes from the central portion of the Edinburgh PUD connecting south and west of the Edinburgh PUD to a topographically defined natural drainage feature just west of Saint Brides Road.” AR 426. The Corps' research found that this natural drainage feature appeared on all topographic maps, and this feature

was later channelized to form St. Brides Ditch. *Id.* Mr. Berg similarly testified on the historical drainage route and testified on the extent of the drainage route that is now St. Brides Ditch. *Id.* at 426. Without resuscitating every detail, the Corps mapped out the route that contains St. Brides Ditch and the Northwest River in great detail. *Id.* at 427–37. Most importantly, the Corps found based on the data and mapping, “[a] continuous physical connection of wetlands and streams does exist and has always existed between the Edinburgh PUD and the Northwest River.” *Id.* at 436. This demonstrates the second significance of the tributaries because St. Brides Ditch has historically been the drainage path for the PUD, and historically, the connection between the wetlands and the Northwest River has existed.

This evidence is similar to that presented in *Cundiff*. In *Cundiff*, the United States presented “maps, historical aerial photographs, and an aerial videotape” showing the flow and connection of the tributaries to the navigable waterway. *United States v. Cundiff*, 480 F.Supp.2d 940, 946 (W.D.Ky.). Similarly, those types of evidence were presented here—except for a videotape—to show the connection, significance and path of the tributaries.

A third significance of the tributaries that the Corps discusses is the ecological and environmental impact of the tributaries. The seasonal RPW contains “a good accumulation of large wood debris.” AR 441. These natural barriers “obstruct[] flow thereby attenuating flood flows delivered to downstream waters including the Northwest River.” *Id.* This means that the seasonal RPW, which is adjacent to the subject wetlands, is able to regulate flow of water coming off the subject wetlands. Although St. Brides Ditch has recently been cleaned, the soils of the Ditch are hydric and provide assistance in storing pollutants and sediment that flows down the Ditch. *Id.* at 441, 444–45.

The Court is hard-pressed to see what more the

Corps could have done in discussing the significance of the tributaries. First, the Corps showed how the tributaries serve as the drainage path for part of the area, using the City of Chesapeake study and Mr. Berg's testimony. Then, using various historical data, the Corps showed that what is now St. Brides Ditch has historically been a drainage path for the land in question. This is very important as it shows St. Brides Ditch naturally is the tributary that links the PUD wetlands and the Northwest River. Finally, the Corps goes into great detail, mapping out how St. Brides Ditch serves as a tributary into the Northwest River. To this end, the Corps provided maps, expert testimony, scientific literature, and historical studies, which all are physical evidence that shows the importance of the tributaries.

(b) Significance of Area to Downstream Water Quality

The second example provided by Justice Kennedy is in some ways the most important, but also the most difficult. In oral argument, this was an issue of much debate, and at the administrative level, this appeared to be a battle of experts. To examine the significance of the area, the Court will first look at what evidence shows the connection between the wetlands and the Northwest River. The Court will then look at what evidence was provided on how these wetlands ecologically and biologically aid the River.

Using topographic maps from the original administrative record, the Corps showed that there are “uplands” areas in the drainage zone that are twenty feet above the wetlands. *See* Def.'s Br. at 22 (citing USACR-00160-11 (Figure C, Fentress Quadrangle, part of the original administrative record filed in paper format with the Court on January 7, 2009)). Based on this survey, the Corps concluded that runoff comes from this uplands area to the wetlands. Additionally, approximately 45 inches of rain falls on the wetlands in an average year. AR 442. Therefore, approximately 203 million gallons of rain

falls each year on the PUD and approximately 548 million gallons falls on the 448 acres of similarly situated wetlands. *Id.* This evidence shows that the wetlands receive runoff from the upland areas and that a significant amount of rainfall falls on the wetlands.

The question then is what happens to the water and runoff. As discussed in Part IV(A)(iii)(a), historical drainage maps of the area show that portions of the PUD drain into the seasonal RPW and into St. Brides Ditch. The Corps provided substantial evidence of the actual flow within the tributaries and mapped out the path to the Northwest River. Given this evidence, it is reasonable to conclude that water that enters much of the similarly situated wetlands finds its way to the Northwest River, which at this time is impaired.

The evidence shows that runoff and water go into the wetlands and that water from the wetlands goes to the Northwest River. The final step in this analysis is to determine what the wetlands do that is significant to the water quality of the Northwest River. To address this issue, the Corps looked to a range of resources and expert testimony. First, the Corps looked to Mr. Greg Hammer's report from 2001 of the PUD site. Mr. Hammer, at the time of his testimony, was a soil scientist with NCRS. Mr. Hammer's research confirmed that Weeksville, Deloss, and Pocomoke soil are the prevalent soils in the PUD. AR 435. The Corps also reviewed the NCRS recent remapping of the PUD site, which shows the site is “predominantly Deloss muck fine sandy loam soils, with some Tomotley-Deloss complex soils.” *Id.* These are both hydric or wetlands soils. *Id.* Additionally, the soil surveys show “that the entire route of St. Brides Ditch to the Northwest River has hydric soils.” *Id.* at 437.

Similarly, the Corps looked at Dr. Lee Daniels' expert testimony from *United States v. RGM Corporations, et al*, which reviewed the Edinburg

PUD. *Id.* at 435. Dr. Daniels examined soil maps, data sheets and soil samples taken from the PUD and concluded that much of the PUD had hydric soils. *Id.* In the Corps' words, Dr. Daniels concluded that there is "a continuous connection of hydric soils from the site to the Northwest River," *id.* at 427, and "testified that the soils on the property had certain characteristics such as a large ped (term used to describe soil structure, clods or soil aggregates that form naturally) size and a high percentage of organic material that allows for greater water storage capacity." *Id.* at 435–46. Dr. Daniels found that the soil at the PUD has a high organic content and large soil aggregates, which are helpful with water storage and movement. *Id.* at 443. The expert testimony of Dr. Daniels is further supported by physical evidence of prolonged water storage, including "blackened leaves ... in lower elevation wetland areas." *Id.* at 442.

In examining the wetlands in the PUD, the Corps concluded that a majority of the wetlands within the 448 acres of similarly situated wetlands are "mineral flats" *Id.* at 431. The Corps included that in this part of the United States "mineral flats occur on poorly dissected interfluvial flats primarily in response to abundant rainfall and slow drainage associated with a landscape of low relief." *Id.* The Corps indicated that hydric soils are found in mineral flats. *Id.*

In discussing the importance of mineral flats, the Corps included that:

Mineral flats are topographically flat and naturally poorly drained which allows them to store flood waters for a longer period of time ... The wetlands on this property with the similarly situated wetlands store the precipitation that falls on the site. Approximately 45 inches of rainfall occurs in an average year. Precipitation falling on the 166 acres of wetlands within the Edinburg PUD would total 203 million gallons per year and total precipitation falling on the entire 448 acres of

similarly situated wetlands would equal 548 million gallons each year. In addition to the direct precipitation input, these wetlands, since they are situated relatively low in the landscape, receive and store runoff from the surrounding upland areas.

Id. at 441–42. Similarly, the Corps noted that the attributes of mineral flats "enable mineral flat wetlands to rapidly cycle (convert) nutrients." *Id.* at 445.

To examine the impact of the mineral flats, the Corps looked to the expert testimony of Dr. Richard Whittecar, a professor of Geology at Old Dominion University, and an expert in landscape geohydrology and geomorphology. *Id.* at 442. Dr. Whittecar testified that the wetlands in the PUD are capable of storing one to one and a half feet of water per acre, or approximately 325,800 to 488,775 gallons of water per acre. *Id.* Dr. Whittecar submitted that in his opinion the loss of wetlands in the PUD "would result in a major change to the timing and routing of water from the site [and] stating the loss of vegetation and microtopography would increase the rate of runoff, decrease the base flow in streams and increase peak flows." *Id.* at 443.

Additionally, these wetlands remove 4.6 to 9 pounds per acre per year of nitrate⁷ from the atmosphere. AR 446. This finding is based on a number of studies cited by the Corps. Using the information from these studies, the Corps concluded that the 448 acres of similarly situated wetlands, cycle between 2,070 and 4,030 pounds of nitrogen each year. *Id.* This data would be unimportant except for the fact that the Corps has shown the connection of water from the wetlands through the seasonal RPW and St. Brides Ditch to the Northwest River. A

⁷ Nitrate is a federally-listed drinking water pollutant. AR 446.

study conducted in 1994 concluded that one-third of nitrogen loading in the Chesapeake Bay came from atmospheric depositing. *Id.* By cycling this nitrogen and preventing some of it from reaching the Northwest River, the wetlands reduce eutrophication, which occurs when waterways receive excess nutrients causing excess plant growth. *Id.* This growth contributes to lower DO levels, which is why the Northwest River is considered impaired. *Id.*

The Corps took all of the evidence and concluded that the loss of the wetlands would lead to increased high volume, high energy flows and flows that would be more erratic, which would harm the Northwest River and aquatic life in the River. *Id.* at 443. The Corps also found that “storage of water within the wetlands and the tributary prevent flash, high velocity[sic] and high volume flood flows.” *Id.* at 443–44. Also, it is important to note that areas like Caroon Farms, nearby the PUD, have suffered from flooding since development occurred in that area. *Id.* at 442 (citing Storm Water Management Model, Southern Chesapeake Watershed MDPU (Study Areas 2 & 3), April 2007). Further, the Corps noted that “wetlands also remove nutrients, sediment and pollutants from the aquatic system. These wetlands slow and retain runoff allowing sediment particles and dissolved pollutants to be assimilated and preventing them from reaching downstream waters.” *Id.* at 445. In the Corps' view, this was particularly important because the areas around St. Brides Ditch and its wetlands “consist of residential and commercial development” and therefore, “nutrients associated with fertilizers for lawns and landscaping are now discharged” into the area. *Id.* at 446. Finally to support its conclusions, the Corps provided significant information from scientific resources that discuss the impact of wetland soils on nitrogen and phosphorous. *See id.* at 446–447.

The evidence presented by the Corps is very similar to the evidence presented in *Cundiff*. In *Cundiff*, the United States presented expert

testimony, which concluded “wetlands perform significant ecological functions” similar to the functions described by Drs. Daniels and Whittecar. *See* 555 F.3d at 211. An additional similarity is that like Dr. Whittecar's statement that the elimination of wetlands would cause a rerouting of water flow, the expert in *Cundiff* testified that “Rudy Cundiff's ditch digging had created channels so that the acid mine runoff would largely bypass his wetlands and flow more directly” into tributaries. *Id.*

There is an important difference between *Cundiff* and this case, which is the fact the damage has not yet been done by developing the subject wetlands in this case. As discussed earlier, *Cundiff* dealt with a reclamation project, where the land had already been filled and developed, and this case deals with a permitting situation, where the land has not been developed. This means that unlike *Cundiff* where acid mining runoff could be seen going into the wetlands or bypassing the wetlands because of the defendants' actions, such evidence does not exist in this case. Given the prospective nature of this case, it is impossible for the Corps or any expert to find the exact damage that would occur if the wetlands were developed.

Plaintiff argues this is a fatal flaw in the Corps' finding because it cannot say that peak flows will increase substantially or that flooding will definitely occur. However, Justice Kennedy does not shut the door on this type of finding. Although his opinion notes that the use of conditional language “could suggest an undue degree of speculation,” the opinion instructs that “a reviewing court must identify substantial evidence supporting the Corps' claims.” *Rapanos*, 547 U.S. at 786 (citing 5 U.S.C. § 706(2)) (Kennedy, J., concurring).

The Corps has presented very similar evidence as was presented in *Cundiff* a case the Fourth Circuit found persuasive. This evidence included physical evidence of soil samples, expert testing, and expert

testimony. Further, this evidence is supported by the scientific literature on the topic. This evidence shows that the wetlands serve to store and filter water and hold runoff from the higher elevations around the site. This is important because, as was discussed, the Northwest River is considered impaired by DEQ and the Corps has provided substantial evidence that waters from the wetlands drain into tributaries that flow into the Northwest River. The Court finds this to be substantial evidence to support the conclusions of the Corps and this evidence shows the importance of the area to downstream water quality.

(c) Indication of quantity and regularity of flow in adjacent tributaries

Justice Kennedy also suggests that evidence of the quantity and regularity of flow in adjacent tributaries would be helpful. *Id.* This is closely related with the evidence presented as to regularity and quantity of actual flow and discussed in Part IV(A)(ii).

In reviewing both the quantitative and qualitative evidence of flow, the Court finds that the Corps provided significant evidence of both the quantity, and of the regularity of the flow, in St. Brides Ditch and in the seasonal RPW.

C. Plaintiffs Arguments

By addressing the specific concerns of the Fourth Circuit, the Corps goes a long way in establishing that the record is sufficient for jurisdiction. However, before making a final recommendation, the Court must address some of the arguments made by Plaintiff. In general, Plaintiff attempts to argue two points. First, that the evidence is insufficient to find a significant nexus, and second, that the evidence shows no significant nexus exists.

Plaintiff argues that the basis for the Corps' jurisdiction are "findings," not evidence. *See* PL's Br. 14. Plaintiff goes so far as to say it is "undisputed"

that there is no evidence on the record. *See id.* at 13. Needless to say the Corps vigorously disagrees with that characterization of the record. *See* Def.'s Br. at 11–12. Unfortunately, these labels placed by Plaintiff on the evidence are boldface and lack support. The studies, pictures, observations, and expert testimony all qualify as physical evidence. Simply labeling evidence as a "finding" does not change the fact that it is physical evidence.

It is also important to note that Plaintiff provided its own evidence and factual findings. This information was included in the administrative record. *See* AR 3–22. The Corps incorporated some of this information, but expressed concern about a great deal of Plaintiff's facts and methodology. *See id.* For example, Plaintiff argues that its photographic evidence shows no water in St. Brides Ditch or only standing water. PL's Br. 18–19. The Corps, however, discounts these photographs because they were taken during a limited period of time and a period of time where "much of the chemical and biological activity is minimal." *See* AR 7. The Court shares the Corps' concerns about this evidence, but regardless under the APA, factual findings, like whether to give weight to these facts, is subject to an arbitrary and capacious standard. *See* 5 U.S.C. § 706(2)(A). There is no allegation that the failure to adopt these facts was arbitrary or capacious, and further, the Corps' decision is supported by the concerns over methodology.

Plaintiff also argues that Justice Kennedy's test does not "direct the Corps [sic] to make an inquiry as to the effect that subsequent, post development uses of [the] property could have on navigable water." Pl.'s Reply Br. 3–4 (ECF No. 94). This is true, however, neither Justice Kennedy nor the Fourth Circuit bar the Corps from examining the future effects of development. In fact, the CWA not only directs the government to "restore" waters of the United States, but to also "maintain" those waters. *See* 33 U.S.C. 1251(a). This indicates that the Corps

cannot limit itself to the restoration of harmed wetlands, but must consider maintaining those wetlands, and in turn maintaining the navigable water ways. The Fourth Circuit made clear that the production of evidence was not to be an undue burden on the Corps. To bar the Corps from examining the impact of development on the property and the waterways would create a huge burden, and in effect, narrow the CWA to only being applying when the property has been developed and caused great harm. Requiring this type of evidence is not supported by the Fourth Circuit's mandate and fails to follow the language of the CWA.

On the issue of the River's impaired status, Plaintiff argues that the phosphorus does not come off the 448 acres of wetlands, but instead comes upstream from fertilizing activities and human impact. *See* Pl.'s Br. 18. This is supported by evidence taken by Plaintiff's experts. *Id.* This argument, however, ignores the wetlands' ability to filter sediment and phosphorous. *See supra* Part IV(A)(iii)(b). If the phosphorus levels upstream from the wetlands are similar to the phosphorus levels downstream from the wetlands, it means the water coming from the wetlands are not contributing to the low DO problem. This is supported by DEQ's finding that the sediment and phosphorous coming off wetlands is "usually non-significant." AR 124–34.

Further, Plaintiff argues that the wetlands are not helping the low DO problem, because the water that comes from upstream areas is not filtered through the wetlands. *See* PL's Br. 18. Again, this is off the mark. The wetlands are not contributing to the problem, even though the evidence shows that water comes from the wetlands and from higher ground onto the wetlands and makes its way to the Northwest River. To allow development would take away wetlands that serve this important ecological function and could harm DEQ and the Commonwealth of Virginia as it attempts to reduce the Total Maximum Daily Load of phosphorous by forty percent.

Additionally, Plaintiff splices the Fourth Circuit's and Justice Kennedy's opinion and asks the Court to read them as requiring the Corps only look at the wetlands in determining significant nexus. *See e.g.*, Pl.'s Reply Br. 11. This, however, ignores both the Fourth Circuit's and Justice's Kennedy's direction that an adequate record examines the importance of tributaries and the importance of the entire ecological system. The Court cannot adopt this narrow approach.

To return to a theme of this Report and Recommendation, this case is different than others discussed because it is a permitting case. Nevertheless, Plaintiff argues that without the type of demonstrative physical evidence found in *NCRW* and *Cundiff*, jurisdiction cannot be established. This case, however, presents a significantly different question than either *NCRW* or *Cundiff*. This is a prospective case, in which, the question is not whether punitive sanctions and reclamation is appropriate, but is whether requiring a permit is appropriate. Therefore, the Corps does not have physical evidence of severe damage. Although some of this land was developed without a permit under the previous owner, this permit focuses not on the developed wetlands, but on the remaining wetlands. To require the type of evidence sought by Plaintiff would require that the Corps allow for development and decide afterwards whether the wetlands fall under CWA jurisdiction. As this is a prospective case, the view of the evidence will be different. In this situation, the Court finds that the evidence shows the required significant nexus.

There is one final issue with Plaintiff's position. As noted, Plaintiff seeks to make two arguments, first that the record is insufficient to find a substantial nexus exists, and second, that the record is sufficient to find that a substantial nexus does not exist. Because the Corps included the evidence presented by Plaintiff in the administrative record, *see* AR 3–22, these two arguments verge on being mutually exclusive.

D. Conclusion

The Court must look at the record and determine whether the Corps has provided sufficient evidence, with at least an indicia of reliability, to support the conclusion that the similarly situated wetlands have a significant impact on the integrity of the Northwest River. *See supra* Part III. The physical evidence provided by the Corps is expert testimony, field tests, mapping, and scientific literature. This evidence has more than an indicia of reliability. The Court also must determine if the evidence provided and the administrative record has the power to persuade, so to give the Court's jurisdictional findings *Skidmore* deference. In reviewing the evidence, there is significant evidence that when taken together has the power to persuade.

First, are the topological survey and calculations done by the Corps, which show that runoff falls to the wetlands from the uplands area and that a substantial amount of rain falls each year on the land. *See supra* Part IV(A)(iii)(a). Second, are the surveys and historical maps that show that the PUD is on a drainage divide with portions of the site draining into St. Brides Ditch and the seasonal RPW, which means this substantial amount of rain goes from the wetlands, into St. Brides Ditch and the seasonable RPW. Additionally, the evidence from Plaintiff's expert, Dr. Cahoon, that rainfall from a 10-year storm on the 448 acres of wetlands over four days would be sufficient to raise the Northwest River by 2.14 inches supports this conclusion. AR 480. Third, there is the evidence showing the regularity of actual flow in both St. Brides Ditch and the seasonal RPW, and how that flow goes from the similarly situated wetlands to the Northwest River. *See supra* Part IV(A)(ii). Finally, the evidence shows what the wetlands do to support the water integrity of the Northwest River by removing nitrates and phosphorous, storing water, and slowing flow. *See supra* Part IV(A)(iii)(b). The biological and ecological impact of the wetlands is important to the Northwest River because the physical evidence

shows is that water flows from the wetlands to the Northwest River, and that both the Northwest River and St. Brides Ditch are impaired.

This evidence establishes that the wetlands, based on their biological and ecological function, have impact on the water that goes through it, and that water ends up in the Northwest River. The evidence to support this is found in maps, pictures, testimony of witnesses, expert testimony, soil testing, expert testing, and scientific literature. The Court finds that this is more than enough evidence to support the Corps' finding that a significant nexus exists between the wetlands and the Northwest River. The Corps record is thorough and uses valid reasoning. In the Court's view, the agencies finding has the power to persuade.

In the Court's view, this administrative record and the evidence included is very similar to the evidence presented in *Cundiff*. As in *Cundiff*, there are a number of expert reports and photographic evidence to support the exercise of jurisdiction. In addition there is quantitative evidence on the issue of flow. To require more of the Corps goes beyond the parameters set by the Fourth Circuit. Based on the record presented, the undersigned RECOMMENDS that the Court find the Corps presented sufficient physical evidence to support its jurisdiction.

V. Recommendation

Based on the foregoing, the Court recommends that Plaintiff's Motion for Summary Judgment be DENIED (ECF No. 77), and Defendant's Cross Motion for Summary Judgment be GRANTED (ECF No. 91).

VI. Review Procedure

By copy of this Report and Recommendation, the parties are notified that pursuant to 28 U.S.C. § 636(b)(1)(c):

1. Any party may serve upon the other party and file with the Clerk written objections to the foregoing findings and recommendations within fourteen (14) days from the date of mailing of this report to the objecting party, *see* 28 U.S.C. § 636(b)(1), computed pursuant to Rule 6(a) of the Federal Rules of Civil Procedure, plus three (3) days permitted by Rule 6(d) of said rules. A party may respond to any other party's objections within fourteen (14) days after being served with a copy thereof.

2. A district judge shall make a *de novo* determination of those portions of this Report or specified findings or recommendations to which objection is made.

The parties are further notified that failure to file timely objections to the findings and recommendations set forth above will result in waiver of right to appeal from a judgment of this court based on such findings and recommendations. *Thomas v. Arn*, 474 U.S. 140, 106 S.Ct. 466, 88 L.Ed.2d 435 (1985); *Carr v. Hutto*, 737 F.2d 433 (4th Cir.1984), *cert. denied*, 474 U.S. 1019, 106 S.Ct. 567, 88 L.Ed.2d 552 (1985); *United States v. Schronce*, 727 F.2d 91 (4th Cir.1984), *cert. denied*, 467 U.S. 1208, 104 S.Ct. 2395, 81 L.Ed.2d 352 (1984).