UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

In the Matter of:	)	
	)	
C & S Enterprise, L.L.C.,	)	**Docket No. CWA-07-2018-0095**
	)	
Respondent.	)	

INITIAL DECISION

DATED: September 30, 2019

PRESIDING OFFICER: Chief Administrative Law Judge Susan L. Biro

APPEARANCES:

For Complainant:

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I. PROCEDURAL HISTORY

This proceeding was commenced on January 2, 2018, when Complainant, Karen A. Flournoy, Director of the Water, Wetlands and Pesticides Division of the United States Environmental Protection Agency, Region 7 ("EPA" or "the Agency"), filed a Complaint against Respondent C & S Enterprise, L.L.C., alleging that Respondent violated Section 301 of the Clean Water Act ("CWA"), 33 U.S.C. § 1311, by discharging pollutants from a point source into waters of the United States without securing a permit under Section 404 of the CWA, 33 U.S.C. § 1344. Based on this alleged violation, the Agency proposed to issue a penalty against Respondent under Section 309(g) of the CWA, 33 U.S.C. § 1319(g), in the amount of $40,500.

Respondent filed an Answer to the Complaint on January 31, 2018. On May 31, 2018, the Agency filed its initial prehearing exchange materials. Respondent submitted a prehearing exchange on July 13, 2018. Thereafter, the Agency supplemented its prehearing exchange on August 24, 2018, and September 13, 2018.

The hearing in this matter was conducted October 2-4, 2018, in Des Moines, Iowa. At hearing, 58 Agency exhibits ("AX") were admitted into evidence. *See* AX nos. 1-32; 1-30a; 10-5a; 10-5b; 10-7a; 10-7b; 10-8a; 10-8b; 10-9a; 10-12a; 10-14a; 10-15a; 10-18a; 10-19a; 10-19b; 10-20a; 10-21a; 10-21b; 10-22a; 11-8a; 24a; 26-2a; 26-3a; 28-1a; 29-2a; 30-7a; 31, app'x B, 28a. Respondent offered six exhibits ("RX"). *See* RX nos. 1-6. Additionally, the Agency provided testimony from six witnesses: Marlyn Schafer, Don Carrington, Bert Noll, Joseph Shoemaker, Delia Garcia, and Peter Stokely. Two witnesses testified on behalf of Respondent: Scott Morrow and Gerald Hentges.

This Tribunal received the official transcript of the hearing on October 23, 2018, and transmitted copies of the transcript to the parties by email on October 26, 2018. Neither party requested changes to the transcript.[1]

On December 14, 2018, the Agency filed its Initial Post-Hearing Brief ("AB"). After receiving an extension of time,[2] Respondent filed its Initial Post-Hearing Brief ("RB") on March 1, 2019. The Agency filed a Reply Post-Hearing Brief ("ARB") on March 15, 2019. Respondent's Reply Post-Hearing Brief ("RRB") was filed on March 29, 2019. With that filing, the record closed.

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[1] All citations to the transcript will be in the following format: "Tr. at [page number]."

[2] On December 28, 2018, the U.S. Environmental Protection Agency along with many other federal government agencies shut down due to an appropriations lapse, and the Office of Administrative Law Judges was closed. The office did not reopen until January 28, 2019. That same day, Respondent moved for additional time to file its Initial Post-Hearing Brief, a request this Tribunal granted on January 30, 2019.

II. LEGAL BACKGROUND

a. Overview of the CWA

Congress enacted the Clean Water Act in 1972 with the stated objective of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Under Section 301(a) of the CWA, it is unlawful for a person to discharge a pollutant to navigable waters from a point source without a permit. 33 U.S.C. §§ 1311(a), 1344(a), 1362(12).

A pollutant includes, among other things, dredged spoil, rock, and sand. 33 U.S.C. § 1362(6). The term "navigable waters" means "the waters of the United States." 33 U.S.C. § 1362(7). Waters of the United States encompass "all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;" tributaries of such waters; and "[w]etlands adjacent to [such] waters (other than waters that are themselves wetlands)." 40 C.F.R. § 232.2 (2014);[3] *see also Henry Stevenson*, 16 E.A.D. 151, 160, 2013 WL 5793370, at *8 (EAB 2013). "'Wetlands' means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." 40 C.F.R. § 232.2; *see also* 33 C.F.R. § 328.3(b).

Under Section 404 of the CWA, a person cannot discharge dredged or fill material into waters of the United States unless he first obtains a permit to do so from the U.S. Army Corps of Engineers ("Corps"). 33 U.S.C. § 1344(a), (d). The Agency and the Corps "jointly administer the permitting program created by" Section 404, and the Corps "issues individual permits after reviewing site-specific applications, evaluating the probable impacts to the public interest of the proposed activities and their intended uses, and taking into account comments received through the public participation process." *Stevenson*, 16 E.A.D. at 160, 2013 WL 5793370, at *8 (citing 33 C.F.R. §§ 320.4, 323, 325; *J. Phillip Adams*, 13 E.A.D. 310, 312-13, 2007 WL 2285420, at *3 (EAB 2007)).

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[3] In 2015, the Agency issued a new definition of "waters of the United States" with an effective date of August 28, 2015. *See* Clean Water Rule: Definition of "Waters of the United States," 80 Fed. Reg. 37054 (June 29, 2015) (Final Rule). Respondent's violation occurred before the 2015 Rule took effect. Accordingly, this Initial Decision applies the pre-2015 definition. Additionally, during a prehearing telephone conference on September 6, 2018, counsel for the parties agreed the pre-2015 definition controls in this case. Finally, on September 12, 2019, Agency Administrator Andrew R. Wheeler signed a rule that finalizes the repeal of the 2015 Rule. *See* https://www.epa.gov/sites/production/files/2019-09/documents/wotus_rin-2040-af74_final_frn_prepub2.pdf.

"The term discharge of fill material means the addition of fill material into waters of the United States." 40 C.F.R. § 232.2. Fill material is "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States." 40 C.F.R. § 232.2. Fill material may include "rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States." *Id.*

Finally, in some circumstances, certain activities may be exempt from Section 404 permit requirements, including "normal farming, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices." 33 U.S.C. § 1344(f); 40 C.F.R. § 232.3(c)(1).

b. CWA Jurisdiction

The Section 404 permitting scheme applies only to "navigable waters" that are "waters of the United States." The U.S. Supreme Court discussed which waters this includes in *Rapanos v. United States*, 547 U.S. 715 (2006). The entire Court agreed "that 'navigable waters' encompassed something more than traditional navigable-in-fact waters," but it articulated "two new and distinct tests for determining CWA jurisdiction, with neither test commanding a majority . . . . " *Rapanos*, 547 U.S. at 730-31, 767, 788; *United States v. Bailey*, 571 F.3d 791, 797 (8th Cir. 2009); *Stevenson*, 16 E.A.D. at 162, 2013 WL 5793370, at **10-12.

First, in an opinion authored by Justice Scalia, a plurality of the Court concluded that "the phrase 'the waters of the United States' includes only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as 'streams[,] ... oceans, rivers, [and] lakes.'" *Rapanos*, 547 U.S. at 739; *see also id.* at 732-33; *Smith Farm Enterprises, LLC*, 15 E.A.D. 222, 240-41, 2011 WL 946993, at *15 (EAB 2011). Notably, "the Plurality stated that 'by describing waters as relatively permanent,' it '[did] not necessarily exclude' seasonal waters or waters that dry up under extraordinary circumstances, such as drought." *Smith Farm*, 15 E.A.D. at 241, 2011 WL 946993, at *15 (quoting *Rapanos*, 547 U.S. at 732 & n.5). Justice Scalia wrote that seasonal waters are those that "contain continuous flow during some months of the year but no flow during dry months" and that "common sense and common usage distinguish between a wash and a seasonal river." *Rapanos*, 547 U.S. at 732 n.5. Additionally, he added, "channels containing permanent flow are plainly within the definition, and . . . 'intermittent' and 'ephemeral' streams – that is, streams whose flow is '[c]oming and going at intervals . . . [b]roken, fitful,' or 'existing only, or no longer than, a day; diurnal . . . short-lived,' – are not." *Id.* (citations omitted). Further, with respect to wetlands, the Plurality "held that a wetland is covered by the [CWA] if: (1) the adjacent channel contains a 'water of the United States' (i.e., a relatively permanent body of water); and (2) the wetland has a continuous surface connection with that water." *Stevenson*, 16 E.A.D. at 162, 2013 WL 5793370, at *10 (citing *Rapanos*, 547 U.S. at 742).

Then, in a concurring opinion, Justice Kennedy declared there to be CWA jurisdiction over a stream or wetland when there is a "significant nexus" between the stream or wetland "and navigable waters in the traditional sense." *Id.* (citing *Rapanos*, 547 U.S. at 779); *Rapanos*, 547 U.S. at 767. A "significant nexus" exists if the stream or wetland, "'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.* (citing *Rapanos*, 547 U.S. at 780). In contrast, when a stream or wetland's "effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term 'navigable waters.'" *Smith Farm*, 15 E.A.D. at 247, 2011 WL 946993, at *20 (citing *Rapanos*, 547 U.S. at 780). For streams or wetlands that "are not adjacent to navigable-in-fact waters, instead feeding into nonnavigable tributaries of those waters, then [the Agency] cannot assume that [the stream or] wetlands have ecological effects on the downstream navigable-in-fact waters." *Id.* at 248, 2011 WL 946993, at *21 (citing *Rapanos*, 547 U.S. at 781-82). Ultimately, under Justice Kennedy's test, the Agency must establish a "significant nexus" between the stream or wetland "and the navigable-in-fact waters on a case-by-case basis." *Id.* (citing *Rapanos*, 547 U.S. at 782).

Without a majority opinion from the Supreme Court, the Environmental Appeals Board ("EAB") has affirmed "that CWA jurisdiction may be determined under either the Plurality test or the Kennedy test." *Stevenson*, 16 E.A.D. at 165, 2013 WL 5793370, at *12; *Smith Farm*, 15 E.A.D. 242, 2011 WL 946993, at *20; *see also United States v. Donovan*, 661 F.3d 174, 184 (3d Cir. 2011); *Bailey*, 571 F.3d at 799; *United States v. Johnson*, 467 F.3d 56, 62–64 (1st Cir. 2006).

Post-*Rapanos*, it is Agency practice to assert jurisdiction over non-navigable tributaries that are "relatively permanent" or have continuous flow for at least three months based on the Plurality test without making a significant nexus finding. *See* U.S. EPA & U.S. Army Corps of Eng'rs, *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decisions in* Rapanos v. United States & Carabell v. United States at 7 (Dec. 2, 2008) (citing *Rapanos*, 547 U.S. at 732 n.5) (available at https://www.epa.gov/cwa-404/2008-rapanos-guidance-and-related-documents) ("Guidance"). The Agency also claims CWA jurisdiction over "adjacent wetlands that have a continuous surface connection with a relatively permanent, non-navigable tributary" without making a significant nexus finding. Guidance at 7 (citing *Rapanos*, 547 U.S. at 742). Referencing *Rapanos*, the Agency defines a continuous surface connection as a "physical connection requirement," such that the wetland "directly abuts the tributary" and is not separated by uplands, berms, dikes, or similar features. Guidance at 7 (citing *Rapanos*, 547 U.S. at 751 n.13). For waters that are not "relatively permanent," i.e., "ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally," the Agency evaluates CWA jurisdiction under Justice Kennedy's significant nexus standard. Guidance at 7. This includes non-navigable tributaries that are not relatively permanent; wetlands adjacent to such tributaries; and wetlands adjacent to, but not directly abutting, a relatively permanent tributary. Guidance at 8.

III. FACTUAL BACKGROUND

a. Respondent

Respondent is C & S Enterprise, a limited liability company established under the laws of Iowa that formed in 1994. Compl., ¶ 4; Answer, ¶ 4; Tr. at 440, 445. Respondent's sole members and owners are Scott Morrow and his wife.[4] Respondent's Initial Prehearing Exchange at 1; Tr. at 440, 521. Respondent owns a 75-acre parcel of property located in Section 20, Township 79 North, Range 12 West, Iowa County, Iowa, referred to hereafter as "the Farm." Compl., ¶ 14; Answer, ¶ 14; AX 31 at 11.

As discussed below, the events giving rise to this proceeding occurred in 2015, when Respondent installed a tile drainage system in a stream that transects the Farm. To accomplish this, Respondent filled in and eliminated 1,871 linear feet of the stream and 1.3 acres of adjacent wetlands. The stream is an unnamed tributary of the English and Iowa Rivers. By filling in this portion of the stream, referred to hereafter as the "unnamed tributary" or "tributary," the Agency alleges Respondent violated Sections 301 and 404 of the Clean Water Act.

b. The land and water at issue

The unnamed tributary "has been around for quite a long time." Tr. at 185. It can be seen in numerous aerial photographs dating from the 1930s. AX 10; AX 31 at 3, 12; Tr. at 195, 312. As depicted in aerial photographs, the tributary can be described as consisting of two sections as it crosses the Farm: an upper portion that is meandering, curving, and clearly incised in the ground and a lower portion that is more linear and at different points in time has appeared less channelized than the upper portion. AX 10.

The unnamed tributary flows into Deep Creek. *See, e.g.*, Tr. at 228. Deep Creek is a perennial-flowing stream with a well-defined bed and banks.[5] It is a jurisdictional water that is "much larger" than the tributary. AX 1 at 7, 8, 41, 48; AX 4 at 18-19; Tr. at 44-45, 225, 428. About 1/3 of a mile downstream from the unnamed tributary, Deep Creek flows into the North English River, which is also a perennial-flowing water body. AX 28; AX 28-1a; Tr. at 234-35. The North English River is subsequently joined by the Middle and South English Rivers, and

[4] Mr. Morrow testified on behalf of the corporate Respondent. Although Mr. Morrow testified about his actions and motivations as if they were his own, and although in many instances this Initial Decision refers to Mr. Morrow and Respondent as if they are interchangeable, this Tribunal understood Mr. Morrow's actions and motivations to be those of the corporate Respondent. To that end, the liability and penalty assigned by this Initial Decision belong to the Respondent and not to Mr. Morrow in his personal capacity.

[5] A perennial stream has substantial flow year-round and therefore typically falls within CWA jurisdiction. Tr. at 17.

they become the English River roughly 25 miles downstream from the Farm. AX 31 at 5, 20. The English River, which flows perennially, is a traditionally navigable water. *See, e.g.*, AX 22. The English River joins the Iowa River approximately 63 miles downstream from the Farm. AX 31 at 5, 20; Tr. at 530.

The unnamed tributary sits at the center of a 100-acre watershed. AX 28; AX 28-1a; AX 31 at 3; AX 31, app'x B at 28; AX 31, app'x B-28a; Tr. at 233, 307-310, 411, 573-74. It is one of about five hundred or six hundred similar tributaries in the larger English River watershed. AX 31 at 5, 21; Tr. at 367. A watershed is an area of land in which water from precipitation or groundwater drains into smaller streams that flow into progressively larger streams. On a map, this may appear similar to twigs connecting to branches connecting to a tree trunk, where the "tree trunk" is a traditionally navigable water. AX 31 at 21; Tr. at 174-75, 295-96, 311. The smaller streams convey the water to larger downstream waters through physical connection. Tr. at 175, 311. The watershed in this case collected runoff from rainfall and directed it into the tributary, which in turn conveyed it through channelized flow to Deep Creek. Tr. at 311. Streams in a watershed provide a habitat for aquatic-dependent or semi-aquatic-dependent species, and they help to break down nutrients and sort sediment. AX 1 at 6, 9, 19, 23; Tr. at 175, 214, 215-16. A stream like the unnamed tributary will "exert critical influences on the character and quality of downstream waters . . . by mitigating flooding, maintaining water quality and quantity, recycling nutrients, and providing habitat for plants and animals." *See* AX 15 at 3.

Within a given watershed, smaller, higher-order streams such as the unnamed tributary are particularly important. Intermittent[6] and ephemeral streams make up at least 75 percent of all waters. Tr. at 176. An "intermittent" stream is "a stream that derives its water not only from rainfall, but [it] also has a high-water table where it's also influenced by ground water." Tr. at 176, 189, 643; *see also* Tr. at 289 ("Intermittent streams also respond to rainfall events but they have a groundwater component to it . . . they would flow as a result of rainfall events but also groundwater that would contribute flow . . . in the periods when it's not raining.").[7] An intermittent stream flows seasonally rather than perennially. Tr. at 17. Intermittent streams typically have a bed and bank, meandering channel, ordinary high-water mark, and consistent geometry caused by water flow sufficiently regular to maintain its shape. Tr. at 176-77. The

[6] In contrast to Justice Scalia, who in *Rapanos* used the term "intermittent" to describe streams that were not jurisdictional because they did not have sufficiently continuous flow, witnesses applied the term to streams that fall within CWA jurisdiction because they are seasonal waters with continuous flow during some, but not all, months of the year. This Initial Decision also uses the term "intermittent" at times to refer to waters that may not have continuous flow year-round but are nevertheless relatively permanent and therefore jurisdictional.

[7] To that extent, precipitation data can provide information about a stream because "[t]he total annual precipitation in an area is a factor in terms of stream flow." Tr. at 300. In the area around the Farm, the annual precipitation was 37 inches, which is "fairly moist, fairly wet, [and] consistent throughout the months." Tr. at 301.

ordinary high-water mark "is generally a break in the vegetation on the bank, where, below the break in vegetation . . . the stream flow occurs and . . . where there will be little or no vegetation." Tr. at 18. Conversely, an "ephemeral" stream may "intersect[ ] the higher groundwater table" but it "is primarily a stream that just flows right after a rainfall event" and has a "smaller drainage area." Tr. at 18-19, 177; *see also* Tr. at 289 ("[I]t's a stream or a water body that flows in response to rainfall events primarily. The rainfall stops, the ephemeral stream quits flowing."). An ephemeral stream may still have a bed and bank and an ordinary high-water mark, but a much straighter geometry because it does not have sufficient flow to meander the water and it does not sort sediments as well as an intermittent stream. Tr. at 177. According to Agency witnesses, a perennial stream is most obviously jurisdictional, followed by intermittent streams and then ephemeral streams. *See, e.g.*, Tr. at 17-19.

Smaller streams like the unnamed tributary have a higher water surface-to-channel contact ratio and a slower flow than larger waters, which aid their ability to chemically break down nutrients and pesticides. Nutrient breakdown is important to make the nutrients available to higher order organisms at the base of the food chain. AX 1 at 6, 9, 19, 23; Tr. at 176, 214, 215. Streams retain and channel water in high runoff periods and provide for ground water recharge and a habitat for wildlife. Tr. at 629. More decomposition can occur in smaller tributaries because the flow is not as great as in higher order streams. Tr. at 216. If a stream is removed from a watershed, all of the chemical, physical, and biological functions it provides are lost, including habitat and the ability to break down nutrients. Tr. at 178. If a stream is diverted through underground drainage tile, flow into the lower watershed may continue, but "you're losing the ability of the microorganisms to be able to break down nutrients and make them available to the food web. You're also losing habitat for aquatic species." Tr. at 178.

Wetlands are similarly important. A wetland is an area of land that has water in it for long enough to support the growth of hydrophytic vegetation. This generally means that the land has hydric soils and a source of hydrology during at least part of the growing season. Tr. at 178. Wetlands help to attenuate downstream floods because they absorb water during high-flow events and release them when the flow subsides. Tr. at 179, 628-29. One acre of wetland can hold more than a million gallons of water. Tr. at 629. "They also act as kidneys" due to their ability to filter and break down nutrients and remove sediments and chemicals, and they can serve as refuge for smaller fish and aquatic animals. Tr. at 179, 628-29. Additionally, they help the groundwater recharge. Tr. at 628-29. A wetland loses all of these functions if it is filled in, increasing the likelihood of downstream flooding and eliminating the ability of the wetland to absorb rainfall for release in drier conditions. Tr. at 179-180.

Agency personnel look for certain key attributes when determining whether a stream is a water of the United States. Specifically, they try to identify whether the stream has a bed and banks, whether it has an ordinary high-water mark, and whether it eventually flows into a traditional navigable water. Tr. at 170. To identify a wetland, the Agency follows the same

procedures as the Corps, and looks for the presence of hydric soils,[8] the source of the hydrology, and whether there is hydrophytic vegetation. Tr. at 170-71.

c. Aerial photographs and other sources of data about the unnamed tributary

In addition to live testimony and reports based on site visits, a range of sources provide information about the unnamed tributary. Chief among those are aerial photographs of the Farm taken over many decades. The Agency acquired and reviewed photographs from Iowa State University, the U.S. Geological Survey ("USGS"),[9] the U.S. Department of Agriculture ("USDA"), Google Earth, Digital Globe, and Pictometry.[10] *See* AX 10; AX 26; AX 29; AX 31 at 7-8; AX 31, app'x B; Tr. at 297. Respondent acquired and reviewed some of the same images. *See* RX 3; RX 5.

Through aerial photographs, it is possible to identify and map streams, wetlands, and the connections between streams and wetlands. Tr. at 285. The images also reveal changes to wetlands and streams over time and whether the changes are natural or manmade. Tr. at 285. The presence or absence of water is visible in the different tones of a photograph – water appears in darker tones – enabling distinctions between bodies of water, wet soil, and dry soil, and it is possible to observe features such as a stream bed and stream bank. Tr. at 291-92. Whether a photograph is taken straight down or from an angle also highlights different characteristics of a water feature. Tr. at 291-92, 297-98.

Streams are further identifiable in aerial images by their curvilinear shape – which helps distinguish them from ditches – and their dendritic branching pattern. Tr. at 290-91, 396-98. They frequently have visible riparian or vegetative zones that follow the stream corridor. Tr. at 290. Intermittent streams typically have pronounced geographic features and express themselves in the topography of the land. Tr. at 290-91. Water in a stream may not be visible when the stream is surrounded by tree cover, so the ability to see water in a specific aerial image is not determinative of the type of stream it is. Tr. at 292-93. Shadows are distinguishable from water based on their color, tone, location, and direction relative to other reference points in photographs. Tr. at 432-33, 580-81.

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[8] Hydric soils retain water that would otherwise pass through into the subsurface. Tr. at 172.

[9] The U.S. Geological Survey is charged with creating maps of the United States and its geographic features, including streams. The USGS mapped the unnamed tributary as early as 1968 and labeled it "as an intermittent stream," that is, a seasonal water with continuous flow during some months of the year. AX 31 at 4, 13-14; Tr. at 303-04.

[10] In contrast to the straight overhead images provided by other sources, Pictometry is a vendor of "oblique" aerial photography, i.e., photographs taken from an angle. Tr. at 323, 406.

Agency witness Peter Stokely testified as an expert in aerial photograph interpretation. Complainant's Initial Prehearing Exchange at 2 (May 31, 2018); Joint Prehearing Stipulations at 2 (Sept. 7, 2018); AX 31; Tr. at 279. Mr. Stokely is an environmental scientist who currently serves as the Agency's national Clean Water Act Section 404 coordinator. AX 6; Tr. at 281. In that position, he supports Agency and Department of Justice case development through aerial photography interpretation, Geographic Information Systems ("GIS")[11] support, and knowledge of wetland science and policy. AX 6 at 1; Tr. at 281-82. He has worked in mapping and photography interpretation since 1986 and has spent most of his career mapping wetlands and streams and helping to develop Section 404 enforcement cases. Tr. at 282-83, 388. Mr. Stokely has testified as an expert witness in more than 20 administrative proceedings and federal trials. AX 6 at 5-8; Tr. at 286. For this case, Mr. Stokely arrived at his opinions after acquiring and viewing aerial images in their original resolution and incorporating USGS maps, the National Hydrography database, LiDAR imagery, and USGS stream statistics. Tr. at 296-99. Beyond his testimony, he produced a report outlining his opinions and conclusions from his analysis of overhead imagery, maps, and geospatial data of the Farm. *See* AX 31.

In addition to Mr. Stokely, Delia Garcia, Ph.D.,[12] an expert witness for the Agency, and Marlyn Schafer and Joseph Shoemaker, both project managers with the Corps who testified on behalf of the Agency, also evaluated the nature of the tributary through aerial photographs and site visits. Similarly, Gerald Hentges,[13] who Respondent proffered as an expert in hydrogeology

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[11] GIS is a computer-based system of organizing geospatial data, aerial photographs, georeferenced maps, and other digital georeference data, such as streams, soils, and wetlands, for viewing and analysis. Tr. at 286-88.

[12] Dr. Garcia is an environmental scientist in the Water Enforcement Branch of the Agency's Region 7 office. Tr. at 165. She has worked at the Agency since May 2006. Since 2011, Dr. Garcia has been primarily responsible for coordinating the Region's enforcement of Section 404 of the Clean Water Act, and she has handled between 40 and 50 enforcement cases. AX 32 at 1-2; Tr. at 168, 172. Dr. Garcia testified as an expert witness concerning stream ecology. *See* Joint Prehearing Stipulations at 2 (Sept. 7, 2018). Her doctoral work was concentrated in fisheries and wildlife biology. She also took graduate classes in subjects related to wetlands and streams. Tr. at 167-68. Additionally, while working at the Agency, Dr. Garcia has received training in wetland delineation, hydric soils, natural stream channel design, and wetland and stream restoration, and she has been credentialed as an inspector under Agency requirements. Tr. at 171. To help determine CWA jurisdiction, Dr. Garcia looks at aerial photography, hydric soil maps, topography maps, the national wetlands inventory map from the U.S. Fish and Wildlife Service, and LiDAR images. Tr. at 172-73. She has reviewed thousands of aerial photographs in her work, and there have been some instances where she has determined that a water body is not jurisdictional. Tr. at 173-74.

[13] Mr. Hentges has a bachelor's degree in hydrology and is a registered professional hydrogeologist. RX 2 at 1; Tr. at 557-58. He has worked for more than 30 years for Terracon

and Clean Water Act jurisdiction, also reviewed aerial images of the Farm when arriving at his opinions.

d. The unnamed tributary prior to Respondent's ownership of the farm

The first available aerial photograph of the unnamed tributary was taken in the 1930s. AX 10 at 1; Tr. at 195, 312, 317. It shows the tributary flowing diagonally from the northwest to the southeast and into Deep Creek. AX 10 at 1; Tr. at 318. Although the resolution is poor relative to other images, this photograph of the tributary is significant because it shows that the tributary has existed for a long time as a "permanent or relatively permanent feature." Tr. at 318, 426.

A photograph from circa 1950 has a better resolution, but similar to the image from the 1930s, "there's no real expression of where the runoff's going once it comes down the steeper areas to the north and west" and enters the lower portion of the tributary. AX 31, App'x B at 3; Tr. at 587. According to Mr. Hentges, there was likely less water flow at that time and so "it's simply sheet flowing out over the field because there's no trace of a flow path or any sort of drainage way." Tr. at 587-88.

A photograph from the 1960s shows the unnamed tributary flowing from the northwest into Deep Creek in a southeasterly direction, producing a dendritic branching pattern. AX 10 at 2; Tr. at 184-85, 319-20, 396-98. There is a clear stream channel, and the upper portion is surrounded by vegetation and trees. AX 10 at 2; Tr. at 185, 319-20. The road network and agricultural lands are visible, and buildings that did not exist in the 1930s have appeared. AX 10 at 2; Tr. at 319. The tributary appears curvilinear – the lower portion is more linear than the curving upper portion. AX 10 at 2; Tr. at 319. The lower portion of the tributary is straighter than the upper portion, indicating that it may have been altered by manmade activities at some point prior to the activities that are the subject of this proceeding. Tr. at 398-99, 401-02. Mr. Hentges opined that "while there's some meandering and erosion . . . going on in the upper portions . . . it's still very linear, and . . . lacks depth and velocity in the lower portion near Deep Creek." RX 5 at 3; Tr. at 588-89.

In 1968, the USGS mapped the unnamed tributary and labeled it "an intermittent stream," which, according to Mr. Stokely, means that it likely had seasonal flow and would be jurisdictional under the CWA. AX 20; AX 31 at 4, 13-14; Tr. at 303-05, 572, 642-43, 668.

Companies, Inc. ("Terracon"), an environmental consulting company. RX 2 at 1; Tr. at 559. At Terracon, he manages projects related to water supply and wetland mitigation, including the delineation of wetlands and waters of the United States. RX 2 at 1; Tr. at 560-61. He previously has testified as an expert witness in "a couple dozen" state and federal proceedings. Tr. at 562, 604. Mr. Hentges first got involved in this case in February 2018. Tr. at 601. In preparing his report for this case, Mr. Hentges reviewed the Agency's prehearing exchange documents, aerial photographs from Iowa State University, and soil maps from the USDA. RX 1; Tr. at 563, 603.

However, Mr. Hentges took a different view of the USGS map and determination. He speculated that the USGS may not have actually surveyed the tributary in the field but instead based its assessment on what it knew of Deep Creek. Tr. at 572, 670. Mr. Hentges then independently interpreted the topography of the map as indicating that the upper portion of the tributary is at a higher elevation, leading to more meandering, curvilinear features, while the lower portion of the tributary flattens out to the same elevation as the surrounding farm fields. AX 31 at 13; Tr. at 568-570. He estimated there to be a 25-30 foot drop from the area northwest of the Farm to the start of the lower portion of the tributary and a 12-15 foot drop between the start of the lower portion of the tributary and Deep Creek. AX 31 at 13; Tr. at 571. Because water force and velocity are less where the topography is flatter, there is less erosion, and instead of a channel in the lower portion, there existed only a straight, grass-bottomed waterway "that likely only flows when it rains," Mr. Hentges asserted. Tr. at 568-570, 571.

An image from the 1970s shows the unnamed tributary still traversing from northwest to southeast and into Deep Creek, along with the same buildings, roads, and fields appearing in photos from previous years. AX 10 at 3; Tr. at 321, 400. The channel of the tributary is not itself visible because of vegetation, but "you can see the path were the channel would be underneath the vegetation." AX 10 at 3; RX 5 at 4; Tr. at 321-22, 589.

On April 2, 1994, an aerial photograph shows many of the same land and water features seen in previous years, with the tributary demarcated by riparian shrubs and tree cover. AX 10 at 4; Tr. at 322. The channel of the tributary is visible in the upper northwest portion. AX 10 at 4; Tr. at 322.

e. Respondent's purchase of the farm and alteration of the unnamed tributary

In March 2008, Respondent took possession of the Farm.[14] Tr. at 445, 505. Mr. Morrow knew the land well: his father had rented the property in the mid-1960s, and it adjoins nearly 240 acres of land that his parents then owned and that his mother still owns. Tr. at 445, 449, 520-22. Additionally, Mr. Morrow has hunted deer, pheasants, squirrels, and rabbits on the Farm since he was a child in the mid-1970s. Tr. at 445-46. "From a young boyhood age even, this was one of the two or three farms that I had interest in purchasing if I was able to, and the timing was right," Mr. Morrow testified.[15] Tr. at 448. He recalled that over the years, the unnamed tributary had "water in it at times, not all the time." Tr. at 447.

[14] Respondent purchased the Farm sometime in 2006 or 2007 but did not close on it until March 1, 2008. Tr. at 445, 520. Respondent paid around $400,000 for the property. Tr. at 521.

[15] Mr. Morrow has farmed since the late 1970s, although in 1986 he stopped farming for a 20-year period while he worked in construction. Mr. Morrow also owns a construction company. Tr. at 442-45.

After Respondent acquired the Farm, Mr. Morrow discovered that the Farm had been poorly maintained. He began clearing and removing scrub bush, trees, and fencerows to increase the farmable acreage, including in areas around the unnamed tributary. *See, e.g.*, AX 31, app'x B, at 13-14; Tr. at 449-451, 505-06, 508. Mr. Morrow did not consult with the Corps before conducting this work. Tr. at 508-09. However, during this time, Mr. Morrow said he frequently visited local offices of the Natural Resources Conservation Service ("NRCS") and the Farm Service Agency ("FSA"), both agencies of the USDA, to learn more about government programs available to farmers and to obtain approval for his work on the land.[16] Tr. at 449, 454-56. The Farm was growing corn and soybeans when Respondent purchased it, and Mr. Morrow continued to farm these crops and to increase the size of the area where they were growing. Tr. at 523, 525-26.

A LiDAR image[17] from May 2008 displays a topographic view of the Farm and the unnamed tributary. AX 24; AX 24a; RX 3; Tr. at 360-62, 565. The image shows the connection between the unnamed tributary and Deep Creek "as a nice, straight line," according to Mr. Stokely, and the incised nature and topographic expression of the tributary are clearly visible. AX 24; AX 24a; AX 31 at 4; Tr. at 363. Mr. Hentges offered a different opinion. He interprets the image as showing that the lower portion of the tributary has five locations that "appear to be the same elevation as the farmed fields on either side . . . . I'm not seeing a defined channel that would lead to the interpretation that there's a bed [and] a bank or an ordinary high-water mark." RX 1 at 2; RX 3; Tr. at 565-66, 649-652. Some of the elevation change appearing in the image "is obviously due to vegetation," he said, and instead of a tributary channel there is a "grass drainageway." RX 1 at 2; RX 3; Tr. at 566-67. He admitted that the elevation change could also be due to manipulation of the tributary. RX 3; Tr. at 651-52. In contrast, Mr. Stokely disagreed with the conclusion that there was not a clear channel in the lower portion of the tributary. RX 3; Tr. at 366. "I agree that the channel isn't as apparent as it is in other places, but I don't agree that there's not a channel there," he said. RX 3; Tr. at 366. In fact, he observed, the LiDAR

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[16] Under the Food Security Act of 1985, wetland conservation provisions – commonly referred to as the "Swampbuster" provisions – condition important USDA benefits on how farmers treat wetlands on their property. A property owner who converts or destroys wetlands is denied these benefits. *Boucher v. U.S. Dep't of Agric.*, 934 F.3d 530, 532 (7th Cir. 2019); *see also* 16 U.S.C. §§ 3801, 3821-24; 7 C.F.R. § 12.4; *Horn Farms, Inc. v. Johanns*, 397 F.3d 472, 474 (7th Cir. 2005). The NRCS and the FSA implement the Swampbuster regulatory scheme. *Boucher*, 934 F.3d at 532. The NRCS "is the USDA's scientific arm charged with making technical determinations about whether wetlands exist or have been converted, as well as investigating failures to comply with the Swampbuster provisions." *Id.* (citing 7 C.F.R. §§ 12.2, 12.6(a)(2) & (c), 12.30(a)). "And the [FSA] relies on NRCS's wetland determinations to make decisions regarding any violations and eligibility for benefits." *Id.* (citing 7 C.F.R. §§ 12.2, 12.6(a) & (b)).

[17] LiDAR is a laser mapping technique in which a laser beam is shot down toward the ground from an aircraft flying overhead. *See, e.g.*, AX 24; Tr. at 359-61.

image reveals the "deeply incised nature" of the tributary, showing that it was cut into the ground. Tr. at 369, 378-79.

In the fall of 2008, Respondent began installing tile on about 25 acres southeast of Deep Creek – a part of the Farm that is outside the area at issue in this proceeding.[18] Tr. at 457, 524. Tile is corrugated tubing typically made of a PVC material that is used to drain agricultural land. Tr. at 30. Tile is usually placed three to five feet below the surface of the ground, and it is perforated so that excess moisture from the soil drains into it and topsoil is prevented from washing away. Tr. at 30, 458, 461. Water then flows through the tile to an outlet – in this case into Deep Creek. Tr. at 30. Mr. Morrow installed the tile using a tile plow. Tr. at 458, 461. Mr. Morrow testified that tiling as much of the land as possible "adds a great value to your farm" because crop productivity is higher and erodibility is lower. Tr. at 462. He also testified that he began tiling to divert what he referred to as ground water – the drainage water coming "from above me." AX 8 at 1; Tr. at 508.

Mr. Morrow claimed that he obtained approval from NRCS prior to his initial tiling work, although he also said that his first conversation with NRCS about tiling did not take place until the fall of 2009. Tr. at 459-60, 527. Mr. Morrow said he had further conversations with NRCS after that, but he could not recall the exact dates. Tr. at 527. These conversations were often with the same person – a woman Mr. Morrow identified as Regina Leer.[19] Tr. at 465-66, 527-28. She never told him that he needed to get a permit for the work, Mr. Morrow said. Tr. at 528. Mr. Morrow also testified that some portions of the work required additional approval out in the field. Tr. at 465. Specifically, on one occasion, Respondent installed two tile lines parallel to the unnamed tributary after Ms. Leer came out to the property and approved them. Tr. at 465. According to Mr. Morrow, Ms. Leer told him during the visit that the tributary "area" could be closed to install "basins or terraces . . . to make it more manageable." Tr. at 465-66, 511-12. He did not get any written authorization to place tile in the tributary, however, and Mr. Morrow admitted at hearing that he does not believe Ms. Leer was qualified to make wetland determinations. Tr. at 511-12.

An aerial photograph from April 4, 2009, shows that the unnamed tributary had a meandering stream segment – more visible with fewer leaves on the surrounding trees – and a lower portion discharging into Deep Creek. AX 10 at 5; AX 10-5a; AX 10-5b; Tr. at 186-88, 323, 329. The land around the area where the unnamed tributary connects to Deep Creek

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[18] Although the tiling was adjacent to Deep Creek, Respondent did not get a permit for the work, but Mr. Morrow testified that he had gotten "the okay from the NRCS." Tr. at 524-25.

[19] Respondent listed Ms. Leer as a potential witness and identified her as "a retired employee" of NRCS. *See* Respondent's Initial Prehearing Exchange at 2 (July 13, 2018). She did not appear at the hearing, however. Don Carrington, an NRCS resource conservationist who testified on behalf of the Agency, identified Ms. Leer as a federal soil conservation service technician and stated that a person in that role would not typically make wetland determinations. Tr. at 90.

contains a lot of moisture. Tr. at 323; AX 10 at 5-a. Water is visible in a defined channel, although some portions of the channel are hidden by dense vegetation. AX 10 at 5; AX 10-5a; AX 10-5b; Tr. at 186-88, 323-24, 325-26, 329, 400. Additionally, water appears to be flowing over the path that crosses the unnamed tributary and next to the channel, possibly because something impeded its flow at the crossing. AX 10-5b; Tr. at 326, 329, 400-01, 404-05.

In November 2009, Respondent tiled 35 acres of the Farm – the land that is visible in most of the photographic evidence produced in this matter. Tr. at 457, 525-26. According to Mr. Morrow, he obtained NRCS approval for this work. Tr. at 457, 459-60. When the work was complete, four outlets released water from the tile system into both Deep Creek and into the unnamed tributary. AX 10 at 7; RX 6; Tr. at 462-64, 469-471.

According to Mr. Stokely and Dr. Garcia, the meandering nature of the upper portion of the unnamed tributary is visible in an aerial photograph from March 14, 2010, as is a defined bed and bank and the tributary's physical connection to Deep Creek. There were fewer leaves on the trees, and water was present in the tributary on that date. AX 10 at 7; AX 10-7a; AX 10-7b; Tr. at 188-89; 330-32, 408. The fields were marked by passing farm machinery that had turned up moist soil. AX 10 at 7; AX 10-7a; AX 10-7b; Tr. at 408-09, 437-38. This also shows that a significant portion of the Farm had been "pattern tiled" by this date – that is, the tile is placed sequentially, parallel to each other, and spaced apart evenly. AX 10 at 7; Tr. at 460-62. Mr. Hentges agreed that "there appears to be some flow paths present in the vegetated drainageway" of the lower portion of the tributary, but he argued that there was no indication of a channel, bed and banks, or ordinary high-water mark. AX 26 at 1; Tr. at 576.

Also in spring 2010, Mr. Morrow used a skid-loader to reshape the lower portion of the unnamed tributary to drain water from the fields. AX 10 at 7-9; Tr. at 474. He said that he received NRCS approval for the work. Tr. at 473-74. He performed similar work a second time 18 to 20 months later. Tr. at 475. On one occasion, he observed water in the channel, and on another occasion, he observed that the tributary was dry. Tr. at 475. Additionally, at various times since owning the Farm, Respondent "leveled off" and cropped over portions of the unnamed tributary, conducting what Mr. Morrow referred to as "normal crop farming operations such as tillage, planting and harvesting," as well as "routine drainage system maintenance." AX 30 at 1, 6; Tr. at 501, 506. When Respondent did this, it disrupted the defined channel in the lower portion of the tributary. Tr. at 506-07.

Mr. Stokely and Dr. Garcia testified that aerial photography from July 3, 2010, shows that the unnamed tributary's bed and bank were readily visible all the way from the northern end of the Farm down to the tributary's southeastern connection to Deep Creek. Water is also seen in the channel, which has a defined bed and bank, and water appears to be flowing across the path that crosses the tributary. There is also less vegetation visible around the tributary. AX 10 at 8; AX 10-8a; AX 10-8b; AX 26 at 2; AX 26-2a; Tr. at 192-93, 194-95, 334-37, 410. Mr. Hentges agreed that "there's obviously runoff" and "a clear flow path in the drainage way" because "when water flows through it, [it] will seek the lowest point it can find, collect there, and flow

downstream." AX 26 at 2; Tr. at 576-77. But he maintained that there is "no way to determine whether there's a defined bed and bank or ordinary high-water mark." AX 26 at 2; Tr. at 577.

In aerial photography from December 18, 2010, the unnamed tributary appears in the same general location that it had been in since the 1930s and is still physically connected to Deep Creek with visible channeling characteristics. AX 10 at 9; AX 10-9a; Tr. at 195, 338. A path crossing over the tributary had been constructed and is clearly visible in the photograph, and a culvert likely runs beneath the path. AX 26 at 3; AX 26-3a; Tr. at 195-96, 338, 413. It is unclear whether there is water in the tributary, although Mr. Hentges contends there is not. AX 10 at 9; AX 10-9a; AX 26 at 3; AX 26-3a; Tr. at 196, 578. However, the ground is covered in snow, although the tributary channel is not, suggesting that the water was still flowing. AX 10 at 9; AX 10-9a; AX 26 at 3; AX 26-3a; Tr. at 411-12. Mr. Hentges argued that because a linear flow path was visible only in some locations but not others, water was merely traveling through the vegetation in the lowest spot it could find and dropping sediment or eroding different spots along the way. AX 26 at 3; Tr. at 578.

In aerial photography from January 4, 2011, the meandering nature of the upper portion of the tributary is visible, as are parts of the more linear lower channel. AX 10 at 10; AX 26 at 4; Tr. at 413-14, 578-79. Snow is on the ground but not in the channel itself. AX 10 at 10; Tr. at 414.

In the spring of 2011, Mr. Morrow went into the local NRCS and FSA offices and requested a wetland determination for his entire property.[20] Tr. at 479-480, 528-29. Mr. Morrow previously had sought more limited wetland determinations for smaller projects, particularly east of Deep Creek and the north and south sides of the unnamed tributary, but this was the first time that he sought a determination for all of the land that included the Farm. Tr. at 529. About six to eight months later, he said, a "young man and young lady" came out, looked over the Farm, and took a soil sample. Tr. at 479.

In aerial photography from July 19, 2011, the channel of the lower portion of the tributary is again visible as a dark-tone linear feature. AX 10 at 11; Tr. at 415. In this photograph, Mr. Hentges saw portions of the tributary that appear to define a flow path but no indication that a channel was present. AX 26 at 5; Tr. at 579.

In 2013, Mr. Morrow began collecting and storing shorter lengths of center coil tile to assemble into longer lengths of tile for the tiling work at issue in this case. Tr. at 475-76. He also consulted a pipe and tile company to determine what size tile he needed to use to provide adequate inlets and outlets for water from the tributary at the north and south ends of the

[20] It is unclear whether Mr. Morrow visited the NRCS, FSA, or both. Although he recognizes that there is a difference between the two agencies, from his experience "they work hand in hand." Tr. at 480. He claims to have started a wetland determination "on the FSA side and then they hand the paperwork over, relay it over to the NRCS side." Tr. at 480.

impacted segment. Tr. at 476-77. And he continued to wait on results from the 2011 visit concerning his request for a wetland determination. Tr. at 76, 480.

In aerial photography from June 28, 2013, the unnamed tributary appears in the same general position as previous years. AX 10 at 12; AX 10-12a; Tr. at 339. The vegetation decreases as the tributary runs from northwest to southeast, revealing a defined channel throughout, according to Mr. Stokely. AX 10 at 12; AX 10-12a; Tr. at 339-40. Mr. Hentges agreed that "a flow pathway is apparent" but argued that it was discontinuous and that the photograph may show only standing water left behind after a rainfall event. AX 26 at 6; Tr. at 580.

In aerial photography from July 12, 2013, the tributary appears largely the same as it did in photographs from prior years. AX 10 at 13; Tr. at 416-17. Mr. Hentges contended that there is "a flow path present, but it's discontinuous. And it does not appear that water's flowing." AX 26 at 7; Tr. at 581.

At the end of 2013, after "wait[ing] and wait[ing]," Mr. Morrow received a document in the mail from the FSA titled "Abbreviated 156 Farm Record." RX 4 at 1; Tr. at 76, 480. The document is dated December 13, 2013, and under the heading "Wetland Status," the form contains the notation, "Tract does not contain a wetland." RX 4 at 1. According to Don Carrington,[21] a resource conservationist for NRCS who reviewed the initial NRCS wetland determination in this case and drafted the final technical decision upholding it, the FSA is not authorized to make wetland determinations under the Food Security Act or on behalf of NRCS. Tr. at 71, 75, 77. Nor does NRCS rely on information reported by FSA to make a wetland determination. Tr. at 77-78. The purpose of the FSA's Abbreviated 156 Farm Record is simply to provide information about the farm to the landowner or producer, Mr. Carrington testified. RX 4; Tr. at 71, 75-76. For example, the form indicates the number and type of crop acreage being farmed. RX 4 at 1; Tr. at 76. The form may or may not indicate a property's final wetland determination by NRCS – "at times [FSA] will take the determination that NRCS has completed and that may be where they get the information that says the tract does not contain a wetland. Other times, I'm not sure how that statement gets there," Mr. Carrington testified. Tr. at 77. Regardless, he said, the "FSA didn't make . . . a wetland determination" in this case. Tr. at 85. Further, he added, farmers are discouraged from relying on wetland information in the FSA's Abbreviated 156 Farm Record "because it's not always 100 percent accurate." Tr. at 97. He testified that the NRCS has tried to communicate this to farmers "to the best of our ability" but does not know whether this information was conveyed to Respondent. Tr. at 98.

[21] Mr. Carrington has a college degree in general agriculture and prior wetland determination training and experience. Tr. at 73-74. According to Mr. Carrington, wetland determinations are made by studying the soil, vegetation, and indicators of hydrology in a given area. Tr. at 73. NRCS generally follows the same wetland standards used by the Corps. Tr. at 74-75.

Nevertheless, Mr. Morrow testified that he relied on the FSA's Abbreviated 156 Farm Record prior to performing the tiling work at issue in this case. Tr. at 480-81, 487. He also testified that he had never seen a wetland determination from NRCS before. AX 11 at 6; Tr. at 509. But even without an NRCS wetland determination, Mr. Morrow felt that he had formal approval from the NRCS to tile and fill in the tributary "because I had a wetland form with 'no wetlands' on it, and I had talked to them in previous years. So, I have other files . . . in their office today to do other work that's already been discussed two-three years ago." Tr. at 519.

In aerial photography from September 16, 2014, the unnamed tributary still appears in the same general location, and its physical connection to Deep Creek can still be seen. AX 10 at 14; AX 10-14a; Tr. at 196-97, 253, 341. The picture appears to have been taken during growing season and reveals a lot of vegetation. AX 10 at 14; AX 10-14a; Tr. at 341. The path crossing the tributary is also visible, as is the channel of the tributary in the lower portion of the photograph. AX 10 at 14; AX 10-14a; AX 31 at 4, 16; Tr. at 197, 341. Mr. Hentges could also see one or more flow paths in the tributary. AX 26 at 8; Tr. at 581. Due to tree cover, it is unclear whether there is water in the tributary. AX 10 at 14; AX 10-14a; Tr. at 197.

By 2015, Mr. Morrow had tiled all of his farmable acreage except for the unnamed tributary and its immediate vicinity. Tr. at 526-27. In February and March of 2015, Mr. Morrow began removing trees and vegetation along the tributary in anticipation of tiling.[22] AX 10 at 17; Tr. at 477-78, 512-13. In aerial photography from March 9, 2015, the tributary channel appears very clear and defined, and there is little vegetation to obscure it. AX 10 at 15; AX 10-15a; Tr. at 342. In fact, the photograph likely reveals a snapshot of the time when Mr. Morrow was removing trees and vegetation from the area around the tributary. AX 10 at 15; AX 10-15a; Tr. at 342-43, 417. Water is visible in the tributary, although Mr. Hentges contended the channel was "a bit discontinuous" and not clearly present. AX 26 at 9; Tr. at 582.

In aerial photography from March 20, 2015, the bed and banks of the tributary can be seen, as well as water flowing from the tributary into Deep Creek. AX 10 at 19; AX 10-19a; AX 10-19b; AX 10 at 20; AX 10-20a; AX 31 at 4, 15; Tr. at 197-98, 253, 347, 349-51, 423, 591. The crossing and culvert are also visible, as are the meandering channel in the upper portion, the clearing of the vegetation and smoothing of the terrain, and the straighter part of the channel below the culvert. AX 10 at 16; AX 10 at 19; AX 10-19a; AX 10-19b; AX 10 at 20; AX 10-20a; AX 31 at 4, 15; Tr. at 197-98, 345, 347, 350-51, 419-420. Two oblique photographs taken the same day show the tributary channel as a clear, defined feature, with a bed and bank all the way through. AX 10 at 17; AX 10 at 18; AX 10-18a; AX 10 at 20; Tr. at 344-47, 420-21. This is how the unnamed tributary appeared just before Respondent filled it in, and it exhibits characteristics that reveal it to be a relatively permanent geographic feature. AX 10 at 17; AX 10

[22] He also contacted the supervisor for secondary roads in Iowa County because the county owned the property where he intended to place the two inlets. RX 6; Tr. at 481-82, 484-85. Mr. Morrow testified that someone from the county gave him verbal permission to install the tile inlets. Tr. at 513.

at 18; AX 10-18a; AX 10 at 19; AX 10-19b; AX 10 at 20; AX 10-20a; AX 31 at 4, 15; Tr. at 345, 349, 350-51. Mr. Hentges again contended from looking at the photographs taken on this date that "there's no real indication there's a channel present in the lower portion of the drainage way," although he admitted to seeing "some channel forming" where the tributary flows into Deep Creek. AX 10 at 16; AX 10 at 17; AX 10 at 18; AX 10 at 19; AX 10 at 20; AX 31 at 4, 15; Tr. at 591. He suggested that it would not be uncommon for a grassed drainageway to develop a channel near a creek if there is enough water flow and change in elevation. Tr. at 592. During cross examination, Mr. Hentges admitted that he did not see a lack of connection between the unnamed tributary and Deep Creek. AX 10 at 19, 20; AX 31 at 4, 15; Tr. at 660-61.

In April 2015, Mr. Morrow began installing tile in the unnamed tributary. He hired an excavator – "a big backhoe" – that "dug an area to place the tile in" that ran the full length of the tributary. Tr. at 478. Once the tiling was installed, Mr. Morrow used his skid loader to refill the channel with dirt to cover the pipe. Tr. at 510-11. He then planted over the tiled and flattened earth. AX 10 at 14, 21; AX 30 at 6; Tr. at 501, 506. The total area tiled was about 1.3 acres. Tr. at 536. He also installed what was referred to as "check dams," "terraces," "basins," or "berms" to catch and slow down flowing water to prevent erosion. Tr. at 434-35, 479, 499. Mr. Morrow did not seek authorization from NRCS or the Corps for his 2015 clearing and tiling work. Tr. at 512-13. Additionally, at hearing, Mr. Morrow conceded that he had nothing in writing from NRCS, the Corps, or Iowa County that authorized the tile or fill work. Tr. at 513-14.

Mr. Morrow estimated that he spent close to $30,000 tiling the Farm in 2015. He estimated that tiling increased his property's value by 20-30 percent. AX 30 at 9; Tr. at 531-34.

f. A neighbor complains and the government responds

On July 20, 2015, a neighbor of the Farm emailed Katherine Timmerman, a district conservationist with NRCS, and Marlyn Schafer, a project manager with the Corps, to report that Mr. Morrow had "cut down trees, bulldozed a ditch shut, [and] laid tile to the river," and "that all has been ineffective as the water and run off flows where the ditch was previous, and ends up at the river via the big creek that runs through there." AX 5 at 2; Tr. at 24. The neighbor also alleged that Mr. Morrow was developing the land so that he could lease it to a hog farming corporation, MCM Pork LLC ("MCM Pork"). AX 5 at 2-3; Tr. at 24-26. The neighbor attached photographs of the property.[23] AX 5 at 6-11.

[23] At hearing, Mr. Schafer testified as to the content of some of the photographs that were attached to the July 20, 2015 email that he received from the neighbor. The date of the photographs is unknown. AX 5; Tr. at 60-61. One photograph, taken from the road on the north end of the property looking downstream along the unnamed tributary toward Deep Creek, shows a "concentrated flow of water . . . where this particular stream channel existed prior to the trees being removed and the channel being filled in." AX 5 at 6; Tr. at 28, 61. "It is a concentrated flow of water; it is still following a meandering pattern in there, so it was either that the channel had not been entirely filled in or some of the field material had eroded out and it was again

Mr. Schafer began to investigate for the Corps. Some of the resources he consulted during his investigation included numerous aerial photographs of the Farm dating from the 1930s to 2014, soil maps created by NRCS, topographic maps created by the USGS, and a national wetlands inventory map from the U.S. Fish and Wildlife Service. *See generally* AX 10; AX 20; AX 27; AX 28; Tr. at 64. After reviewing these resources, he made a preliminary determination on July 28, 2015, that the unnamed tributary was a jurisdictional stream.[24] AX 5 at 1; AX 9 at 1; Tr. at 26-27, 31, 66-67. On July 27, 2015, Mr. Schafer called Mr. Morrow to advise him of the inquiry and verify that the unnamed tributary had been filled in. AX 9 at 1; Tr. at 31-32. He told Mr. Morrow that if the unnamed tributary was a jurisdictional water, it would require a permit from the Corps before it could be tiled and filled in. AX 9 at 1; Tr. at 32.

On July 29, 2015, Mr. Schafer met with Mr. Morrow at the Farm and further discussed with him the work that had been done and the requirements of the Clean Water Act. Tr. at 33-34. At the time of the meeting, a substantial number of trees had been cleared and earth graded, although "there was still some rough areas that had not been filled and graded yet." *See* AX 10 at 21; Tr. at 34-35, 63. During the visit, Mr. Schafer also observed that the tile had been installed, including two tile basins constructed in berms across the unnamed tributary, with intakes to capture surface water and route it underground into the subsurface drainage tile and toward an outlet into Deep Creek. *See* AX 4 at 1-2; Tr. at 35-36.[25] Mr. Schafer saw minor erosion and sediment deposition around wooden posts guarding the upstream intake, as well as wet soil and flowing water. AX 4 at 2; Tr. at 36-38. Heading upstream from the intake and north into the neighboring property, where the unnamed tributary had not been disturbed or filled in, Mr. Schafer observed a well-defined channel with flowing water, an ordinary high-water mark, vegetation on the bank, and a streambed with flow and sediment sorting in the channel. The vegetation appeared to be hydrophytic vegetation that would grow in wet areas, such as a fringe wetland. AX 4 at 5-6, 11; Tr. at 38-39, 40, 41. Mr. Schafer found the waterflow

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following some of the original channel," Mr. Schafer testified. AX 5 at 6; Tr. at 28, 61. The water then pooled in an area near where the fill work had been completed. AX 5 at 6; Tr. at 61. Another photograph shows the unnamed tributary looking upstream on neighboring property. AX 5 at 9; Tr. at 28. In that direction, the channel "remains undisturbed" with "a wooded cover and a divine channel, a substantial streamflow, and you can see down into that stream channel where there is gravel and there's all the vegetation along that stream channel that would appear to be wetland vegetation." AX 5 at 9; Tr. at 28-29. According to Mr. Schafer, it appears similar to what the unnamed tributary would have looked like on Respondent's property before "that wooded cover was cleared and then the stream channel was filled." AX 5 at 9; Tr. at 29. Two other photographs show the unnamed tributary after the tree removal and "some earth-work had occurred," but "the entire channel here had not yet been filled in." AX 5 at 10-11; Tr. at 29-30.

[24] Mr. Schafer and the Corps have maintained this determination throughout this proceeding. Tr. at 66-67.

[25] Mr. Schafer took photographs of the property during his visit. *See* AX 4.

consistent with what he would expect to see in a jurisdictional stream a few days after a rainfall event. AX 4 at 5-6, 11; Tr. at 39. Specifically, the channel still had "a streamflow occurring and wet conditions, like that deposition is still very saturated and so, as far as meeting the criteria as a stream channel, it does meet that criteria." AX 4 at 5-6, 11; Tr. at 40. Mr. Schafer also concluded that the downstream portion of the unnamed tributary that had been tiled and filled in "would have had very similar characteristics," only with a larger and deeper channel because it was downstream where drainage areas increase in size. Tr. at 41, 67-68. But in the downstream area on the Farm, Mr. Schafer observed that the channel had been filled in and planted over with soybeans – although water had naturally flowed through where the channel had been, causing erosion and drowning some of the crop. AX 4 at 12-13; Tr. at 42-43. The area was "very wet," and there was still some active stream flow "down in the lowest part of the drainageway." AX 4 at 12-13; Tr. at 43. Meanwhile, water was flowing through the tile system in the unnamed tributary and exiting the outlets into Deep Creek. AX 4 at 20; Tr. at 45-46.

In aerial photographs taken on September 20, 2015, several months after the tributary was filled in and tiled, the channel is no longer visible, nor is its physical connection to Deep Creek. AX 10 at 21; AX 10-21b; Tr. at 200. The once-meandering northwest portion has been leveled and smoothed by earth moving equipment, the tributary directed underground, and the defined channel that was previously there is no longer present or visible. AX 10 at 21; AX 10-21b; Tr. at 352-53; *see also* AX 31 at 4-5, 17. However, some overland flow of water can be seen where the upper portion of the channel was previously more visible. AX 10-21a; Tr. at 200-01. The overland flow existed because although some of the water from the tributary was entering the upper tile intakes, there was also water draining from the uplands and simply flowing across the surface of the ground. Tr. at 201. This indicates that the tributary had enough flow that it exceeded the capacity of the tiles. Tr. at 201. Mr. Hentges found it difficult to see surface water runoff. AX 26 at 10; Tr. at 584. The image also shows that vegetation seen in previous images has been cleared. Tr. at 201.

On October 7, 2015, Mr. Schafer sent a letter to Mr. Morrow summarizing steps the Corps had taken to that point to determine whether the unnamed tributary and any associated wetlands were subject to the jurisdiction of the Clean Water Act. AX 18; Tr. at 52-54. Mr. Schafer described the history of the unnamed tributary based on the aerial photography and maps, as well as his personal observations from the site visit. AX 18; Tr. at 52-54, 64. In the letter, Mr. Schafer also informed Mr. Morrow that the NRCS would complete a wetland determination under the Food Security Act before the Corps issued its jurisdictional findings under the Clean Water Act. AX 18 at 2; Tr. at 55, 143.

The NRCS issued its official wetland determination to Respondent on March 11, 2016, through its Highly Erodible Land and Wetland Conservation Determination form and associated map.[26] AX 11 at 6, 8; AX 11-8a; Tr. at 79-80, 82, 204-06. The determination was completed in

[26] As indicated above, the NRCS makes its wetland determinations under the Food Security Act, not the Clean Water Act. Although the Agency draws its own wetland conclusions, it also will

accordance with the National Food Security Act Manual Wetland Identification procedures and 7 C.F.R. Part 12. AX 11 at 3. The determination found three different wetland areas on the Farm. AX 11 at 6, 8; AX 11-8a; Tr. at 80. This included Field 100, which was determined to contain 0.2 acres of wetland that met standard wetland criteria and 1.3 acres of converted wetland. AX 11 at 6-8; AX 11-8a; Tr. at 80-81, 233-34. A converted wetland is wetland that has been manipulated so that it no longer meets standard wetland criteria, and its conversion renders the landowner ineligible for USDA benefits[27] until the wetland is restored or mitigated. AX 11 at 7; Tr. at 81. NRCS determined that the 1.3 acres – the land that included and immediately surrounded the unnamed tributary and extended for its entire length across the Farm – was converted in 2014. AX 11 at 6, 8; AX 11-8a; Tr. at 80, 83-85, 206, 244.

Respondent requested a reconsideration of the NRCS wetland determination. On March 28, 2016, the NRCS made a slight technical correction but otherwise upheld its wetland determination as a Final Technical Determination. AX 11 at 3-5. In accordance with USDA regulations, Respondent then appealed the NRCS wetland determination to the Iowa County Committee of the FSA. AX 11 at 11-12; Tr. at 87. Mr. Morrow met with the committee on June 7, 2016, to present his argument against the wetland findings. AX 11 at 11-12. During this meeting, Mr. Morrow contended that he had requested a wetland determination for acreage ruled to be farmed wetland in 2011 after unearthing an older clay tile system, and he told the committee that he received a determination stating that the acreage was not a wetland. AX 11 at 11. He also claimed that he previously asked NRCS if he could fill in the unnamed tributary and "was verbally told ok." AX 11 at 11. However, NRCS had no documentation that it had visited the Farm between 2011 and 2015, and neither NRCS nor FSA had a record of providing a wetland determination for the Farm. AX 11 at 11. NRCS did, however, acknowledge that it had received a request from Mr. Morrow for a wetland determination in 2011. AX 11 at 11.

Aerial photography from June 8, 2016, a little more than a year after the tributary was tiled and filled in, shows that there appears to be water coming to the surface again and beginning to reestablish a channel, according to Mr. Stokely. AX 10 at 22; AX 10-22a; AX 31 at 5, 17-18; Tr. at 354-56. Mr. Hentges saw "either some shadows or perhaps standing water in pocket(s), discontinuous in the area." AX 26 at 11; Tr. at 585.

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rely on NRCS determinations because they are made using the same factors that the Agency looks at and because the NRCS follows the same procedure that the Corps mandates. Tr. at 204-05; *see also Boucher*, 934 F.3d at 534 (observing that NRCS agents rely on the Corps' Wetlands Delineation Manual (1987)).

[27] Such benefits include crop insurance premium subsidies, disaster payments, and the ability to participate in the conservation reserve program, conservation stewardship program, or environmental quality program. Tr. at 92. Such benefits are seen by farms as "very valuable." Tr. at 93.

On June 14, 2016, the Iowa County Committee determined there was no merit to Respondent's appeal and upheld the NRCS wetland determination. AX 11 at 11-12; Tr. at 87. The committee recognized that "there was a lack of documentation and follow through by NRCS employees during a period of personnel changes within the agency" and that Mr. Morrow had "valid frustrations in communication" with NRCS about the separate acreage determined to be farmed wetland. AX 11 at 12. But, significantly, the committee observed "that no wetland determination request was ever filed with NRCS" for the 1.3 acres that included the unnamed tributary.[28] AX 11 at 12; Tr. at 88.

On March 30, 2017, Joseph Shoemaker, a project manager with the Corps, visited the Farm.[29] AX 2; Tr. at 140, 143-44, 160. While there, he observed and took pictures of the location where the unnamed tributary entered the drain tile on the northern edge of the property. AX 2; Tr. at 144-46. The tile drain inserts were fenced off to keep debris from flowing into them. AX 2 at 8; Tr. at 150-51. Looking downstream toward the south, Mr. Shoemaker observed a field of disturbed soil. AX 2 at 3; Tr. at 147, 158. He also observed that the placement of the tile and fill material had altered the original condition of the lower portion of the tributary. Tr. at 155. Looking upstream to the north, the unnamed tributary contained rippling, flowing water, a defined channel, a bed and bank, and terrestrial vegetation growing above the water line that had been destroyed by consistently flowing water. AX 2 at 4; Tr. at 148, 156. Water flow that was inconsistent would likely result in vegetation at the bottom of the channel and a less defined flow-path, he testified. Tr. at 148. When Mr. Shoemaker walked a few paces upstream on Respondent's property, he observed that the channel had similar characteristics as it had in the downstream direction near his original location, but it was even larger and more well defined. AX 2 at 5-7; Tr. at 149-150, 159. Additionally, sediment was moving through the channel and not accumulating, providing further evidence of flowing water. AX 2 at 6-7; Tr. at 149-150. Based on the observations he made during his site visit and information previously compiled by Mr. Schafer, Mr. Shoemaker also determined that the unnamed tributary was a water of the United States. Tr. at 151, 155, 161.

In an April 6, 2017, letter drafted by Mr. Shoemaker, the Corps notified Mr. Morrow that the unnamed tributary was a water of the United States under the Clean Water Act and that Respondent had violated the Act by discharging fill material into the tributary without a permit from the Corps. AX 17; Tr. at 151-52. Mr. Shoemaker then referred the matter to the Agency. AX 17; Tr. at 180. In a written response dated April 26, 2017, Mr. Morrow asserted that he had

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[28] Mr. Morrow testified that he first received the NRCS Wetland Determination in 2016 but continued to farm through the wetland that year. AX 11 at 6; Tr. at 488. In 2017, a local NRCS employee told Mr. Morrow he should not be farming the 1.3 acres of wetland surrounding the unnamed tributary, so he said he allowed the NRCS to flag it off and has not farmed it since. Tr. at 488.

[29] Mr. Shoemaker took over responsibility for Respondent's case after Marlyn Schafer retired at the end of 2015. Tr. at 13, 55-56, 142.

intended only to improve the Farm and that he had worked with NRCS on his plans and never been informed of any permit requirements. AX 8; Tr. at 153.

Dr. Garcia received Respondent's case when Mr. Shoemaker transferred it to the Agency. In December 2017, she consulted with Mr. Stokely, the Agency's aerial imagery expert and Section 404 enforcement coordinator. AX 13; Tr. at 182-83, 293-94. After reviewing images and information that Dr. Garcia sent, he too agreed that the unnamed tributary appeared to be a jurisdictional stream. AX 13; Tr. at 294-95.

On March 20, 2018, in the most recently obtained aerial photograph of the Farm relative to this proceeding, the northwest reach of the unnamed tributary is visible. AX 29; AX 29-2a; Tr. at 357-58. Moving toward the southeast, the tributary becomes obscured as it reaches the point where the tiling and filling occurred. AX 29; AX 29-2a; Tr. at 358. However, the lower section of the tributary appears to be reestablishing itself. AX 29 at 2; AX 29-2a; AX 31 at 5, 19; Tr. at 358-59. This was not surprising to Mr. Stokely, who testified that because the unnamed tributary has been around since the 1930s, even after Respondent attempted to modify it, "it has enough flow that it wants to keep on . . . coming out of its pipe maybe and reestablishing a flow on the surface." Tr. at 359.

On March 30, 2018, Respondent's expert witness, Mr. Hentges, visited the Farm on his way to a family gathering. RX 1 at 3; Tr. at 562, 652. He did not take any photos during his visit, which lasted about 90 minutes, or make notes of his observations. Tr. at 652-53. However, he did observe some re-channelization of water in the lower portion of the tributary. Tr. at 664. Mr. Hentges did not review any similarly-situated tributaries that might serve as a reference site. Tr. at 639.

On May 15, 2018, Dr. Garcia, Mr. Shoemaker, and others visited the Farm and surveyed the entire length of the unnamed tributary, from the neighboring property on the north side down to the tributary's connection with Deep Creek. Tr. at 153-55, 207-08. The conditions that Dr. Garcia observed were very similar to how it appeared in aerial photography on September 20, 2015. AX 10 at 21; Tr. at 208. The upper part of the tributary was also similar in condition to its appearance during Mr. Shoemaker's April 2017 visit and had visually observable flowing water. Tr. at 155-56, 160-61, 162-63, 227. Once the water entered the tile, it was lost from view until it flowed out into Deep Creek. Tr. at 163-64.

During the visit, the group walked the upstream portion of the tributary on neighboring property to the north of the Farm, and Dr. Garcia took several photographs. AX 1 at 5-8, 9; Tr. at 209-10. Near the northern edge of the Farm where the tile intakes had been installed, water was flowing into them from the undisturbed upstream tributary as it crossed over from the neighboring property.[30] AX 1 at 5, 6, 9, 13, 24, 28; Tr. at 210-11, 216, 218-19. The tile intakes

[30] Dr. Garcia described the flowing water as "baseflow," indicating that it had not rained during the visit and that there was capacity for a heavier flow. Tr. at 211-12.

were surrounded by hog wire fencing to prevent debris from entering, indicating that during high rainfall events there is enough water flowing through to carry larger pieces of debris. AX 1 at 6, 9, 11, 13, 28, 32; Tr. at 211-12, 218-19, 222. One of the intakes contained iron deposits, demonstrating that the tributary is "groundwater influenced." AX 1 at 6, 10, 31; Tr. at 221-22. Dr. Garcia testified that groundwater maintained the baseflow of the tributary and rainfall events increased its flow. Tr. at 247-48.

Moving upstream from the tile intakes, Dr. Garcia observed a clearly visible bed and bank on the tributary with water flowing strongly enough that there was little to no terrestrial vegetation on the bed of the tributary. AX 1 at 5, 6, 9, 15, 19, 24; Tr. at 213, 214-15, 216. The width of the stream varied throughout. AX 1 at 5, 9, 16; Tr. at 213-14. There was evidence that higher flow events had carried through vegetation and other materials that would eventually be broken down into nutrients such as carbon that downstream organisms would rely on. AX 1 at 5, 6, 9, 19, 23; Tr. at 214, 215-16. Dr. Garcia documented an ephemeral tributary that drained into the unnamed tributary and that contributed additional waterflow during rainfall events. AX 1 at 6, 9, 26; Tr. at 216-17. Additionally, she documented hydrophytic vegetation typically found within wetlands, as well as semi-aquatic wildlife. AX 1 at 6, 10, 29, 30; AX 1-30a; Tr. at 219, 220-21. Dr. Garcia testified that the upstream presence of wetland vegetation and wildlife was indicative of vegetation and wildlife that would be found in the downstream portion of the unnamed tributary before it was tiled and filled in. Tr. at 219, 220-21.

Moving downstream from the tile intakes near the northern border of the Farm, Dr. Garcia traversed the area where the tributary had been prior to being tiled and filled. AX 1 at 7, 12, 35; Tr. at 222-23. Even though the tributary was not visible, Dr. Garcia observed a willow species that is typically water-dependent, indicating that there were still hydric soils present and enough surface and groundwater to sustain such vegetation.[31] AX 1 at 7, 12, 35; Tr. at 223. She also observed water flowing through the tile that had entered the system through the upstream intakes. AX 1 at 7, 12, 38; AX 19; Tr. at 223-24. She did not observe any water on the surface of the ground, although she had seen such surface water in photographs from earlier in the year. Tr. at 248. In addition to run-off, the surface water likely came from water from the upper portion of the tributary that passed by the tile intakes during higher flow events, she said. Tr. at 248. Further downstream, Dr. Garcia observed water flowing out of the tile outlets directly into Deep Creek at the same general location where the unnamed tributary had discharged into Deep Creek. AX 1 at 8, 49, 53; AX 19; Tr. at 225-26, 227.

[31] Mr. Hentges testified that he reviewed a web soil survey document from the USDA and concluded further investigation was needed to determine if the soils were in fact hydric in a general sense or whether there were merely small inclusions that were hydric. AX 27; Tr. at 597-600, 620. Still, he agreed that the immediate area around the unnamed tributary has or is developing wetland characteristics, although he was unwilling to say that it was evidence that wetland existed before the tributary was tiled and filled. Tr. at 622-23. His expert report does not generally discuss the issue. RX 3; Tr. at 624.

On August 15, 2018, the Agency requested additional information from Respondent about activities performed within the unnamed tributary prior to July 2015. AX 30 at 1-3. In response, Mr. Morrow wrote that he had engaged in "routine drainage system maintenance . . . with the knowledge of the local NRCS office" and conducted "normal crop farming operations such as tillage, planting, and harvesting." AX 30 at 6. He also provided a map of the tiling system he installed that shows a single tile line extending from the northern border of his property southeast through the tributary to Deep Creek. AX 30 at 6-7; AX 30-7a; Tr. at 238-39. The map does not show any other tile lines entering the one installed in the unnamed tributary. AX 30 at 6-7; AX 30-7a; Tr. at 245-46.

As of the date of the hearing, the converted wetland status for the 1.3 acres that includes the unnamed tributary was still in effect, and Mr. Morrow said that the acreage is "flagged out and not being farmed."[32] Tr. at 89, 488. He testified that he undertook the 2015 work to improve his land both economically and environmentally. Tr. at 499, 534-35. As a "steward of the ground," he tries to leave his Farm in better shape than when he got it, he said, testifying that the tiling collects water that would otherwise erode the topsoil and wash into the river, and the basins catch debris and silt that can be returned to the locations it came from. Tr. at 499-500. Before he made such improvements, Mr. Morrow testified, the earth and silt would wash into Deep Creek and be carried downstream. Tr. at 500. Thus, tiling through the unnamed tributary was not so much about adding it as acreage that could be farmed, Mr. Morrow said, but about being able to catch the soil, corn stalks, and bean stalks in big rains before they permanently wash away. Tr. at 545. Mr. Morrow admitted that he did not consult any experts on stream morphology or stream ecology before filling in the tributary. Tr. at 518. Mr. Hentges agreed that Mr. Morrow's tiling was beneficial to his stated purpose of preventing soil from washing away, and he suggested that agriculture officials generally recommended farmers find ways to keep field runoff from entering the waterways. Tr. at 654-56, 665. Mr. Hentges testified that there were options other than tiling to accomplish this, but the other options were not necessarily better. Tr. at 666-67.

As for his own observation of the tributary, Mr. Morrow testified that he had seen it dry "quite often." Tr. at 531. He also said that he has observed times when water flowed through the lower portion of the unnamed tributary and times when water was not flowing, although he did not keep track of these occasions. Tr. at 496-97. Likewise, Mr. Morrow had observed water flowing in the upper portion of the unnamed tributary as well, and he acknowledged that it had a bank. Tr. at 498-99.

[32] Dr. Garcia did not observe any flags when she inspected the farm in May 2018. Tr. at 244.

g. Witness conclusions about the nature of the unnamed tributary

i. Peter Stokely

Mr. Stokely reviewed more than 35 aerial photographs of the Farm taken between the 1930s and 2018 and spanning all four seasons of the year.[33] AX 31 at 4, 23-26, app'x B; Tr. at 312-13, 391. He was able to observe the unnamed tributary in every photograph that he reviewed. AX 31 at 4; Tr. at 312. He observed the stream channel of the unnamed tributary directly in 18 of the photographs.[34] AX 31 at 4, 23-26; Tr. at 313. Of those 18 photographs, Mr. Stokely observed water in some part of the tributary on 10 occasions during the months of March, April, June, and July. AX 31 at 4, 23-26; Tr. at 313. For three other dates in the months of April and May when shadow, resolution, or vegetation obscured the tributary, Mr. Stokely believed that water was in the channel based on observations of nearby high soil moisture, surface ponding, or the presence of water in nearby tributaries. AX 31 at 4.

After viewing the historical images of the unnamed tributary, Mr. Stokely concluded that the unnamed tributary is a relatively permanent water feature with continuous seasonal flow during spring months and intermittent flow during the rest of the year. AX 31 at 5-6; Tr. at 368. As a seasonal stream, there would be times when no water is present in the channel. Tr. at 396. The tributary is hydrologically connected and contributes flow to the English and Iowa rivers. AX 31 at 6. Mr. Stokely's opinion was reinforced by his observation of the tributary appearing to reform in 2016 and 2018. AX 31 at 5.

In addition to his personal experience with similarly sized tributaries, Mr. Stokely based his conclusion on his review of all of the aerial photographs, the topography and geomorphic characteristics of the tributary, the watershed size, the amount of precipitation, and the way the tributary was mapped by the USGS. AX 31 at 5; Tr. at 368-69. The water in the tributary is sourced by a combination of both groundwater above it in the watershed and drainage from surrounding fields. Tr. at 418-19. Rainfall and the size of the watershed support Mr. Stokely's conclusion that the tributary is relatively permanent feature.[35] Tr. at 301-02.

Mr. Stokely did not visit the Farm in person because it was not necessary to do so to interpret what he saw in the aerial photographs and maps or to write his report. Tr. at 302, 386-

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[33] Mr. Stokely did not recreate all 35 photographs that he reviewed as figures in his expert report. Tr. at 391-92. However, he attached to his report a list of every photograph he obtained. AX 31 at 7-9; Tr. at 430.

[34] Resolution or canopy cover precluded observation of the stream channel in 17 photographs. AX 31 at 4.

[35] Mr. Hentges did not specifically dispute these determinations but characterized the watershed size as "a small area." Tr. at 574.

88. He did review ground photographs of the Farm to obtain additional information about it, and nothing he saw caused him to question his opinions or conclusions. Tr. at 430-31. He conceded, however, that site visits serve a purpose and can have value in a case like this. Tr. at 395.

ii. Delia Garcia

Dr. Garcia conducted her own analysis and independently concluded that the unnamed tributary and surrounding wetland were within the Clean Water Act's jurisdiction. Tr. at 180-81. In addition to her site visit and reviewing the file from the Corps, she examined the tributary using Arc GIS software, Google Earth, aerial images, Pictometry, and satellite photos from Digital Globe. Tr. at 181-82.

Dr. Garcia concluded that the unnamed tributary was a relatively permanent stream that had existed since at least the 1930s. Tr. at 201-02, 252-53. The upper portion had a meandering geometry created by the strength of the water flow. The lower portion had been graded over time, yet the flow of water was sufficient "to cut the channel again and again." Tr. at 202, 252-53. Indeed, "if you look at the five years prior to the tributary being tiled and drained, you can very much, clearly see a bed and banks," Dr. Garcia testified. Tr. at 253. Dr. Garcia further determined the tributary was an intermittent, i.e., seasonal, rather than ephemeral stream because it has a well-defined bed and bank that could be clearly seen in multiple aerial photos. Tr. at 202-03. Additionally, the map of the unnamed tributary's watershed shows that it has "enough flow coming in from 100 acres that would support intermittent, relatively permanent waters," according to Dr. Garcia. AX 28; AX 28-1a; Tr. at 233-34. Ultimately, Dr. Garcia concluded, the unnamed tributary and its within-stream wetlands "are jurisdictional waters of the United States." Tr. at 235.

Based on her observations of the unnamed tributary and analysis of associated data, Dr. Garcia concluded that the lower portion that was tiled and filled in would have exhibited conditions similar to what she observed in the unaltered upper portion of the tributary, including the presence of wetlands. Tr. at 226-27, 228. Dr. Garcia determined that the tributary had "all the characteristics of an intermittent tributary that would have relatively permanent flow, where it would flow . . . at least seasonally during the year." Tr. at 227. The unnamed tributary's physical connection to Deep Creek that existed before the fill work remained, albeit through tiles. Tr. at 228. Dr. Garcia further agreed that even though Respondent "had tried grading it over several years . . . the tributary kept cutting back into the channel," indicating "that there was enough flow in the tributary that it wasn't able to sustain a grass waterway." Tr. at 251.

iii. Marlyn Schafer

Based on the observations he made during his site visit, and in conjunction with the various maps and aerial photography he reviewed, Mr. Schafer concluded that the unnamed tributary had previously existed as a defined channel from the north end of the Farm all the way down to Deep Creek and was a jurisdictional stream. Tr. at 46-47. In his testimony, Mr. Schafer

noted that the historical aerial photography showed that the unnamed tributary had been physically altered into a grass waterway in the past, so that at times a channel was not present, but "the natural nature of the tributary is to have a defined channel from the upland area down to Deep Creek." Tr. at 47, 50, 51-52, 65, 68. Mr. Schafer testified that in his review of the historical photographs, the tributary specifically appeared to have been altered at different times by construction equipment during the last century. Tr. at 68. The changes were such that they could not have occurred naturally but "would absolutely . . . have had to be man-made." Tr. at 69. For example, from a photograph of the Farm taken in the 1960s, Mr. Schafer determined that "a channel/swale was present in the bottomland which appears to have been mechanically excavated and graded."[36] AX 18 at 1; Tr. at 69-70. But entering into the 2000s, Mr. Schafer said, the unnamed tributary reverted back to a tree-lined channel that was continuous to Deep Creek. Tr. at 68. That is, despite prior alterations and previous instances where trees had been cleared and the tributary shaped into a grass waterway before the 2015 work, "it always returned to a defined channel . . . which is the condition that it was in the more recent years," with "direct connectivity" to Deep Creek before Respondent modified it. AX 10 at 18; Tr. at 47-48, 51, 65, 67-69; *see also* Tr. at 54-55 (Mr. Schafer testifying that following past alterations, over time "[t]hat section had eventually reverted back to a defined channel. Each year it showed a deeper . . . more . . . visible channel."). Further, he testified, converting the unnamed tributary into a grass waterway does not negate the CWA jurisdiction that would have existed at the time the tributary was modified. Tr. at 48-49.

iv. Gerald Hentges

Mr. Hentges agreed that Respondent tiled and filled in the unnamed tributary. Tr. at 621-22. But he concluded from the photographs he reviewed before and at hearing that a bed and bank could not be identified in the lower portion of the drainageway, so the tributary could not be a water of the United States. RX 1 at 1; Tr. at 583.[37] "[I]t's a standard issue with the review of all aerial photography. It just simply doesn't always indicate the location of wetlands or other waters in the U.S. I looked at a lot of it and you really need the field data, the photographs of the direct condition, and the measurements, the documentation of a bed and a bank and a high-water

[36] Dr. Garcia testified that the resolution of the image of the farm from the 1960s made it difficult to determine whether the unnamed tributary existed then as a channel or a swale. Tr. at 242-43. However, she said, any conversion of the tributary to a grass-bottomed waterway or swale would have been performed mechanically with heavy equipment, and such a conversion does not remove the tributary's jurisdiction. Tr. at 251, 253. And even a swale or grassed waterway would be jurisdictional if the water flow continued to connect the upstream portion of the tributary to Deep Creek, she added. Tr. at 252. In any event, Dr. Garcia saw no evidence that the unnamed tributary had been consistently maintained as a grass waterway. "[F]or the most part, it looked like a channel to me," she said. Tr. at 269.

[37] Mr. Hentges's report does not contain any analysis of any photographs taken after 2009. RX 1; Tr. at 648. The first time he discussed post-2009 photographs was at the hearing. Tr. at 648.

mark." Tr. at 583, 594.

Although the tiling and filling made it impossible to assess much of the tributary on the ground, Mr. Hentges argued that the next best assessment would have been to review a reference site – a similarly situated tributary – and that was not done by either party.[38] Tr. at 594-97. But ultimately, he said, "it's the fluvial mechanics of the situation that cause erosional feature in the higher elevation," while the lower portion of the tributary "is simply vegetated drainageway," and that high runoff volume could cut a channel there. Tr. at 593. Over time, he argued, the channel is filled with sediment and taken away by nature. Tr. at 594. "So, whatever's created through certain runoff events or by channeling overtime has always been taken away, filled in, and the flow path changed," Mr. Hentges testified, so there has been only a vegetative drainageway and no defined channel. Tr. at 594, 633. In his opinion, the tributary only runs in response to rainfall. Tr. at 658. It would be a rare occasion, he said, for the channel to carry groundwater. Tr. at 659.

Because there is no bed and bank or ordinary high-water mark in the lower portion of the tributary, Mr. Hentges argued, the tributary cannot be a water of the United States. RX 1 at 1; Tr. at 637. Mr. Hentges said that his position applies only to the lower portion of the tributary, and he does not dispute that the upper portion has a defined bed and bank and ordinary high-water mark. Tr. at 632-33. And he agreed that before the tributary was tiled and filled, nutrients and sediments would flow down it and into Deep Creek. Tr. at 653. Mr. Hentges also conceded that he has no legal authority to support his opinion that the tributary is not jurisdictional simply because he is unable to identify a bed and bank in the lower portion. Tr. at 637. "I pronounce my opinion on whether an aquatic feature is a water of the U.S. all the time . . . . And I tell my clients it doesn't mean anything, what I think." Tr. at 637-38.

Mr. Hentges further acknowledged that he does not have any training in reviewing aerial photography and that he has not before been asked to interpret historical aerial imagery in a litigation matter involving Section 404 of the CWA. Tr. at 583-84, 607-610. Nor was he expecting to interpret aerial photographs when he first became involved in this case. Tr. at 611. Indeed, no aerial photographs were part of his three-page expert report. RX 1; Tr. at 614-15. Mr. Hentges also does not regularly use GIS software, and he primarily viewed photographs on the Iowa State University website. Tr. at 612-13. But he testified that over the course of his career, he has seen "hundreds of reports" that include aerial photography that suggest certain conditions that were not borne out by the field data and ground photographs, and he has previously testified about aerial photography in legal proceedings. Tr. at 583-84, 609-610.

[38] Mr. Hentges disputes that the upstream portion of the tributary can serve as a reference point for the downstream portion because "[t]he two separate portions . . . occupy different landforms." RX 1 at 2.

h. The hog barn

One point of dispute in this proceeding has been Respondent's motivation for tiling the Farm. Shortly after the unnamed tributary was tiled and filled, Respondent sold a portion of the Farm to MCM Pork, which constructed a hog confinement facility ("hog barn") on the land. The Agency alleges that Respondent's filling and tiling of the tributary were prompted at least in part by Mr. Morrow's desire to enable this real estate transaction. Key to this allegation are setback requirements imposed by the Iowa Department of Natural Resources ("Iowa DNR"), which requires a minimum distance of 500 feet between facilities like the hog barn and certain streams covered by state law.[39] Tr. at 32, 104-05, 111-12.

According to Mr. Morrow, he first planned to sell a portion of his land for the hog barn at the end of May 2015, a month *after* he had tiled the tributary. Tr. at 489, 493, 514. Mr. Morrow testified that he had not planned to sell any land at the time he did the work in April. But at the end of May, he was approached by an intermediary for a man who was interested in buying a portion of the Farm for the building. Tr. at 490, 514. A few days later, either at the end of May or the beginning of June, Mr. Morrow met with the man and reached a verbal agreement to sell the land. Tr. at 490-91.

By June 10, 2015, a map of the construction site had been created by The Pinnacle Group, LLC ("Pinnacle"), a consulting firm for construction design and manure management planning for animal feed operations. AX 14 at 5; Tr. at 106-07. The map states that the distance to water is 566 feet. AX 14 at 5; Tr. at 115-16.

Respondent closed on the sale of land to MCM Pork around the end of June. Tr. at 490-91. On July 14, 2015, Pinnacle submitted the site map along with a manure management plan and a construction design statement to the Iowa DNR, where it was reviewed by Bert Noll, an environmental specialist in the DNR's Animal Feeding Operations Program. AX 14 at 5; Tr. at 103-07, 110-11, 115.[40] Tr. at 136. Mr. Noll reviewed the materials and determined that all of

[39] Based on the number of animals that the hog barn was designed to contain – around 2,400 head of hog – Iowa regulates the facility as a medium-sized confinement feed lot for "finishing swine." Tr. at 132-34. Finishing swine include hogs that are past the nursery phase up until the point they are ready to be slaughtered. The animals typically range in size between 50 and 300 pounds. Tr. at 133.

[40] Mr. Noll believed that Pinnacle was submitting the map and site materials on behalf of Respondent, although he was unclear who owned the site at the time of the submission. Tr. at 105-06, 110-11, 124-25. At the time of the submission, Mr. Noll was not aware of MCM Pork's involvement. AX 14 at 5; Tr. at 125, 127-28. The site map was required, in part, to evidence that the setback requirements were being met. AX 14 at 5; Tr. at 107, 115-16. A manure management plan demonstrates whether a feed lot has sufficient acreage on which to apply the manure it produces. Tr. at 134-35. The goal is to prevent the manure from entering a body of

the requirements had been satisfied. AX 14 at 5; Tr. at 107, 115-16. He then issued a construction approval letter. Tr. at 116.

At hearing, the Agency presented an aerial photograph of the hog barn taken after it was constructed. *See* AX 14 at 3; Tr. at 108, 117-18. The building appeared to be constructed in a slightly different location and orientation than what Pinnacle presented to the Iowa DNR. AX 14 at 3; Tr. at 108, 117-18, 121. That is, Pinnacle's map shows the proposed building site located further to the northeast than where the barn was actually built. *See, e.g.*, AX 10. Distances computed by the Agency based on the hog barn's actual post-construction footprint show the building is as close as 376 feet to the tributary. *See* AX 10 at 21-22; AX 14 at 3; Tr. at 108, 118, 121, 126-27. The DNR had no official record of the alteration. Tr. at 120-23.

Mr. Morrow said that he sold the land to MCM Pork for his own economic benefit. Tr. at 494. Respondent received $12,000 from the sale, and Mr. Morrow's construction company earned $28,000 for cleaning up the building site. Tr. at 517-18. Respondent also has a 10-year contract to receive manure that the hog barn produces. The manure is injected into the ground on the Farm as an organic fertilizer. Tr. at 135, 494, 518, 535, 541. Mr. Morrow estimated that the free manure saves him $10,000 to $12,000 per year. Tr. at 540. Although Respondent is not required by any agreement with MCM Pork to ensure that the setback rule is not violated, Mr. Morrow believes that he would face hardship if the hog barn could not operate because he would no longer receive free manure. Tr. at 538-540, 546-47

When Respondent's neighbor first notified NRCS and the Corps on July 20, 2015, of the changes to Respondent's land, the neighbor alleged that the work was done to enable its sale and development for the hog barn. AX 5 at 1-2; Tr. at 492. Mr. Morrow testified that he did not know how his neighbor knew about the hog building. Tr. at 492.

As noted above, Mr. Schafer, the Corps project manager, spoke to Mr. Morrow on July 27, 2015. He recorded in his notes that Mr. Morrow told him in the phone call that Respondent "sold the area of the old farmstead to MCM, LLC, who will build and operate a hog confinement unit. [Mr. Morrow] installed large tiles and filled the channel because it was within the limits set by [Iowa's Department of Natural Resources] for distance of the confinement unit to any channel." AX 9 at 1; Tr. at 31-32, 492-93. Mr. Schafer testified that his understanding from the conversation was that Mr. Morrow filled in the unnamed tributary because of the setback

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water. According to Mr. Noll, manure that is injected at least four inches into the ground generally does not wash into streams and wetlands, while manure that is "surface supplied" is more likely to, particularly if it is traveling across shorter distances. Tr. at 137-38. A construction design statement is used to describe building materials and design specifications, including the pit in which manure will be stored before it is removed to spread on fields for fertilization. Tr. at 135. Based on its size, the hog barn required a construction design statement and manure management plan but did not require a permit. Tr. at 134-35.

regulations. Tr. at 32-33. Further, in the October 7, 2015 letter to Mr. Morrow documenting the Corps's investigation, Mr. Schafer wrote that during his site visit, Mr. Morrow had "explained that [he] had removed the wooded cover and closed the channel from near Deep Creek to the north property line. The reason for closing the channel is to meet State of Iowa requirements for distance between a planned swine confinement facility and open water." AX 18 at 1. At the hearing, Mr. Morrow in his testimony agreed that he and Mr. Schafer discussed Iowa's 500-foot distance requirement for a hog building from a water source. But he maintained that he "did not solely or particularly clear that area to gain 500 feet." Tr. at 493.

Additionally, as discussed above, Mr. Morrow appealed the NRCS wetland determination to the Iowa County Committee of the FSA in March 2016. *See* AX 11. A June 2016 letter from the committee to Respondent summarizes Mr. Morrow's meeting with it that month. AX 11 at 11-12. In describing the information that Mr. Morrow provided to the committee, the letter states that he said that before tiling and filling in the unnamed tributary, he had asked NRCS if the tributary "could be closed as the [Iowa Department of Natural Resources] required it eliminated in order to put in the hog building and he was verbally told ok." AX 11 at 11; Tr. at 515. At the hearing in this proceeding, Mr. Morrow agreed that "[b]y the way the letter reads," he had told the Iowa County Committee of the FSA that the Iowa setback regulation was at least a partial reason for his decision to fill in the unnamed tributary. Tr. at 515-16. But in the hearing for this proceeding, he maintained that "I would have closed that gully even – that there wasn't a hog building involved." Tr. at 516.

IV. JURISDICTION

An essential question that must first be answered is whether the Agency has jurisdiction over the unnamed tributary under the Clean Water Act. Respondent's primary argument in this proceeding is that it does not, because the unnamed tributary and associated wetlands are not waters of the United States. *See* RB at 7-14; RRB at 3-9. As discussed above, *Rapanos* offers two tests to determine jurisdiction – the Plurality test and the Kennedy test – either of which may apply. *See Stevenson*, 16 E.A.D. at 165, 2013 WL 5793370, at *11; *Smith Farm*, 15 E.A.D. 242, 2011 WL 946993, at *20; *Baily*, 571 F.3d at 799.

For the reasons outlined below, I conclude that the Agency has jurisdiction under the Plurality's test.[41] Further, I find that jurisdiction exists whether the unnamed tributary is treated as a stream or a wetland.

[41] Because jurisdiction exists under the Plurality's test, I need not analyze jurisdiction under Justice Kennedy's test.

a. Jurisdiction under the Plurality test

i. Tributary jurisdiction

The *Rapanos* plurality concluded that "relatively permanent . . . bodies of water 'forming geographic features' that are described in ordinary parlance as 'streams[,]'" including seasonal waters that "contain continuous flow during some months of the year but no flow during dry months[,]" are waters of the United States. *Rapanos*, 547 U.S. at 732-33 & n.5, 739. The Agency argues that the unnamed tributary meets these requirements because at the time it was filled in, the tributary had "relatively permanent" flow that formed a "geographic feature." AB at 14-20. I agree.

First, the aerial photographs show water in the tributary during several spring months over a span of years. Both Mr. Stokely and Dr. Garcia testified to the presence of water in the tributary in photographs dated April 2009, March 2010, July 2010, and March 2015. Mr. Stokely further buttressed his testimony with his expert report, which identifies water in the tributary on 10 occasions during the months of March, April, June, and July over several years, including during periods of lower rainfall. Mr. Stokely and Dr. Garcia also described consistent geographic features of the unnamed tributary appearing in images over the years that are consistent with a relatively permanent body of water, including its defined bed and banks, channelized nature, expression in the topography of the land, and connection to Deep Creek. In the context of a nearly 90-year historical photographic record of the tributary, especially compelling are the four images taken from multiple angles in March 2015, shortly before Respondent's modifications. In those images, the bed and bank of the lower half of the tributary are especially discernable, as is the presence of either ice or water in the channel.

Second, on-site observations of the upper reach of the tributary support the photographic evidence of its relatively permanent nature before alteration. Water was seen flowing in the upper part of the tributary and into Respondent's tile system in July 2015, March 2017, and May 2018. During the 2015 and 2018 site visits, water was also documented flowing out of the tile system and into Deep Creek. Also during these visits, Agency and Corps personnel observed a defined bed and bank and ordinary high-water mark on the upper portion of the unnamed tributary, suggesting that the lower portion had similar characteristics before it was filled in. Further, Dr. Garcia observed iron deposits around the upper tile intakes and an oily sheen in the water, indicating that the tributary is "groundwater influenced" and not just responsive to rainfall. She also observed a lower-order stream that was another source of water flowing into the unnamed tributary.

Third, after evaluating the evidence, Dr. Garcia, Mr. Stokely, and Mr. Schafer all concluded that the unnamed tributary was a relatively permanent water feature with at least intermittent flow. I find their opinions particularly persuasive given their extensive education and experience evaluating streams and watersheds. Additionally, the USGS reached a similar conclusion, as it has characterized the tributary as an intermittent stream since 1968.

Respondent argues that the unnamed tributary has no jurisdictional connection to Deep Creek because the lower portion did not have the requisite geographic features or significant nexus. RB at 7-13. This argument relies almost entirely on Mr. Hentges's opinion that the lower portion of the tributary was merely a flat grassed drainageway that was never channelized before it was tiled. Mr. Hentges also disputes the frequency with which water appears in photographs of the tributary. But Mr. Hentges's opinion on this point is outweighed by the evidence in the record and the opinions of Mr. Stokely and Dr. Garcia.

First, when it comes to the interpretation of aerial photographs of the unnamed tributary, I find Mr. Stokely to be a more credible witness than Mr. Hentges given Mr. Stokely's extensive experience, knowledge, and training in that specific subject matter. To the extent that Mr. Hentges does possess expertise in aerial photography interpretation, it is no more than Dr. Garcia, who also has a substantial working knowledge of aerial photography in this context even though it is not her specialty. Therefore, when Mr. Hentges' interpretation of the aerial photographs conflicts with the interpretations of Mr. Stokely and Dr. Garcia, I favor and give greater weight to the opinions of the two Agency witnesses. And their interpretation of the evidence confirms that the unnamed tributary had a defined bed and bank and channel through which water flows for at least four months out of the year. This is true despite Respondent's contention that the Agency's aerial photography interpretations cannot be relied on because the Agency did not confirm its analysis by inspecting the unnamed tributary in person before Respondent altered it or by inspecting similarly situated tributaries. *See* RB at 10-13 (citing Tr. at 594-96, 639); RRB at 5-7. While I agree that such an analysis might have yielded further evidence relevant to this proceeding, the lack of such evidence does not diminish the Agency's interpretation of the aerial photography in a material way. It is also notable that the Agency did inspect the upper portion of the tributary after the lower portion was altered, providing sufficient "on the ground" information that supports the Agency's conclusions about the tributary.

Further, even to the relatively untrained eye of this Tribunal, the totality of the aerial photographs in the record tell a clear story: the unnamed tributary has crossed Respondent's property to connect to Deep Creek for nearly a century. Over time, the lower portion of the tributary appears to have been modified by man in ways that made it more linear than the upper portion. This occurred both before and after Respondent owned the Farm. Agency witnesses testified that the tributary's geography suggested man-made modifications in previous decades, and Mr. Morrow admitted to plowing through the tributary and cropping over it, eliminating the channel for periods of time. But despite these interventions, the evidence shows that the tributary has, over time, continually sought to revert to its natural state. The natural channeling of the lower portion of the tributary is especially evident in the photographs taken in March 2015, shortly before Respondent began the tiling work. Each of those six images shows a distinct, curving channel that connects to Deep Creek. Though the lower portion of the tributary is not always as deeply incised as the upper portion of the tributary, the angled Pictometry photographs reveal what appear to be a defined bed and bank, as well as the presence of water. And Mr. Hentges admitted that the lower portion of the unnamed tributary had a physical connection to Deep Creek. Ultimately, I cannot give credence to his claim that there is no

channel in the lower portion of the tributary, as this defies even what this Tribunal can plainly observe.

But even if the lower part of the tributary was at times just a grass-bottomed waterway, the fact that water still flowed from the upper portion of the tributary and into Deep Creek maintains CWA jurisdiction. *See* Tr. at 48-49, 251-53; *see also J. Phillip Adams*, EPA Docket No. CWA-10-2004-0156, 2006 WL 3406321, at *14 (ALJ, Oct. 18, 2006) (respondent altered creek channel so that it dissipated into a hayfield, but jurisdiction was maintained by continued sheet flow to downstream waterway). Courts have also ruled that man-made modifications to a stream do not sever jurisdiction. *See United States v. Moses*, 496 F.3d 984, 988-89 (9th Cir. 2007) ("It is doubtful that a mere man-made diversion would have turned what was part of the waters of the United States into something else and, thus, eliminated it from national concern."). And although Respondent speculates that "natural forces" may have altered the tributary in some way as to sever jurisdiction, that claim is not supported by the evidence, particularly in the face of clearly man-made alterations. *See* RB at 7 n.2; RRB at 3. Even if the lower portion of the tributary was changed over the decades in ways that eliminated its channel, the evidence shows that the flow of water continued, and neither the hydrological connection to Deep Creek nor jurisdiction were eliminated.[42]

Consequently, I find that the unnamed tributary satisfies the *Rapanos* Plurality test for jurisdiction: the evidence establishes that the tributary is a "relatively permanent" water that "contain[s] continuous flow during some months of the year," and it is physically connected to Deep Creek.

ii. Wetlands jurisdiction

With respect to wetlands adjacent to relatively permanent streams, the Plurality "held that a wetland is covered by the [CWA] if: (1) the adjacent channel contains a 'water of the United States' (i.e., a relatively permanent body of water); and (2) the wetland has a continuous surface connection with that water." *Stevenson*, 16 E.A.D. at 162, 2013 WL 5793370, at *10 (citing *Rapanos*, 547 U.S. at 742). In this case, the Agency argues that wetlands adjacent to the unnamed tributary had a continuous surface connection, fulfilling the Plurality test. AB at 20-22. Again, the Agency is correct.

As set forth in its Highly Erodible Land and Wetland Conservation Determination, the NRCS concluded that 1.3 acres of converted wetlands surround and include the portion of the unnamed tributary that Respondent filled and tiled. Although the NRCS makes wetland determinations under the Food Security Act and not the Clean Water Act, Agency witnesses

[42] Respondent also suggests that its manipulation of the tributary was done for maintenance purposes and not to sever jurisdiction. RRB at 3-4. But Respondent's intent in tiling the tributary is not relevant to the question of liability, as the CWA is a strict liability statute. *See Bailey*, 571 F.3d at 805.

testified that the NRCS looks at the same characteristics that the Corps or the Agency would, such as the type of soil, vegetation, and indicators of hydrology. Tr. at 20, 74-75, 91, 171; *see also* 7 C.F.R. § 12.30(c)(7) (wetland identification process involves determining "if the area of interest supports a prevalence of hydrophytic vegetation, a predominance of hydric soils, and wetland hydrology under normal circumstances."). Additionally, both the Agency and the Corps commonly rely on NRCS wetland determinations. *See* Tr. at 21, 204-05. Mr. Carrington testified that there was no separation between the wetland and the tributary itself. Moreover, when both Mr. Schafer and Dr. Garcia visited the site in 2015 and 2018, they personally observed wetland characteristics. Mr. Schafer testified that he found heavily saturated ground, hydrophytic vegetation, and fringe wetlands, while Dr. Garcia testified that she observed hydrophytic vegetation present in wetlands that indicate the presence of hydric soils. Both asserted that the conditions they observed in the unaltered upper portion of the tributary would have been mirrored downstream. Beyond her site visit, Dr. Garcia reviewed aerial images, soil maps, and the NRCS wetland determination, and she ultimately concluded that there existed within-stream wetlands before Respondent filled them in. Because the unnamed tributary, as discussed above, is a water of the United States, so too are the 1.3 acres of converted wetlands, which surround and include the tributary and therefore share a continuous surface connection with it.

Respondent argues there is evidence that the land surrounding and including the unnamed tributary was not a wetland. Specifically, Respondent points to Mr. Hentges's testimony interpreting AX 27, a NRCS soil survey of the Farm after Respondent filled in the tributary. RB at 13-14. From his review of the survey, Mr. Hentges concluded that further investigation was needed to determine if the soils were hydric in a general sense or whether there were merely small inclusions that were hydric.

Here, however, the Agency's evidence outweighs Mr. Hentges's opinion. The NRCS completed a valid wetland determination in accordance with the policies and procedures contained in the National Food Security Act Manual. *See* AX 11 at 3, 6-8. That determination was upheld on appeal within NRCS, and there was no evidence that Respondent pursued the matter further in federal court. *See* AX 11 at 11-12. In contrast, Mr. Hentges reviewed a soil map at hearing and found areas in which he would like more information. The disparity in the level of evaluation in itself is sufficient for me to accept the existence of an adjacent wetland. It is also significant that Mr. Schafer, Dr. Garcia, and even Mr. Hentges all observed evidence of wetland conditions during their site visits. Indeed, Mr. Hentges testified that in his experience "there are often" wetland zones abutting waterways like the unnamed tributary. Tr. at 620. Moreover, in his expert report, he wrote that "it appears the non-farmed areas over the current tile line likely have or are developing wetland characteristics." RX 1; Tr. at 621. And at hearing, he testified that his visit to the farm confirmed this. To that extent, Mr. Hentges's testimony that more information would provide more conclusive evidence that a wetland abutted the unnamed tributary does little to undermine the determination that such a wetland existed. And in many ways, his testimony seems to support the finding by NRCS and observations by Agency witnesses.

Respondent also notes that the FSA's "Abbreviated 156 Farm Record" indicated that there was no wetland on the Farm in 2013. RB at 14. I do not find this document compelling as to the question of whether a wetland existed, however, because the FSA does not perform wetland determinations. Further, there was no information presented about the source of the document's declaration that the Farm did not contain a wetland.

For these reasons, I find that there was a wetland immediately adjacent to and including the unnamed tributary that had a continuous surface connection to the tributary. This satisfies the *Rapanos* Plurality test for jurisdiction under the CWA.[43]

b. Jurisdiction conclusion

For the foregoing reasons, both the unnamed tributary and its adjacent and within-stream wetlands are waters of the United States and therefore navigable waters for purposes of Clean Water Act jurisdiction.

V. LIABILITY

As outlined above, it is unlawful for a person to discharge a pollutant from a point source into navigable waters without a permit. 33 U.S.C. §§ 1311(a), 1362(12). In this case, Section 404 of the CWA requires a permit "for the discharge of dredged or fill material" into navigable waters. 33 U.S.C. § 1344(a). Consequently, it is the Agency's burden to prove by a preponderance of the evidence that Respondent is (a) a person (b) who discharged dredged or fill material (c) from a point source (d) into navigable waters (e) without a permit. *See* 40 C.F.R. § 22.24.

a. Respondent is a person

The CWA defines "person" to include an individual, corporation, partnership, or association, among others. 33 U.S.C. § 1362(5). Respondent, a limited liability company established under the laws of Iowa, admits that it is a "person" under this definition. Compl., ¶¶ 4, 13; Answer, ¶¶ 4, 13; Tr. at 440, 445. Consequently, Respondent is a person within the meaning of the CWA.

b. Respondent discharged fill material

The CWA does not define "discharge of fill material," but Agency regulations do. Under Agency regulations, "[t]he term *discharge of fill material* means the addition of fill material into waters of the United States." 40 C.F.R. § 232.2. Such activity includes the "[p]lacement of fill that is necessary for the construction of any structure or infrastructure in a water of the United

[43] Of course, even if no wetland existed, the Agency would still have jurisdiction under the CWA based on the tributary itself.

States, . . . the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction, . . . [or] dams and dikes." 40 C.F.R. § 232.2. "[T]he term fill material means material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States." 40 C.F.R. § 232.2. Fill material may include rock, sand, soil, or clay, among other substances. 40 C.F.R. § 232.2.

Although Respondent denied in its Answer that it discharged fill material, the evidence produced at hearing demonstrates otherwise. Mr. Morrow testified that he began removing trees and vegetation along the tributary in February and March 2015 in anticipation of tiling. Then, in April 2015, Mr. Morrow began installing tile in the unnamed tributary. To do so, he testified that he hired an excavator – "a big backhoe" – that "dug an area to place the tile in" that ran the full length of the tributary. Tr. at 478. Once the tiling was installed, Mr. Morrow said that he used his skid loader to refill the channel with dirt to cover the pipe. He then planted over the tiled and flattened earth. The total area tiled was about 1.3 acres. Mr. Morrow said that he also installed what was referred to as "check dams," "terraces," "basins," or "berms" in the tributary to catch and slow down flowing water to prevent erosion. Tr. at 434-35, 479, 499. Further, Mr. Hentges agreed that Respondent had tiled and filled in the unnamed tributary. These activities resulted in the addition of fill material into the unnamed tributary, a water of the United States, and therefore constitute the "discharge of fill material" under the CWA and Agency regulations.

c. The fill material was discharged from a point source

The CWA defines a "point source" as "any discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). As indicated above, Respondent used an excavator and backhoe to install tile in the tributary and then refill it with dirt. Tr. at 478, 510-11. Bulldozers, backhoes, and other earth moving equipment qualify as point sources under the CWA. *See Parker v. Scrap Metal Processors, Inc.*, 386 F.3d 993, 1009 (11th Cir. 2004); *Avoyelles Sportsmen's League, Inc. v. Marsh*, 715 F.2d 897, 922 (5th Cir. 1983). Consequently, the earth moving equipment that Respondent used to tile and fill in the tributary is a "point source" under the CWA.

d. The unnamed tributary and adjacent wetlands are navigable waters

As discussed above, "navigable waters" are "waters of the United States," which at the times relevant to this proceeding were defined at 40 C.F.R. § 232.2 to include "all waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;" tributaries of such waters; and "[w]etlands adjacent to [such] waters (other than waters that are themselves wetlands)." 40 C.F.R. § 232.2 (2014); *see also Stevenson*, 16 E.A.D. at 160, 2013 WL 5793370, at *8.

"Wetlands" means those areas that are inundated or saturated by

> surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

40 C.F.R. § 232.2. For the reasons previously discussed, the unnamed tributary and adjacent wetlands are "waters of the United States" and therefore "navigable waters" under the CWA.

e. Respondent did not obtain a permit for its work

Before Respondent tiled and filled in the unnamed tributary, it was obligated to obtain a permit from the Corps. *See* 33 U.S.C. § 1344. Mr. Morrow conceded at hearing that he did not seek authorization from the Corps for the 2015 clearing and tiling work. Additionally, Mr. Morrow acknowledged that he had nothing in writing from the Corps that authorized the tile or fill work. Consequently, Respondent did not obtain the permit required by 33 U.S.C. § 1344.

f. Respondent does not meet any exceptions to CWA requirements

Respondent contends that its activities were not prohibited discharges under Section 404. *See* RB at 15-16; RRB at 9. Specifically, Respondent points to the exemption for "[n]ormal farming, silviculture, and ranching activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices." 33 U.S.C. § 1344(f)(1)(A); *see also* 40 C.F.R. § 232.3(c)(1)(i). "Minor drainage" is defined by regulation as

> [t]he discharge of dredged or fill material incidental to connecting upland drainage facilities to waters of the United States, adequate to effect the removal of excess soil moisture from upland croplands. Construction and maintenance of upland (dryland) facilities, such as ditching and tiling, incidental to the planting, cultivating, protecting, or harvesting of crops, involve no discharge of dredged or fill material into waters of the United States, and as such never require a section 404 permit.

40 C.F.R. § 232.3(d)(3)(i)(A). However, even where a discharge is exempt under Section 1344(f)(1)(A), the discharge may be "recaptured" by the permit requirement of 33 U.S.C. § 1344(f)(2), which states that

> [a]ny discharge of dredged or fill material into the navigable waters incidental to any activity having as its purpose bringing an area of the navigable waters into a use to which it was not previously subject, where the flow or circulation of navigable waters may be

> impaired or the reach of such waters be reduced, shall be required to have a permit under this section.

33 U.S.C. § 1344(f)(2); *see also United States v. Brace*, 41 F.3d 117, 123 (3d Cir. 1994); 40 C.F.R. § 232.3(b). Regulations implementing this recapture provision further provide that where the discharge "result[s] in significant discernable alterations to flow or circulation, the presumption is that flow or circulation may be impaired by such alteration," and note that "[a] conversion of section 404 wetland to a non-wetland is a change in use of an area of waters of the U.S." 40 C.F.R. § 232.3(b). "Thus, to be exempt from the CWA permit requirement, a [respondent] has the burden of demonstrating that proposed activities both *satisfy* the requirements of Section [1344(f)(1)] and *avoid* the recapture provision of Section [1344(f)(2)]." *Brace*, 41 F.3d at 124.

In this case, Respondent has not demonstrated that its tiling activity satisfied the requirements of Section 1344(f)(1) or avoided the recapture provision of Section 1344(f)(2). Respondent claims that tiling the tributary was normal farming activity, either because crops were planted in it at various times or because the tiling itself constituted "minor drainage." RB at 15-16. Respondent also disputes Dr. Garcia's assessment that the tiling cannot be "minor drainage" because it was installed within the tributary rather than "upland." *See* RB at 15-16 (quoting Tr. at 258-59). In doing so, Respondent argues that "tributary" and "upland" are not defined in the regulations, and that the tiling was installed upland from Deep Creek. RB at 16. I find this argument tenuous. Even without regulatory definition, the "tributary" itself is clearly not "upland (dryland)." The tributary is a water of the United States, and tile placed within it is not in the "upland," so Respondent's activity would not qualify as "minor drainage." But even if Respondent's tiling of the tributary qualified as minor drainage or some other normal farming activity under Section 1344(f)(1), "such otherwise exempt practices are 'recaptured' by the CWA for regulation because of their change-in-use purpose and their adverse effect on the flow, circulation, or reach of waters of the United States." *Ray & Jeanette Veldhuis*, 11 E.A.D. 194, 203, 2003 WL 23019918, at *9 (EAB 2003). That is, Respondent's tiling displaced the unnamed tributary, a water of the United States, thereby affecting its flow, circulation, and reach, to convert it to farmable acreage. In this way, Respondent is like the farmer in *Brace*, who tiled 30 acres of wetland, draining the site to convert it from a wetland to a new, non-wetland use. *See Brace*, 41 F.3d at 129. As in *Brace*, Respondent's actions in this case "fall squarely within the statutory definition of 'recapture.'" *Id.*

g. Liability conclusion

For the foregoing reasons, the Agency has met its burden: The Agency has shown by a preponderance of the evidence that Respondent violated 33 U.S.C. §§ 1311 when it tiled and filled in the unnamed tributary without obtaining a permit from the Corps under 33 U.S.C. § 1344.

VI. PENALTY

The Agency may assess a civil administrative penalty against any person who violates 33 U.S.C. § 1311. *See* 33 U.S.C. § 1319(g)(1)(A). The CWA originally authorized penalties of up to $10,000 per day for each day during which the violation continues and a maximum penalty amount that shall not exceed $125,000. *See* 33 U.S.C. § 1319(g)(2)(B). These statutory maximum penalty levels have been increased over time as required by the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 note; Pub. L. 101-410), as amended by the Debt Collection Improvement Act of 1996, and most recently, by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015 (28 U.S.C. § 2461 note; Pub. L.114-74, Section 701). Consequently, the Agency may assess statutory penalties in this case of up to $16,000 per day or $187,500 in total for violations that occurred before November 2, 2015, and $21,933 per day or $274,159 in total for violations that occurred after November 2, 2015. *See* 40 C.F.R. § 19.4 & Tables 1-2.

Where a violation has occurred, this Tribunal "shall determine the amount of the recommended civil penalty based on the evidence in the record and in accordance with any penalty criteria set forth in the [CWA]" and "explain in detail in the initial decision how the penalty to be assessed corresponds to any penalty criteria set forth in the [CWA]." 40 C.F.R. § 22.27(b). The CWA requires that the civil penalty "take into account the nature, circumstances, extent and gravity of the violation, or violations, and, with respect to the violator, ability to pay, any prior history of such violations, the degree of culpability, economic benefit or savings (if any) resulting from the violation, and such other matters as justice may require." 33 U.S.C. § 1319(g)(3). "The CWA 'prescribes no precise formula by which these factors must be computed.'" *Stevenson*, 16 E.A.D. at 169, 2013 WL 5793370, at *15 (quoting *Britton Constr. Co.*, 8 E.A.D. 261, 278 (EAB 1999)); *Pepperell Assocs.*, 9 E.A.D. 83, 107, 2000 WL 576426, at *20 (EAB 2000). Thus, penalty calculation under the Act is "highly discretionary." *Tull v. United States*, 481 U.S. 412, 426-27 (1987). If the assessed penalty differs from the penalty proposed by the Agency, I must "set forth in the initial decision the specific reasons for the increase or decrease." 40 C.F.R. § 22.27(b).

Further, "[a]lthough the presiding officer must also consider any civil penalty guidelines issued under the Act, the Agency has not developed a penalty policy specific to litigation under section 404 of the CWA."[44] *Stevenson*, 16 E.A.D. at 169, 2013 WL 5793370, at *15 (citing *City of Marshall*, 10 E.A.D. 173, 189 n.28, 2001 WL 1356721, at *13 n.28 (EAB 2001)) (internal citation omitted); *see also* 40 C.F.R. § 22.27(b). Thus, "it is appropriate for the presiding officer to analyze directly each of the statutory factors." *Stevenson*, 16 E.A.D. at 169, 2013 WL

[44] The Agency does employ a penalty policy for use in settlement negotiations. *See* Clean Water Act Section 404 Settlement Penalty Policy (Dec. 21, 2001) ("Settlement Policy"). However, this matter has proceeded beyond the settlement context, and this Tribunal will rely only on the CWA statutory factors to calculate the penalty. Any other reference to the Settlement Policy in this Initial Decision is made for "instructive value" only. *See Stevenson*, 2013 WL 5793370, at *16.

5793370, at *15 (citing *Phoenix Constr. Servs., Inc.*, 11 E.A.D. 379, 395, 2004 WL 1059751, at *13 (EAB 2004)). Other general Agency penalty policies may also provide guidance. *Id.* (citing *Smith Farm*, 15 E.A.D. at 282, 2011 WL 946993, at *48); *see, e.g.*, EPA General Enforcement Policy # GM-21, Policy on Civil Penalties (Feb. 16, 1984) ("Policy on Civil Penalties"); EPA General Enforcement Policy # GM-22, A Framework for Statute-Specific Approaches to Penalty Assessments: Implementing EPA's Policy on Civil Penalties (Feb. 16, 1984) ("Penalty Framework"). The Agency policies denote three important goals of penalty assessment: "deterrence, the fair and equitable treatment of the regulated community, and the swift resolution of environmental problems." *Smith Farm*, 15 E.A.D. at 282, 2011 WL 946993, at *48.

In this case, the Agency seeks a penalty of $40,500. Dr. Garcia testified that she calculated the proposed penalty using the Agency's Settlement Policy and treated the violation as lasting from the day the tiling was installed to the day the Complaint was filed. Tr. at 264, 266. In post-hearing briefs, the Agency discusses the statutory penalty factors and facts relevant thereto, but it does not advocate a particular penalty calculation methodology or explain its penalty calculation in detail.

a. Nature, circumstances, extent, and gravity of violation

The CWA requires that any penalty amount be based, in part, on "the nature, circumstances, extent and gravity of the violation, or violations." 33 U.S.C. § 1319(g)(3). "When considering the nature, circumstances, extent and gravity of CWA section 404 violations, the Agency's Penalty Framework guides [this Tribunal] and sets forth a number of factors the Agency may consider." *Stevenson*, 16 E.A.D. at 172, 2013 WL 5793370, at *17 (citing *San Pedro Forklift, Inc.*, 15 E.A.D. 838, 880, 2013 WL 1784788, at *34 (EAB 2013). These factors include

> actual or possible harm (whether and to what extent [the respondent's] activity actually resulted or was likely to result in an unpermitted discharge); the amount of pollutant; toxicity of the pollutant; sensitivity of the environment; the length of time a violation continued; and the importance of the permitting requirements to achieving the goals of the CWA.

San Pedro Forklift, 15 E.A.D. at 880, 2013 WL 1784788, at *34 (citing Penalty Framework at 13-16).

Here, Respondent caused actual harm to the environment when it discharged fill material into the unnamed tributary and 1.3 acres of associated wetland. Dr. Garcia testified to this harm: "[G]iven my experience and knowledge of these types of systems, by taking away 1,800 feet [of tributary], I would say there was definitely harm to the environment that took place."[45] Tr. at

[45] Dr. Garcia did not recall what portion of the proposed penalty she based on harm to the

259. Because the tile system empties into Deep Creek, the velocity of the water is much higher than it would have been were the channel still present. Tr. at 229. Consequently, "you're not able to get some of the water infiltration that you would have normally with a bed and banks." Tr. at 229. This leads to increased water flow and erosion downstream. Tr. at 229. Filling and tiling the unnamed tributary also destroyed the habitat for aquatic fauna that would have otherwise used it and eliminated the ability of microorganisms within the tributary to "break down nutrients and make nutrients available to other fauna." Tr. at 230, 231, 259. These problems were further exacerbated by removing the grade and slope of the unnamed tributary, lowering the water quality for downstream tributaries. Tr. at 230-31. Similarly, the loss of wetland eliminated its ability to store water during high water events and to break down chemical components and harmful nutrients in the water. Tr. at 231-32. Indeed, although the unnamed tributary is smaller than the rivers it feeds into downstream, streams of its size play a critical role in the health of the greater watershed. AX 15 at 3. Further, Respondent has continued to cause this harm since the tributary was first tiled more than four years ago. At the same time, Dr. Garcia said that it was "very difficult" to quantify the harm caused because it would require extensive analyses of every impact to the tributary and the collection of baseline information before the tributary was altered. Tr. at 260. Her description of the harm caused was "a general statement given what we know about these systems." Tr. at 260. In that sense, it is difficult to say how extensive the environmental harm has been, but it is clear that harm was caused.

Beyond harming the environment, Respondent harmed the regulatory scheme by discharging fill material without a permit. *See San Pedro Forklift*, 15 E.A.D. at 881, 2013 WL 1784788, at *35. In fact, "the failure to obtain a permit goes to the heart of the statutory program under the CWA," because "the permit process is the cornerstone of the scheme for cleaning up the nation's waters" – which is the CWA's fundamental purpose. *Phoenix Constr. Servs.*, 11 E.A.D. at 398, 2004 WL 1059751, at *15 (quoting *United States v. Huebner*, 752 F.2d 1235, 1239 (7th Cir. 1985)) (internal quotation marks omitted). The EAB has offered several reasons why obtaining a section 404 permit is important: Filling a wetland (and in this case a stream) without a permit may lead to irreparable harm to the filled wetland itself; an issued permit would likely contain conditions designed to prevent or reduce impacts to neighboring waters or wetland areas; the permit process allows for public participation; and a private landowner's activities are visible to the local community, so filling in a stream or wetland without a permit creates "the perception that an individual is 'getting away with it' and openly flaunting . . . environmental requirements." *Phoenix Constr. Servs.*, 11 E.A.D. at 399, 2004 WL 1059751, at *16. This further sets a poor example for the community and encourages other similar violations, causing a snowball effect: "Although a particular alteration of a wetland may constitute a minor change, the cumulative effect of numerous piecemeal changes can result in a major impairment of wetland resources." *Id.*

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environment. Tr. at 265.

Dr. Garcia offered a similar analysis in her testimony: By not getting a permit before tiling the tributary, Respondent harmed the regulatory scheme because landowners who do go through the permit process are then placed at a disadvantage, she testified, particularly if they must spend resources on consultants to prepare a permit application in complex situations. Tr. at 260. Further, to obtain a permit, a landowner would have to mitigate for any streams or wetlands that he was allowed to disrupt, she said. Tr. at 261. In converting a stream and wetland without a permit, Respondent upset the level playing field that the permitting system seeks to maintain and removed resources from the watershed without mitigating the damage, Dr. Garcia added. Tr. at 261. Thus, even if there were no actual harm to the environment, the failure to obtain a permit before filling jurisdictional streams or wetlands "may cause significant harm to the regulatory program." *See Phoenix Constr. Servs.*, 11 E.A.D. at 400, 2004 WL 1059751, at *16.

Thus, I find the nature, circumstances, extent, and gravity of Respondent's violation to be significant.

b. Degree of culpability

The CWA further requires me to consider Respondent's degree of culpability in the violation, although it does not provide instruction for how this affects the overall penalty assessment. 33 U.S.C. § 1319(g)(3); *see also Stevenson*, 16 E.A.D. at 176, 2013 WL 5793370, at *20 (citing *Smith Farm*, 15 E.A.D. at 287, 2011 WL 946993, at *52). As Agency guidance observes, a respondent's degree of willfulness or negligence is important to this analysis. *Stevenson*, 16 E.A.D. at 176, 2013 WL 5793370, at *20; *see also* Penalty Framework at 17-18. Factors that impact a respondent's degree of willfulness or negligence include:

> · How much control the violator had over the events constituting the violation.
> · The forseeability [sic] of the events constituting the violation.
> · Whether the violator took reasonable precautions against the events constituting the violation.
> · Whether the violator knew or should have known of the hazards associated with the conduct.
> · The level of sophistication within the industry in dealing with compliance issues and/or the accessibility of appropriate control technology (if this information is readily available). This should be balanced against the technology forcing nature of the statute where applicable.
> · Whether the violator in fact knew of the legal requirement which was violated.

Stevenson, 16 E.A.D. at 177, 2013 WL 5793370, at **20-21 (citing Penalty Framework at 18). Additionally, the EAB has observed that a party's lack of awareness of the CWA's permit requirements "should never be used as a basis to reduce a penalty because [t]o do so would be to

encourage ignorance of the law." *Stevenson*, 16 E.A.D. at 177-78, 2013 WL 5793370, at *21.

In this case, Respondent owned the property and had total control over the events that constituted the violation. Respondent knew and understood the scope of the work being performed, and it was entirely foreseeable that tiling the tributary would involve filling a stream and wetland. Given that Respondent intentionally engaged in these actions, Mr. Morrow obviously took few apparent precautions to prevent the violation, and as a seasoned farmer and business owner, he should have known of the hazards associated with his conduct.

Even so, Respondent claims to have been unaware of the legal requirement that was violated. That is, Mr. Morrow argues that he did not know he was breaking any laws when he tiled the unnamed tributary because he believed that NRCS had granted him permission to complete the work. *See* RB at 1-2, 6-7. He further testified that he desired to be a good steward of the land. *See* RB at 17 (quoting Tr. at 499-500, 655-56). But Mr. Morrow's assertions, even if genuine, cannot excuse his negligence of tiling the tributary without obtaining a permit from the Corps.

First, Mr. Morrow is an experienced, second generation, long-time farmer and business owner who should have been aware that there are restrictions on filling in streams and wetlands. Indeed, there is evidence that he actually was aware of such restrictions based on his 2011 effort to obtain a wetland determination for the Farm from NRCS. And before that, he had sought wetland determinations for other smaller projects. Thus, he cannot simply claim ignorance of the law, and even if he could, this would not excuse his conduct. Second, Mr. Morrow chose to rely on verbal permission purportedly provided several years prior to the 2015 work by Regina Leer, an official who he admits he knew was not authorized to make wetland determinations. Rather than seek additional written verification from the Corps, Mr. Morrow proceeded with the work he desired to complete. This is unacceptable. Third, it was also unacceptable for Mr. Morrow to simply rely on the FSA's Abbreviated 156 Farm Record. The Farm Record is not a wetland determination, and the FSA is not authorized to make wetland determinations. Mr. Morrow's testimony suggests that he knew this because he had on previous occasions sought wetland determinations from NRCS. Fourth, even if Mr. Morrow genuinely believed that there were no wetlands on his farm, this belief ultimately does not justify his unpermitted work. The unnamed tributary was an open and obvious waterway that at the very least created a question as to whether it was subject to CWA jurisdiction, regardless of whether wetlands surrounded it. Mr. Morrow did not take sufficient steps to determine whether it was a water of the United States. If he did not know that his actions required a permit, then he should have known that there was a significant potential that a permit was required. Mr. Morrow was negligent when he did not even obtain written permission from NRCS before proceeding with his work, let alone request review by the Corps as the Clean Water Act requires.

Mr. Morrow's testimony that he wants to farm responsibly is credible. And I recognize his frustration with his interaction with NRCS. It seems clear that Mr. Morrow requested a wetland determination from that agency in 2011 and did not receive one until after he tiled the

tributary in 2015. *See, e.g.*, AX 11 at 11. To that extent, I do not think that he specifically intended to violate the law, and it somewhat diminishes his culpability. However, responsible stewardship of the land requires due diligence in adhering to the laws and regulations crafted to protect the land. In this case, even if Mr. Morrow's sole reason for tiling through the tributary was a belief that it was the most environmentally responsible course he could take, he acted negligently by not obtaining or even pursuing a permit from the appropriate government agency.

Beyond Respondent's basic negligence in not seeking a permit, there remains the question of whether Respondent acted with increased willfulness so that it could profit from selling land to MCM Pork. That is, did Respondent tile the tributary for the sole purpose of eliminating a waterway that would otherwise encroach upon the state's setback requirement and prevent construction of the hog barn? The Agency argues that this was Respondent's primary motivation for tiling the tributary, while Respondent asserts that it was not. *See* AB at 34-37; ARB at 11-13; RB at 16-17. The evidence points to something in between. Based on the timeline that Respondent presented, the tributary was tiled in April 2015, and Mr. Morrow was not approached about selling a portion of the Farm until the end of May 2015, after the work was complete. He testified that he had not considered selling any land before then. The Agency argues that there is evidence that Respondent did not actually complete the tiling work until July 2015. Specifically, the Agency singles out Respondent's written reference to activities performed on the property "prior to July 2015" in response to the Agency's request for information; photographs presented with the emailed complaint from Respondent's neighbor on July 20, 2015, that appear to show unfinished tiling activity; and the June 10, 2015 site document created by Pinnacle that shows a picture of the tributary without any fill work. AB at 37 (citing AX 5; AX 14 at 5; AX 30 at 1, 6). While this evidence raises further questions, I do not find it sufficiently conclusive. With respect to Respondent's written reference to July 2015, it appears that Respondent may have simply parroted back language that the Agency itself used in the initial request for information. *See* AX 30 at 1. Regarding the neighbor's complaint, the attached photographs are undated, and the neighbor's email describes the work in the past tense as if it were already completed. AX 5. Perhaps testimony from the neighbor would have shed further light on the timeline and content of his photographs, but this testimony was not presented. As for the photograph in the Pinnacle site document that shows the Farm before the tiling work, it also is undated.[46] AX 14 at 5. However, the photograph appears to have been taken before the tiling work because there is visible vegetation along the tributary that other photographs show was removed by March 20, 2015. *See* AX 10 at 15-20.

But despite the lack of significant evidence to directly dispute Respondent's timeline of the tiling activity, Respondent has admitted that closing the tributary to meet Iowa's setback regulations was at least a partial reason for the work. *See* Tr. at 493, 515-16. Records summarizing conversations that Mr. Morrow had with Mr. Schafer in July 2015 and with the NRCS in 2016 all indicate that he told various government representatives that he filled in the

[46] The document itself is dated June 10, 2015, but there is no indication that that is the date of the photograph. AX 14 at 5.

tributary to meet the state's setback requirements. *See* AX 9 at 1; AX 11 at 11; AX 18 at 1. For this reason, I cannot conclude that the opportunity to sell land for a hog barn played *no* role in Respondent's decision to tile the tributary. Presumably it was one of several motivating factors and at least a partial reason for Respondent's violation. This increases Respondent's culpability from mere negligence to something greater. It also further illustrates Respondent's sophistication. If Mr. Morrow was aware of the state's setback regulations, then he likely would, and certainly should, have been aware of federal laws and regulations that required him to obtain a permit from the Corps before filling in the tributary.

For these reasons, I find that Respondent acted with significant negligence when it installed tile in the unnamed tributary without first seeking a permit from the Corps.[47]

c. Economic benefit

Recovering a violator's economic benefit that it received by not complying with environmental laws "is a critical component of the Agency's civil penalty program." *San Pedro Forklift, Inc.*, 15 E.A.D. at 879, 2013 WL 1784788, at *34 (citing *B.J. Carney Indus., Inc.*, 7 E.A.D. 171, 207, 1997 WL 323716, at **26-27 (EAB 1997), *appeal dismissed as moot*, 200 F.3d 1222 (9th Cir. 2000)); *see also Policy on Civil Penalties* at 3 ("It is Agency policy that penalties generally should, at a minimum, remove any significant economic benefits resulting from failing to comply with the law"); *accord Penalty Framework* at 6. This is particularly true in enforcement matters like this one, where the CWA requires consideration of the "economic benefit or savings (if any) resulting from the violation." *San Pedro Forklift*, 15 E.A.D. at 879, 2013 WL 1784788, at *34 (quoting 33 U.S.C. § 1319(g)(3)). Generally, economic benefit is calculated as a measure of "delayed costs," "avoided costs," and/or the "benefit from competitive advantage gained through noncompliance." *Id.* (quoting *Britton*, 8 E.A.D. at 287, 1999 WL 362870 at *19); *see also Penalty Framework* at 6-11.

Here, Respondent obtained an economic benefit by violating the law. Respondent avoided the costs of seeking and abiding by a permit from the Corps. Presumably, this would include the cost of the permit itself, the potential cost of hiring consultants or professionals to complete the permit application process, the cost of any mitigation efforts needed to obtain a permit, and the cost of complying with the permit. Mitigation involves "replacing" the converted wetland by creating a new wetland in another location with the same acreage, function, and value as the converted wetland. Tr. at 93. Dr. Garcia testified that Respondent could purchase wetland mitigation credits from a mitigation bank in the region for $30,000 to $50,000 per acre, or it could have restored other wetland acreage on property that it owns. Tr. at 262-63. Mr. Morrow testified that he expected restoration or mitigation would cost between $40,000 and $45,000 an

[47] In calculating the Agency's proposed penalty, Dr. Garcia assigned "relatively low" culpability to Respondent because Respondent does not have a history of violations. Tr. at 265. However, this conflates two separate statutory factors. As noted below, Respondent's prior history of violations was not at issue in this proceeding.

acre. Tr. at 516-17. According to Dr. Garcia, Respondent's economic benefit included the money saved by not needing to mitigate for wetland loss. Tr. at 267. Thus, for the 1.3 acres of wetland Respondent converted, mitigation costs would be $39,000 to $65,000 under Dr. Garcia's estimate, or $52,000 to $58,500 under Mr. Morrow's estimate.

Additionally, Respondent benefited to the extent that the value of the Farm increased as additional land was tiled. And Respondent received an even more extensive economic benefit because tiling the tributary enabled it to sell a portion of the Farm to MCM Pork. Respondent earned $12,000 for the land purchased by MCM Pork, and Mr. Morrow's construction company earned $28,000 for cleaning up the site. Further, MCM Pork is supplying Respondent with ten years' worth of manure, fertilizer that Mr. Morrow valued at $10,000 to $12,000 per year. In sum, the evidence at hearing suggests Respondent's violation may have generated an economic benefit of up to $160,000, not including generally increased land value and money saved by not completing the permitting process.

Consequently, I find that Respondent's violation generated an economic benefit that, at a minimum, exceeds the entire penalty proposed by the Agency.

d. Ability to pay, prior history of violations, and other matters as justice may require

Respondent did not claim an inability to pay the proposed penalty in this case. Similarly, the Agency never alleged that Respondent had any history of prior violations, and no such evidence was offered at hearing. Finally, there have been no grounds offered for altering the penalty for other matters as justice may require. Consequently, the penalty will not be increased or decreased based on these factors.

e. Penalty conclusion

For the reasons discussed above, I find that it is appropriate to assess a penalty in the amount of $40,500, as proposed by the Agency. There was clear harm to the environment and the regulatory scheme, and at the time of hearing, the violation had been ongoing for more than three years. Given the rough estimates of Respondent's economic benefit, it would be justifiable to assess a much larger penalty had the Agency requested one on that basis and produced further evidence in support of the specific economic benefit alleged. However, in recognition of Mr. Morrow's testimony that he believed his work was permissible and his stated desire to improve his land in a responsible manner, I will not increase the penalty to capture additional economic benefit.

VII. CONCLUSION AND ORDER

1. Respondent is liable for violating the Clean Water Act as set forth above.

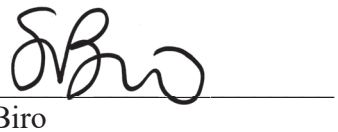
2. For this violation, Respondent is hereby assessed a civil penalty of **$40,500.00**.

3. Payment of the full amount of this civil penalty shall be made within **30 days** after this Initial Decision becomes a final order under 40 C.F.R. § 22.27(c), as provided below:

   > Payment shall be made by submitting a certified or cashier's check[48] in the requisite amount, payable to "Treasurer, United States of America," and mailed to:
   >
   > U.S. Environmental Protection Agency
   > Fines and Penalties
   > Cincinnati Finance Center
   > P.O. Box 979077
   > St. Louis, MO 63197-9000
   >
   > A transmittal letter identifying the subject case and EPA docket number (CWA-07-2018-0095), as well as the Respondent's name and address, must accompany the check.
   >
   > If Respondent fails to pay the penalty within the prescribed statutory period after entry of this Initial Decision, interest on the penalty may be assessed. *See* 31 U.S.C. § 3717; 40 C.F.R. § 13.11.

4. Pursuant to 40 C.F.R. § 22.27(c), this Initial Decision shall become a final order **45 days** after its service upon the parties and without further proceedings unless: (1) a party moves to reopen the hearing within **20 days** after service of this Initial Decision, pursuant to 40 C.F.R. § 22.28(a); (2) an appeal to the Environmental Appeals Board is taken within **30 days** after this Initial Decision is served upon the parties pursuant to 40 C.F.R. § 22.30(a); or (3) the Environmental Appeals Board elects, upon its own initiative, to review this Initial Decision, under 40 C.F.R. § 22.30(b).

SO ORDERED.



Susan L. Biro
Chief Administrative Law Judge

[48] Respondent may also pay by one of the electronic methods described at the following Agency website: https://www.epa.gov/financial/additional-instructions-making-payments-epa.

Dated: September 30, 2019
Washington, D.C.

In the Matter of *C & S Enterprise, L.L.C.*, Respondent.
Docket No. CWA-07-2018-0095

CERTIFICATE OF SERVICE

I hereby certify that the foregoing **Initial Decision**, dated September 30, 2019, and issued by Chief Administrative Law Judge Susan L. Biro, was sent this day to the following parties in the manner indicated below.

Matt Barnwell
Attorney Advisor

Original and One Copy by Hand Delivery to:
Mary Angeles
Headquarters Hearing Clerk
U.S. Environmental Protection Agency
Office of Administrative Law Judges
Ronald Reagan Building, Room M1200
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Attorney for Respondent

Dated: September 30, 2019
Washington, D.C.