

9/14/59

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE ADMINISTRATOR

In the Matter of)
The Hoffman Group, Inc.,) Docket No. CWA-88-AO-24
Respondent)

1. CWA Section 309(g)-Wetlands - Depositing scraped and excavated material into wetlands for purpose of grading and seeding constitutes a discharge of a pollutant under Section 301 of the Act.
2. CWA Section 309(g)-Wetlands - Corps of Engineers' wetlands delineation made from a site visit and use of an aerial photo, an aerial contour map, a U.S.D.A. soil survey, a National Wetland Inventory Map and soil boring data upheld but modified to exclude area where hydric soils and wetland hydrology had not been shown to be present.
3. CWA Section 309(g)-Wetlands - Isolated depressionnal area although qualifying as wetlands held not a "waters of the United States" under the regulations, 33 C.F.R. 328.3(a) and 40 C.F.R. 230(s).
4. CWA Section 309(g)-Wetlands - In assessing penalty for unauthorized fill of wetlands, governing factor is not how important were the functions served by the wetland but the failure to apply for a permit when respondent knew or should have known that wetland may be disturbed.
5. CWA Section 309(g)-Wetlands - Penalty of \$50,000 assessed for unauthorized fill of some 5 acres of wetlands.

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INITIAL DECISION

This is a proceeding under the Clean Water Act, Section 309(g), as amended, 33 U.S.C. 1319(g) (Supp. V 1987) upon a complaint issued by the United States Environmental Protection Agency, Region V ("EPA") to assess a civil penalty of \$125,000, against The Hoffman Group ("Hoffman") for an alleged unauthorized fill of wetlands.¹

Specifically, the complaint alleged that Hoffman owns or controls property situated on Hoffman Estates, Cook County, Illinois, on which are located wetlands that are waters of the United States as defined in 40 C.F.R. 122.2. The complaint further alleged that Hoffman, using machinery constituting a "point source" within the meaning of Section 502(14), of the Act, 33 U.S.C. 1362(14), discharged an unknown amount of dirt, clay, top soil, etc., into approximately 6.2 acres of said wetlands. Prior to being filled, the wetland was a tributary adjacent to Schaumburg Branch of Poplar Creek (itself a water of the United States). It was finally alleged that this filling activity was carried out without the permit required by either Section 402 or 404 of the Act, 33 U.S.C. 1342, 1344, and therefore is a violation of Section 301 of the Act, 33 U.S.C. 1311.

¹ The penalty of \$125,000 is assessed pursuant to Section 309(g)(2)(B) as a Class II civil penalty, and is the maximum penalty allowed thereunder.

Hoffman in its answer admitted that it owned property on which were located wetlands as alleged in the complaint. It also admitted that certain areas of the property were filled but denied that the filled land constituted "waters of the United States." Hoffman further alleged that the filling was done pursuant to express plan approval of local governmental authorities following numerous public hearings, that no time during the plan approval process or during the course of obtaining permits was any suggestion made by any participating person or agency that a permit was required under the Act, that the filling activity was completed prior to December 4, 1985, and that Hoffman did not know and did not receive notice from the Corps of Engineers that the Federal Government asserted jurisdiction under Section 404 of the Act until after completion of the filling activities. Upon such notification, Hoffman alleged that it applied to the Corps of Engineers for an after-the-fact permit, proposing both on-site and off-site mitigation, but the EPA objected to Hoffman's mitigation plan and the permit was denied. Finally, Hoffman denied that the \$125,000 penalty was appropriate and that its filling activities had any adverse impact on the Poplar Creek watershed.

Hearing commenced in this matter on October 24, 1988. Twenty-one days were spent in hearings. The hearings did not run consecutively, and the final hearing was held on January 19, 1989. Thereafter, the parties filed posthearing briefs. This decision is being rendered on consideration of the entire record and the submissions of the parties. Proposed findings and conclusions

submissions of the parties. Proposed findings and conclusions inconsistent with this decision are rejected. It is also to be noted that citations to support this decision are not intended to include all record support for the point cited. ²

The Filled Land At Issue

The Victoria Crossing site on which the alleged unauthorized filling was done occupies about 43 acres and is located in the Village of Hoffman Estates, Cook County, Illinois. ³ It is a square parcel bordered on the west by the Schaumburg Branch of Poplar Creek, on the north by a subdivision, on the south by the east-west leg of Bode Road, and on the east by Bode Road again which at the southeast corner of the site makes a 90 degree turn and runs northward (hereafter referred to as "the north-south leg of Bode Road"). ⁴

The property was described as follows in a report the North Cook County Soil and Water Conservation District submitted in November 1984 to the Village of Hoffman Estates in connection with Hoffman's petition to rezone the property:

² References to the record will be cited as follows: Reference to the Transcript of testimony will be cited as "Tr." followed by the page number, e.g., "Tr. 9" refers to page 9 of the transcript. Complainant's exhibits (sometimes marked as "Government Exhibit") will be cited as "CX" followed by the exhibit number, and Respondent's exhibits will be cited as "RX" and the exhibit number.

³ The parcel is described as a 42.9 acre tract in CX 34 and as a 42.8 tract in Respondent's Post-Hearing Brief (hereafter "Resp's. Br.") at 1. The difference is immaterial.

⁴ RX 16. A map of the property, adapted from Ex. A to Resp's. Br. is attached as an Appendix to this decision.

To the north, east and south of the parcel are single-family residential areas. To the west is a wetland and vacant grass field.

The topography on the parcel varies from upland rolling area on the east; to level, wetland areas on the south and west. The parcel has a drainage pattern from the upland areas on the east toward the south and west. A small pothole is located along the north border of the parcel. The Schaumburg Branch of Poplar Creek borders the parcel on the west edge.

The current land use is agricultural on the upland areas. A crop of soybeans was planted. The land on the west and a portion of the south is a wetland area. As a result of the slopes being tilled, some erosion is occurring presently.

* * *

A significant characteristic of this parcel is the wetland that is located along the drainageway on the south end and along the creek on the west. The wetlands extends to the east from the creek and includes a variety of wetland vegetation. Several species of wetland birds were observed on the site.⁵

With respect to the wetlands noted on the west and southern portions of the site, the report went on to state as follows:

The wetland that borders the creek on the west edge of the property and extends eastward along the drainageway on the south end, is a very valuable natural resource and should be given preservation status. Several species of wetland birds were observed on the site including waterfowl. The wetland habitat provides nesting, resting, feeding, and overwintering habitat for many species of wetland wildlife. The vegetation serves to filter sediment and prevent phosphates from entering a water system and in this situation, Poplar Creek. Wetlands provide some of the last remaining habitat in Cook County where a unique variety of plants and animals can be found.

It is recommended that the wetland area be defined and then be maintained in its natural state rather than grading and seeding.

⁵

CX 34; Tr. 945-948.

Any work that is done in the wetland should be done under the auspices of those agencies having regulatory authority to protect wetlands. The United States Army Corp of Engineers Regulatory Functions Branch can be contacted in Chicago for any questions.⁶

The upland portion in the northeastern part of the site was developed into homes and is not at issue in this proceeding. What is at issue is a strip of land which was filled at the lower elevation on the southern and western parts where wetlands were noted to be present, which filled land is hereafter called "Area B," and the depression or "pothole" at the northeast border which was also filled, and which hereafter will be referred to as "Area A."⁷ It is not disputed that no permit was ever sought from the Corps of Engineers for this filling activity. The EPA contends, and Hoffman denies that this filled land was a wetland included within the "navigable waters of the United States" and subject to Section 404 of the Clean Water Act, 33 U.S.C. Section 1344.

The Pertinent Provisions of the Statute and Regulations

The Clean Water Act, Section 404, 33 U.S.C. Section 1344, authorizes the Secretary of the Army acting through the Corps of Engineers to issue permits for the discharge of dredged or fill material into the navigable waters. Section 301(a) of the Act, 33

⁶ Id.

⁷ The filled areas at issue are marked by diagonal lines in Appendix below. Area B was apparently filled in connection with Hoffman's agreement with the Hoffman Estates Park District to grade and seed that part of the site. RX 25. Area A was apparently filled in connection with constructing homes on the site. See CX 17 which shows houses in the part where the depression area was located.

U.S.C. Section 1311(a), prohibits the discharge of pollutants (which would include dredged or fill materials) into the navigable waters if done without a permit.⁸

Enforcement with respect to the unauthorized discharge of pollutants into the navigable waters is divided between the Corps of Engineers and the EPA. Under Section 309(g)(1)(A), 33 U.S.C. Section 1319(g)(1)(A), the EPA is authorized to assess civil penalties for the discharge of pollutants done without a permit, while under Section 309(g)(1)(B), 33 U.S.C. Section 1319(g)(1)(B), the Corps of Engineers is authorized to assess civil penalties where the discharge is done in violation of a permit issued by it under Section 404.

The term "navigable waters" is defined to mean "waters of the United States."⁹ Both the EPA and the Corps of Engineers in their respective regulations dealing with the enforcement of Section 404 further define waters of the United States to include various types

⁸ See Section 502(6), 33 U.S.C. 1362(6), for definition of "pollutant" and Section 502(12), 33 U.S.C. 1362(12), for definition of "discharge of a pollutant." It is not disputed that Hoffman's activities of filling and grading the land constitute the "discharge of a pollutant" under Section 301(a). See *Avoyelles Sportsman's League v. Marsh*, 715 F.2d 897, 922-927 (5th Cir. 1983) (the filling in of sloughs and levelling of land was the discharge of a pollutant within the meaning of Section 301(a)). See also Joint Exhibit (Joint Stipulations of Law and Fact), Pars. 23 and 24.

⁹ Clean Water Act, Section 502(7), 33 U.S.C. 1361(7).

of wetlands. ¹⁰ "Wetlands" themselves are, in turn, defined as follows:

The term "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. ¹¹

It also seems to be agreed in this case that for an area to qualify as a wetland, it should be saturated or inundated at least every other year, for a long enough period to develop anaerobic conditions that support the growth of hydrophytic vegetation. ¹²

Both sides are in agreement that under the definition there are three indicators or parameters that must be satisfied in order for an area to be delineated as a wetland. The area must have hydrophytic vegetation, hydric soils and wetland hydrology. ¹³

Hydrophytic vegetation: This is macroscopic (readily observable) plant life growing in water or on a substrate that is at

¹⁰ See 40 C.F.R. 230.3(s) (EPA); 33 C.F.R. 328.3(a) (Corps of Engineers). The regulations are identical.

¹¹ 40 C.F.R. 230.3(t); 33 C.F.R. 328.3(l).

¹² Tr. 325, 1503. The record indicates that continuous saturation of the root zone for a period of 7 to 14 days during the growing season is usually sufficient to create the anaerobic conditions that will foster the growth of wetland vegetation and kill the non-wetland vegetation. Tr. 187, 326-327, 1972, 2305.

¹³ These parameters are described in both the Corps of Engineers Wetlands Delineation Manual (January 1987), CX 15 (hereafter "CE Manual"), and Vol. 1 of the EPA's Wetland Identification and Delineation Manual, RX 5 (hereafter "EPA Manual"). These manuals are designed to provide guidance in delineating the boundaries of a wetland. See CX 15, p. 5; RX 5, p. 2.

least periodically deficient in oxygen (anaerobic) as a result of excessive water content. ¹⁴

Hydric Soils: These are soils that are saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions in the upper part. ¹⁵

Wetland Hydrology: The sum total of wetness characteristics in areas that are inundated or have saturated soils for a sufficient duration to support hydrophytic vegetation. ¹⁶

While all three indicators, hydrology, vegetation and soils, should be present, direct proof of all three may not always be possible. For example, hydrology can present a special problem if the wetland is a seasonal wetland that will display evidence of soil saturation or inundation during the early part of the growing season when the groundwater table is high, so as to support the growth of hydrophytic vegetation, but later on in the growing season, with the receding of the groundwater table, may lack evidence that the area was ever saturated or inundated. ¹⁷ In that case, it may be necessary in order to determine if the area

¹⁴ CE Manual, CX 15, p. 3, and Appendix A (definitions of "Hydrophytic vegetation" and "macrophyte"); EPA Manual, RX 5, p. 8. The EPA manual goes on to say that hydrophytes that usually dominate wetlands are emergent plant species (erect, rooted non-woody species such as the common cattail or woody species such as the bald cypress). RX 5, p. 8.

¹⁵ CE Manual, CX 15, pp. 4, A6 (definition of "Hydric Soil"); EPA Manual, RX 5, p. 12.

¹⁶ CE Manual, CX 15, pp. 14, A14 (definition of "Wetland Hydrology"); RX 5, p. 17.

¹⁷ Tr. 94-95; CE Manual, CX 15, p. 93.

has wetlands hydrology, to turn to other evidence relevant to the hydrology of the area. Seasonal wetlands are common in the Chicago area. ¹⁸

The Corps of Engineers' Delineation

John Rogner is a biologist employed in the Regulatory Functions Branch of the Corps of Engineers. He handles the processing of permit applications received by the Corps of Engineers pursuant to Section 404 of the Clean Water Act. He also makes wetland delineations for the Corps. ¹⁹

He first visited the site on March 26, 1986 and noted that filling had occurred on the western and southern part of the site. Believing the filled area may have been a wetland he went on the site and inspected it. On the undisturbed portion between the filled area and Schaumburg Branch on the west and Bode Road on the south, he saw vegetation consisting of cattails, river bulrush and reed canary grass. Cattails, and river bulrush are "obligate" wetland plants (occur almost always in wetlands). Reed canary grass is a facultative wetland plant (occurs between 67% to 99% in wetlands). On the southern end along what appeared to be a former drainageway he also saw black willow and a red osier dogwood. Black willow again is an obligate wetland plant and the red osier dogwood is a facultative wetland plant. ²⁰ As he walked along the

¹⁸ Tr. 97.

¹⁹ Tr. 81-82.

²⁰ Tr. 100-105; CX 5.

western part he saw either standing water to a depth of four to five inches or soil saturation virtually the entire length. The soil in the southwest part was also saturated to the surface.²¹

Mr. Rogner then sought to determine whether the filled area satisfied the wetland indicators of vegetation, soils and hydrology. Looking first at vegetation, Mr. Rogner went to an aerial photograph dated April 19, 1980, for a photograph of the area prior to being filled. He compared the areas that he had observed where wetland vegetation remained as it appeared on the aerial photo with other parts of the aerial photo that had a similar appearance, made a determination of the extent of wetland vegetation based on that, and scaled off these areas on an aerial topographic or contour map to mark their delineation.²² He verified this delineation against the Fish and Wildlife Services Natural Wetland Inventory which plots the limits of hydrophitic vegetation as determined through their methods. He found that his delineation of wetlands on the site agreed in general with the Fish and Wildlife delineation.²³

²¹ Tr. 106-107.

²² Tr. 164-66; See CX 4 for the 1980 photo and RX 21(a) for a copy of the topographic map used by the Corps. The topographic map is based on an aerial photo taken on May 15, 1979. Tr. 418. Mr. Rogner's delineation of the entire wetland area is also shown on RX 21B, see Tr. 175, and on RX 16, where it is the dotted line as depicted in the Corps' map dated 7/9/86, Tr. 1033; Joint Ex. 1, Stip. No. 33.

²³ Tr. 167, 170-175; CX 7. The Fish and Wildlife maps are created through interpretation of high-altitude aerial photographs. The map used in this case was based upon an aerial photograph taken in October 1980. The boundaries of the Fish and Wildlife delineation are also shown on RX 21(f).

The wetland was classified by Fish and Wildlife Service as a "PEMC" type which means a palustrine wetland ("P") with emergent vegetation ("EM") and with a seasonal water regime ("C").²⁴

Next, to determine the type of soil in the filled areas, Mr. Rogner used the Soil Survey of Du Page and Cook Counties, Illinois, published by the Soil Conservation Service of the U.S. Department of Agriculture (hereafter "SCS Soil Survey").²⁵ The SCS Soil Survey showed that the soils in Area B delineated by Mr. Rogner consisted of Houghton and Muskego muck (#930) and Peotone (#330), both considered hydric soils. The northern depressional area (Area A) contained Peotone soil.²⁶ Mr. Rogner made certain adjustments in transforming the information from the Soil Survey to his own wetlands delineation. The Soil Survey mapped the Houghton and Muskego muck in southeast Area B as extending on the north and south into areas which Mr. Rogner considered had too steep a slope for such soil. Thus, Mr. Rogner's delineation did not include the entire area shown as having Houghton and Muskego muck soil on the Soil Survey.²⁷ With respect to the northeastern section (Area A), where Peotone soil was noted as being present, he delineated an

²⁴ Tr. 171-173; CX 23, p. 9. The word "pulustrine" in the transcript should be corrected to "palustrine".

²⁵ Tr. 178. The Soil Survey is CX 8. Sheet 26 contains the Victoria Crossing site.

²⁶ Tr. 184, 188; CX 8 (Sheet No. 26). The pertinent information from the Soil Survey is also shown on RX 21(e). See also CX 15, Table D1 for list of Hydric soils.

²⁷ Tr. 185-186.

area larger than that shown on the Soil Survey as having Peotone soil, and included an area mapped as having Markham soil which is not hydric. He noticed that on the topographic map from the aerial photo taken on May 15, 1979, the area shown as inundated (marked by a water elevation of 803.8 feet) extended beyond the mapped area of the Peotone soil and concluded that it was likely that the depressional area had been ponded since the beginning of the growing season and ponding of soil for this duration satisfied the requirement for a hydric soil. ²⁸

Turning finally to the hydrology indicator, Mr. Rogner walked the entire area of the undisturbed lowland in the western and southern parts between the filled area and Schaumburg Branch on the west and Bode Road on the south and noted that the entire area was either shallowly inundated or had soil saturated to the surface. ²⁹ He also consulted the Hydrologic Atlas, published by the United States Geological Survey in cooperation with the Northeastern Illinois Planning Commission, giving hydrologic data with respect to floods in the Palatine Quadrangle, Illinois, the area in which Victoria Crossing was located. Part of the site was shown as having been flooded in 1957. The location of the flooded area confirmed what the SCS Soil Survey indicated, namely, a drainageway on the southern part coming into the site from the east. The flooding took place along that drainageway and also along the

²⁸ Tr. 186-188, 433-434. According to Mr. Rogner the growing season began on March 1st. Tr. 1223.

²⁹ Tr. 192.

Schaumburg Branch. The depressional area in the northwest corner (Area A) was also shown as having been ponded during the 1957 rain event.³⁰ He further consulted the topographic map made from the aerial photo taken on May 15, 1979. This also confirmed the presence of the drainageway along the southern part coming from the east. It also showed the presence of standing water on Area A.³¹ Finally, Mr. Rogner looked at a soils report of the site made by Mr. Louis T. Hooper for Hoffman in October 1984. Borings 9, 12, and 13 were taken within the area delineated by Mr. Rogner and showed soil saturation within 12 inches of the surface of the ground even though in October the groundwater levels can be expected to be lower than they would be in the spring. The soils report also described Area 2, which comprised the eastern part of southern Area B, as likely to have a "perched" water table retaining the water near the surface. This fact together with the fact that there was an established drainageway coming through this part of the area, led Mr. Rogner to conclude that this part of the area could have wetlands hydrology.³²

Two borings were taken in Area A, the depressional area on the northeast part of the site. Both showed water several feet below the surface. Mr. Rogner did not consider this significant because this was a condition consistent with the Peotone soil found in this

³⁰ CX 9; Tr. 194-195.

³¹ CX 6; Tr. 196-197.

³² Tr. 197, 202-203; CX 10; RX 21(J). For definition of "perched water table," see infra p. 32, n. 95.

area, which is likely to have a high water table during the months of February through July.³³

A copy of the aerial contour map showing the existing and filled wetlands as delineated by the Corps was sent to Hoffman on July 9, 1986. The filled wetland Areas A & B totalled some 6.5 acres. Approximately 0.3 acres, however, at the northern end of Area B were never filled, so that the actual size of the disputed filled area is around 6.2 acres.³⁴

Summarizing Mr. Rogner's delineation, an examination of the topographic map shows that Area A is a bowl shaped area lying at the northeast edge of the site. As shown by the spacing between the contours, the eastern part of the bowl has a steeper slope than the western part. It covers approximately 1.4 acres.³⁵

³³ Tr. 203-204; see also Tr. 1405-1408. The two borings for Area A reported on the Hooper Soils Report were 2 and 19. See CX 10. For water table data, see CX 8, p. 212.

³⁴ CX 6; Tr. 257-258, 1563-1566; Joint Ex. 1, Par. 18. See also Appendix below. According to Mr. Rogner, he included the unfilled area on the basis of information furnished to him by Hoffman's engineers on the extent of the fill. Tr. 256, 1294. The EPA claims that the erroneous inclusion of these 0.3 acres was offset by the fact that Hoffman's filling activities "disturbed" another area of wetlands equal in size. Complainant's Br. at 3, n. 1. The testimony relied on is Mr. Rogner's interpretation of RX 21(d), which shows the area of fill removed according to a plan approved by the EPA. Tr. 1215. Work done according to an approved mitigation plan should not be considered as violating Section 404.

³⁵ RX 16 and overlays RX 21(a) (topographic map), 21(b) (Corps' wetland delineation), 21(c) (boundaries of filled wetlands); Tr. 1172. RX 21(a) is a copy of the topographic map containing the Corps' delineation sent by the Corps to Hoffman on July 9, 1986. It was based on aerial photo taken on May 15, 1979. Tr. 418. It is stipulated that it is a fair and accurate depiction of the site as of that date. Joint Stipulations of Law and Fact, Par. 35.

Area B is an essentially flat area on the western and southern part of the site at a lower elevation than the land to the east and north on which houses were built. On the west this wetland includes Schaumburg Branch, which is at the western boundary of the site and it extends from the northern border to the east-west leg of Bode Road on the south, excluding the higher slopes up to the road. It then forms the "southeast arm" running eastward along the southern end to where the land slopes upward to the north-south leg of Bode Road, which runs along the eastern edge of the site, but again excludes the higher slope adjacent to the road bed.³⁶ This wetland totalled about 13.3 acres. It was considered not suitable for houses and was to be turned over to the Hoffman Estates Park District.³⁷ The filled part, on the west is a strip of land at the eastern edge of the delineated wetland, and on the south, it comprises most of the southeast arm. The filled area totals about 4.8 acres.³⁸

The Correctness of the Corps' Delineation

The problem faced by the Corps in making its delineation of filled wetland was that the vegetation had been destroyed and the upper layer of the soil profile altered by the fill material. The

³⁶ RX 21(a), 21(b).

³⁷ RX 25; CX 40, p. 66; Tr. 1082-1083.

³⁸ RX 21(c). As previously noted, supra, at p. 15, the total filled area was 6.2 acres. Deducting the 1.4 acres for Area A, leaves 4.8 acres, 1.5 acres of which constituted the western strip, and the remaining 3.3 acres the filled southeast arm. See Tr. 1629. See also Appendix below.

hydrology of the site would also be affected to the extent that the fill material raised the elevation of the land or altered the land's drainage.

In evaluating the Corps delineation, it will be convenient to recognize that there are three separate areas that present somewhat different questions. First, there is Area A, the depressional or bowl shaped area for which Hoffman contends there is no credible proof of being wetland, and over which, in any event, the EPA and the Corps have no jurisdiction under Section 404. Next there is the strip on the western side. Hoffman does not really dispute that some portion of the western part adjacent to Schaumburg Branch may be wetland.³⁹ The question here, rather, is whether this wetland extends as far east as the filled strip. Finally, there is the southwest arm of Area B. Hoffman does not deny that at sometime in the past it may have been a wetland, but contends that because of changes in the drainage into the area and of drainage of the area itself, this wetland hydrology no longer exists.

One question which should be first considered is that of the burden of proof. Because of the fill it is not significant that none of the wetland parameters were evident in the filled land at the time Mr. Rogner made his investigation. He necessarily would have to rely on whatever information was available about the land prior to its being filled. This does not alter the burden of proof. The EPA must still show that its version of the facts,

³⁹ Hoffman in its answer to the complaint admitted that there were wetlands on the site.

namely, that the filled land was wetland is more probably true than Hoffman's version that the land was not a wetland.

For evidence that Areas A & B were wetlands prior to being filled, Mr. Rogner mainly relied on his own observation of the site, an aerial photograph dated April 19, 1980, a U.S. Fish and Wildlife Map of wetlands, a soil survey published by the U.S.D.A. Soil Conservation Service, a U.S. Hydrology Atlas, a topographic map made from an aerial photo taken on May 15, 1979, and a soils report of the site based on borings made in October 1984. On their face, the materials used all seem relevant to the status of the land and Mr. Rogner's delineation drawn from them reasonable, but Hoffman makes several arguments to show that they are not reliable evidence of the presence of wetlands.

Thus, with respect to the identification of wetland vegetation on Areas A and B, Hoffman argues that the aerial photo taken on April 19, 1980, used by Mr. Rogner was unreliable because it was taken more than 5 years prior to Rogner's inspection and at a time which was outside the growing season.⁴⁰

The use of an aerial photo taken within 5 years prior to alteration of the site is recommended by the Corps.⁴¹ The land here was filled in the fall of 1985.⁴² Thus, the photo was taken

⁴⁰ Resp's. Br. at 19-20, 30-31.

⁴¹ CX 15, p. 85.

⁴² Tr. 1814.

some 5 1/2 years before the land was filled, and six years prior to Mr. Rogner's inspection.

The framers of the manual presumably picked the 5 year interval as a reasonable period within which the land is not likely to change significantly.⁴³ The use of the manual for identifying wetlands is made voluntary so it cannot be construed as establishing any hard and fast rules precluding the use of a photo taken more than 5 years before the alteration.⁴⁴ No doubt a photo could be so old as to call into question its reliability, but I do not regard a photo that is no more than six years old as falling into that class. The record itself does not contain any evidence indicating that it was unreasonable for Mr. Rogner to assume that the vegetation at the time he inspected the site was not essentially different from that shown in the aerial photo.⁴⁵

Hoffman also questions whether the 1980 aerial photo was sufficiently detailed to enable Rogner to determine that there was wetland vegetation on the filled area prior to its being filled.

⁴³ Tr. 1817-1818.

⁴⁴ See CX 15, p. 1.

⁴⁵ See Tr. 398. Hoffman argues that the area of fill in the western part of Area B is the highest portion of the alleged wetlands area and, therefore, could be in transition from a wetland to an upland area. Respondent's Proposed Findings of Fact Nos. 253-255. The argument assumes that there were changes in hydrology that would affect the vegetation. The hydrology of Area B appears to have remained substantially unchanged since before 1980. Tr. 2215-2220; CX 31 (aerial photo taken April 26, 1975); CX 34. Consequently, the aerial photo would be a reliable indicator of the vegetation that would have been there when the land was filled as well as at the time Rogner made his inspection.

During his inspection Mr. Rogner noted the presence of wetlands vegetation on the undisturbed portions of Area B, as the prevalent vegetation. ⁴⁶ He concluded that areas similar in appearance on the aerial photo to the undisturbed areas where he knew wetlands vegetation was present also had wetlands vegetations. ⁴⁷ Mr. Rogner has had considerable experience in interpreting aerial photographs to determine whether wetlands vegetation is present. ⁴⁸ The use of aerial photos to determine the presence of wetland vegetation prior to fill is also a recommended procedure in the Corps' wetlands delineation manual. ⁴⁹ Mr. Rogner's experience in interpreting aerial photos and the fact that the procedure is a recognized one in determining the type of vegetation on the land prior to being filled gives credence to Mr. Rogner's interpretation even though there does appear to be a conflict of opinion as to whether this particular aerial photo could be used in this manner. ⁵⁰

⁴⁶ Tr. 104-106, 1297. The presence of wetland vegetation in the undisturbed land in the western part of Area B is also shown in photographs Mr. Rogner took on his inspection. See Tr. 127-136; CX 3N, 30, 3P, 3Q, 3R, 3T and 3U. Dr. Sanders would agree that the predominant vegetation along the creek was cattails and that it was a wetland area. Tr. 1828.

⁴⁷ Tr. 164-165.

⁴⁸ Tr. 154-155.

⁴⁹ CX 15 (p. 85).

⁵⁰ Dr. Straw said that he would not be able to tell from the aerial photo what species of vegetation was present in the area. T. 2090-2091. Mr. Rogner, however, was not purporting to identify species from the photo, but instead, was comparing the appearance of areas known to have wetland vegetation with the appearance of other areas on the photo.

It would be unrealistic in any event to reject the delineation solely on the basis of the claimed inaccuracy of this aerial photo and without considering the totality of the evidence relied on by the Corps to make its delineation.

Hoffman also asserts that the aerial photo was unreliable because it was taken outside the growing season.⁵¹ The growing season is the portion of the year when soil temperatures are above biologic zero, which is 5 degrees Centigrade or 41 degrees Fahrenheit.⁵² The anaerobic condition of saturated soil, which promotes the growth of wetlands vegetation, affects the biologic processes taking place during the growing season.⁵³ Victoria Crossing is within the Soil Conservation Services "mesic" range.⁵⁴ The growing season for that range is from March through October.⁵⁵ Hoffman argues that this is too imprecise given the geographic scope of the mesic range and that the growing season should be determined by reference to the last date of freeze in the spring and the first date of freeze in the fall for the area in which Victoria Crossing is located. On the basis of the last freezing date in the spring and the first freezing temperature in the fall,

⁵¹ Resp's. Br. at 13-14.

⁵² CX 15, p. A5; RX 5, p. A-3.

⁵³ Tr. 319, 1509, 1973-1975.

⁵⁴ Tr. 1227, 1516.

⁵⁵ RX 5, p. A-3.

the growing season for this area on the average is likely to be between May 1 and October 12.⁵⁶

The Corps' manual says that for "ease of determination" the growing season can be "approximated" by the number of frost-free days.⁵⁷ Thus, the manual recognizes that the actual growing season, which is determined by the ground and not air temperature, is not precisely fixed by the dates of the last freeze in the spring or the first in the fall which relate to the air temperature. So Rogner's assumption that March 26th, the date of his visit and April 19, the date of the photo, were within the growing season because the growing season for soils in the mesic range began in March, was not contrary to the Corps manual. Nor can it be said to be without a scientific basis.⁵⁸

In any event, the prevalent vegetation in Area B, as observed by Rogner at the time of his visit on March 26, 1986, consisted of both obligate and facultative wetland plants.⁵⁹ If the growing season had not yet begun as asserted by Hoffman it would appear that the hydrology to support wetland vegetation had been present

⁵⁶ CX 8, p. 145.

⁵⁷ CX 15, p. A-5.

⁵⁸ It is to be noted that the EPA's Wetlands Identification and Delineation Manual defines growing season solely on the regime classifications of mesic, etc. as defined in Soil Taxonomy. RX 5, p. A3. Dr. Sander's explanation that March was intended to apply only to the southern part of the mesic range and not to the northern part where Victoria Crossing was located (Tr. 1517-1518) is a refinement not contained in the Corp's manual itself.

⁵⁹ Supra, p. 10.

during the prior growing season. Rogner, then, would be justified in assuming that what he observed was representative of the area's vegetation.⁶⁰

Mr. Rogner to verify his finding that his delineated wetlands, including the filled areas, contained wetlands vegetation, compared his delineation with the National Wetland Inventory ("NWI") map prepared by the Fish and Wildlife Service of the U.S. Department of Interior.⁶¹ A comparison of the Corps' Area B with the NWI map disclosed that the NWI determination in general covers more land than the Corps' delineation, except for the eastern edge of the southeast arm where it does not extend as far east, stopping short generally of the 799 foot contour. With respect to Area A, while the NWI showed a wetland there, it was smaller in area than that determined by the Corps.⁶² Although its boundaries do not coincide completely with the Corps' delineation, the NWI Inventory so far as it does coincide, corroborates that there had been wetland vegetation on the filled portions of Areas A and B.⁶³ The

⁶⁰ The possible explanation that upland plants had been the dominant vegetation but had died off during the winter seems too speculative in the absence of knowing what the upland plants were.

⁶¹ Tr. 167, 169. The National Wetland Inventory map delineates wetlands only on the basis of soils and plants. Tr. 2202.

⁶² See RX 21(a) and compare overlay RX 21(b) (Corps' delineation) with overlay RX 21(f) (NWI boundaries). The presence of wetland vegetation on Area B was also confirmed by Sandra Lowell, a resident in the area. Tr. 46-53.

⁶³ Hoffman argues that a wetland delineation of the Corps should never be larger than an NWI wetland, Resp's. Br. at 32. Dr. Sanders apparently so concluded because the NWI does not
(continued...)

presence of cattails in Area A, but within a smaller area than that delineated by the Corps' was also observed by Mr. Hooper when he visited the site in October 1984. ⁶⁴

To determine whether the filled area satisfied the soils parameter, Mr. Rogner used the SCS Soil Survey. ⁶⁵ He scaled off on the aerial topography map the boundaries of those areas shown as having hydric soils. The SCS Survey showed hydric soils within the western part of Area B delineated by the Corps. ⁶⁶ In the southeastern branch of Area B, however, he noted that the limit of mapped hydric soil extended north into an area on the topographic map that had a higher degree of slope than was within the reported range for that slope. Accordingly, he kept his delineation to the area within the 0-2% slope indicated for this soil. The same is true of his delineation with respect to the southern end of the

⁶³(...continued)

consult hydrology. Tr. 1627. The NWI is based upon high altitude aerial photographs and is at a scale of 1:58000. CX 7; Tr. 175. The 1980 aerial photo does not appear to be a high altitude aerial photograph and is at a scale of 1" = 400' (4800"), providing a more detailed picture of the Victoria Crossing site. CX 4. Mr. Rogner's conclusion, therefore, that a more accurate line could be drawn from the 1980 aerial photo, seems entirely reasonable. Tr. 175-176.

⁶⁴ Tr. 1342-1343; 1380. It is part of Mr. Hooper's job to look for cattails. Tr. 1393.

⁶⁵ Tr. 179-180; CX 8, p. 26.

⁶⁶ The hydric soils consisted of Houghton and Muskego muck (soil series 930) and Peotone silty clay loams (soil series 330). See RX 21(e); CX 8, pp. 44, 61 and Sheet No. 26. For classification of these soils as hydric soils, see CX 15, Table D1.

site at Bode Road.⁶⁷ With respect to the northeast depression, Area A, a hydric soil was also mapped for part of that area. The topographic map which he used for his delineation showed a water surface elevation (ponded area) at 803.8'. Accordingly, he included the area lying within the 804' contour as containing hydric soils, even though part of it was mapped as having Markham silt loam which is not a listed hydric soil.⁶⁸ His reasoning was that since this area was shown as ponded on May 15 (the date of the aerial topographic map), it had undoubtedly been ponded since the beginning of the growing season and therefore, met the definition of a hydric soil.⁶⁹

Hoffman asserts that the SCS mapping, using small scale aerial photos is not precise enough to define the soil mapping units with the exactitude that Rogner has attempted.⁷⁰ Mr. Fehrenbacher, a soil scientist with the Soil Conservation Service stated, however,

⁶⁷ Tr. 185-186. The Corps' delineation limit was generally around the 800' contour. RX 21(e). Mr. Rogner's analysis of soils was confirmed in general by Mr. Fehrenbacher of the Soil Conservation Service. See Tr. 674.

⁶⁸ RX 21(e); Tr. 186-188, 196-197, 1830-1831.

⁶⁹ Tr. 187-188; RX 21(a). A hydric soil is defined generally as any soil that is saturated, flooded or ponded long enough during the growing season to develop anaerobic conditions favoring the growth and regeneration of hydrophytic vegetation. CX 15, p. A6. Mr. Rogner considered that seven days of ponding would be long enough to create anaerobic conditions. Tr. 187. Dr. Straw assumed that 10 - 14 days of ponding was necessary to create anaerobic conditions. Tr. 2305-2306. Under Mr. Rogner's assumption that the area had been ponded since the beginning of the growing season, either condition would have been satisfied.

⁷⁰ Resp's. Br. at 22-23.

that while the possibility of error was always present, since the lines between mapping units on the SCS map could represent a distance of 50 to 100 feet on the ground, the accuracy of the line could be verified by comparing the line with the contours on a detailed contour map, as Mr. Rogner had done.⁷¹

The SCS mappings are prepared with sufficient care that they do present credible evidence in themselves of the soils within the mapping area.⁷² Soil borings are not necessary, but if they are taken, the accuracy of the SCS mappings, of course, must be evaluated against what the borings disclose. In this case there were soil borings taken by Mr. Hooper. While they were not taken for the purpose of making a wetlands delineation, the information they disclose is not inconsistent with Mr. Rogner's hydric soils determination.⁷³

⁷¹ Tr. 688-690.

⁷² The photos are inspected for overtones and are taken during the spring when there is the most reflection from the soils. They are also viewed stereoscopically to identify slope breaks between landscape units. The soil mapping lines are also verified by soil borings. Tr. 584-585, 636-639.

⁷³ CX 10, 48. Mr. Hooper's borings were taken in October 1984. Mr. Hooper's Area 4 includes much of the filled land in the western part of Area B and also a sizable part of the southeast branch of Area B. Compare RX 21(c) (overlay of Corps' delineation) with RX 21(J) (overlay of Hooper's soils map). He describes this area as defining "marsh-like features at the site" and as having "[h]ighly compressible soils in the form of peats and organic," CX 10. This is consistent with the Muskego and Houghton muck series. CX 8, pp. 99, 108. Hoffman points out that Hooper's borings Nos. 6, 7, 8, 12, 13, 25 and 26 which are also in the filled area or on the line in Area B indicate that there is an area of mineral soil which stretches for as much as 300 feet through the filled area. Resp's. Reply Br. at 20. Peotone, also a hydric soil, is a silty clay, mineral soil, and is often included with Houghton and Muskego (continued...)

Finally, to determine the hydrology of the filled land, Mr. Rogner first observed that the undisturbed portions of Area B was either shallowly inundated or had soil saturated to the surface.⁷⁴ Hoffman argues that this evidence is irrelevant. I disagree. None of the factors cited by Hoffman persuade me that the wet condition observed by Rogner was not characteristic of the normal condition of the site at that time of the year, which would be the early part of the growing season.⁷⁵

For the evidence of hydrology, Mr. Rogner observed that both the aerial topographic map and the Hydrologic Investigations Atlas,

⁷³(...continued)
muck. CX 8, pp. 44, 61; CX 10, CX 48; RX 21(j); Tr. 190, 665. Thus, the presence of mineral soil would not be inconsistent with Mr. Rogner's determination that the filled area had hydric soils present. The same observation could be made with respect to Walter's Boring Nos. B6 and B9. See RX 6, 21(K).

⁷⁴ Tr. 191-192.

⁷⁵ Hoffman argues that the wetness could have been caused by melting snow from snow that had fallen a week before, by the fact that the ground may have been partially frozen, by the lack of the growing vegetation (because of the claim that the growing season had not yet begun) which would dry the soil through transpiration, and by the unevenness of terrain caused by a stockpile of topsoil. Resp's. Br. at 46. The possibility that construction may have created a berm that would retain water in the undisturbed part of Area B seems mere speculation on Dr. Sander's part. Tr. 1635-1636. What would seem to be more significant was that the filled area itself was not inundated or showing soil saturation like the undisturbed part adjacent to it. Tr. 191. This is in contrast to the fact that the soil borings in the filled area taken by Mr. Hooper in October 1984, prior to fill showed saturated conditions in the soil. *Infra*, at p. 31. That the ground might have been partially frozen also appears to be speculative. Precipitation undoubtedly will affect the wetness of the soil but the record does not show that there was an unusual amount of precipitation. See RX 27. The record also does not show how the amount of vegetation would have differed from what would exist in the early part of the growing season.

published by the U.S. Geologic Survey disclosed that there was a drainageway coming into the southeast arm of Area B from across Bode Road. ⁷⁶ The aerial topographic map also showed standing water in Area A. ⁷⁷

Hoffman argues that the water elevation on the aerial topographic map shown for Area A is not evidence of the normal wetness of the site, asserting there was an unusual amount of rain preceding May 15, 1979, which was the date the aerial photo was taken. ⁷⁸ It is true that the precipitation data for the 29-year period 1959-1987, discloses that there was more than the "average" amount of precipitation prior to May 15, 1979. ⁷⁹ Nevertheless, the ponding

⁷⁶ Tr. 195, 196; RX 21(a) (which is identical to CX 6); CX 9. Mr. Rogner described the drainageway as a "swale," which is a low depressional area that water tends to collect in and move onward. Tr. 1409. The Hydrologic Investigations Atlas also showed that there was an area along the drainageway and along Schaumburg Branch roughly coinciding with Area B, that was flooded in 1957. CX 9.

⁷⁷ RX 21(a). The surface water is shown by the symbol "W.E. 803.8" which denotes standing water at that elevation.

⁷⁸ Resp's. Br. at 35-36.

⁷⁹ RX 31, p. 4A. How much above average the precipitation was depends on what comparison is being made. Dr. Straw defines an "abnormal" rainfall as 50% above the historical average. Tr. 1832, 2363-2368. Hoffman argues that the rainfall for the period from December to May 14 was 49.1% higher than normal. The actual computation is not spelled out. Dr. Straw's statement that the rainfall for the 14 days in May was 54% above normal (Tr. 2185) is not supported by data showing what the average rainfall for the first 14 days in May is. Rainfall for the entire month of May 1979, amounted to 2.58 inches and was 22% below the average for the month of 3.32 inches, making Dr. Straw's assumption questionable. CX 31, p. 4A. The EPA using the data for the entire month of May calculates the rainfall for the six month period as 33% above normal. Complainant's Reply Br. at 37-38. If the precipitation for the 14 days in May amounting to 2.54 inches is
(continued...)

was consistent with the topography, a closed depressional area.⁸⁰ It was also consistent with the evidence of Peotone soil, a wetland soil, in the area.⁸¹ Also to be considered is that the exact topography of the area under the ponding was not known, so that the heavier precipitation could have meant a more widespread ponding rather than the difference between a wet and a dry area.⁸² The evidence, therefore, does support the Corps' delineation insofar

⁷⁹(...continued)

used for both the specific period and the average, an assumption which seems as plausible as Hoffman's or the EPA's, then the precipitation is about 40% above average (20.19 inches for the specific period and 14.42 for the average).

⁸⁰ Tr. 1405-1406. Mr. Hooper, however, was referring to his Area 3, which is smaller in circumference than the Corps' delineation. Compare RX 21(b) with RX 21(J). "Ponded" is defined in the Corps' manual as a condition in which water stands in a closed depression and may be removed only by percolation, evaporation, or transpiration. CX 15, p. A10.

⁸¹ "Peotone" is defined in the SCS Soil Survey as a "nearly level, very poorly drained soil" located in depressions that receive sediment from surrounding slopes. "Poorly drained" is defined as a condition where "[w]ater is removed so slowly that the soil is saturated periodically during the growing season or remains wet for long periods." CX 8, pp. 44, 126 (definition of "drainage class"). Hoffman argues that the expected frequency of flooding is once every four years. Resp's. Br. at 37. This is based on the fact that the expected high water table for Peotone is from February through July. CX 8, p. 212. The assumption that one-half the flooding over a four year period will, therefore, happen during the months of February, March and April, Tr. 2177, seems too conjectural to be credible. The presence of a high water table in February - July is not inconsistent with Mr. Hooper's borings in Area 1 in October 1984, showing dry conditions near the surface. CX 10 (Boring Nos. 2 and 19.)

⁸² See Tr. 1834-1835.

as it includes the area mapped as having Peotone soil. It is less persuasive with respect to the area mapped as having Markham soil.⁸³

With respect to Area B, Mr. Rogner, as already noted, took into account the existence of the drainageway along the southeast arm with water flowing from the east of Bode Road west across the southeast arm toward Schaumburg Branch. The drainage way would, of course, be an indication that the area was periodically inundated.⁸⁴

Mr. Rogner also looked at the soils report made by Louis T. Hooper, a registered structural engineer, for Hoffman based on a study of the site made in October 1984.⁸⁵ In general, Mr. Hooper's Area 4, which he describes as a "marsh-like" feature, follows the Corps' delineation of Area B on the west and south except that it

⁸³ Markham soil is defined as a "gently sloping and moderately well drained soil on ridges, knolls and short, uneven side slopes of undulating glacial till plains or moraines on uplands." CX 8, p. 53. Both the mapping of Markham soil and the evidence of heavier than average rainfall tends to discredit Mr. Rogner's assumption that the wetland extended throughout the ponded area. This is also confirmed by Mr. Hooper's observation that he did not observe cattails throughout the area. Tr. 1342.

⁸⁴ See CX 8, Sheet No. 26. The Victoria Crossing site (outlined in blue on Sheet No. 26) is reproduced on RX 21(e). The drainageway is shown by a broken line interspersed with three dots. Tr. 188-189. The symbol in this instance apparently stands for an ephemeral stream, which only flows when it rains. Tr. 2169. Drainage patterns are considered a wetlands indicator. CX 15, p. 41.

⁸⁵ Tr. 197. The soils report is CX 10. A copy of the boring location sketch attached to the report is also in evidence as RX 21(J). A supplemental report dated October 24, 1984 is contained in CX 48.

does not extend as far east.⁸⁶ The borings on this Area 4 showed water either at the ground surface or within one foot of the ground surface.⁸⁷ The saturated soil necessary to create the anaerobic environment for the growth of wetland vegetation must exist within the major portion of the root zone. The major portion of the root zone for purposes of wetland determination is considered to be the top 12 inches of the soil.⁸⁸

One exception where Mr. Hooper's mapping of a marshy area differed from the Corps' delineation was Hooper Boring No. 8, which is in the filled area delineated by the Corps to the east of Boring 7. This boring was dry.⁸⁹ Mr. Rogner considered this an anomalous reading, because it was at the same elevation as Boring 7. Accordingly, he did not let it change the delineation he had made on the basis of vegetation and soils even though Boring 8 was within the area.⁹⁰ Mr. Hooper in his mapping of the area, included this boring in his Area 1, the area which he found was unlikely to have groundwater above 10'. Thus, his mapping shows a shallow U bulge around Boring 8 extending into the filled area

⁸⁶ CX 10; Compare overlays RX 21(a), RX 21(c) and RX 21(J).

⁸⁷ See logs for borings B.7, B.9, B.12, and B.13, in CX 10. See also logs for supplemental borings B.21-29, CX 48. B.7, B.12 and B.13 are within the filled area delineated by the Corps. B.9 is on the border. RX 21(a), 21(c), 21(J).

⁸⁸ Tr. 313-314.

⁸⁹ CX 10.

⁹⁰ Tr. 200-201; RX 21(a), 21(c) and 21(J).

delineated by the Corps. ⁹¹ Mr. Rogner's reason for assuming that Boring 8 was not representative of hydrology of the area because it is at the same elevation as Boring 11 is persuasive. ⁹²

The eastern tip of the Corps' delineation in the southern part of Area B ends at the 802' contour. Mr. Hooper's Area 4, does not extend as far east but stops at the 703' contour, where Boring 13 was taken, with the southern tip going to the 796' contour, somewhat to the east of Boring 12. ⁹³ East of Mr. Hooper's Area 4, but falling within the Corps' delineation, Mr. Hooper mapped a small segment on the northern part as his Area 1, and the remainder which falls within the Corps' delineation, as Area 2. ⁹⁴ Mr. Hooper concluded that Area 2 had a perched water table making it probable that free groundwater would be present in spring and early summer. ⁹⁵ Consequently, Mr. Rogner did not think it significant that Boring 11, in Mr. Hooper's Area 2, but just outside the Corps' delineation was a dry hole. Mr. Rogner was of the opinion that while the presence of an established drainageway coming through the

⁹¹ CX 10; RX 21(a), 21(c), 21(J).

⁹² Tr. 202. Supplemental Boring 28 next to Boring 7 also showed water at the ground level. CX 48.

⁹³ RX 21(a), 21(c), 21(J).

⁹⁴ The small segment mapped as Area 1 includes the area showing a water elevation (W.E.) at 793.6. RX 21(a), RX 21(c), RX 21(J).

⁹⁵ CX 10. A "perched" water table lies above the permanent water table and is created by an impermeable layer of soil (in this case glacial till) lying between the topsoil and the permanent water table. Tr. 1334, 1385, 1968.

area and the perched water table was in itself inconclusive evidence of wetlands hydrology in this particular location, he could still rely on the evidence of wetland vegetation and soils to extend his delineation as far east as he did. ⁹⁶

Hoffman argues that the Hooper data is subject to the same defects it has urged against other data relied on by Rogner, namely, that it does not reflect conditions during the growing season and does not consider the effect that precipitation might have on the water levels. ⁹⁷ In October, however, one would expect that water levels would be lower than in the early spring when the snow melts. ⁹⁸ The probabilities, then, are that if the soil is saturated in October, it was also saturated in the spring during the early part of the growing season. Hoffman argues that the saturated soil conditions may have been caused by significant rainfall events in late September and mid October combined with freeze dates in September that killed the plants and limited removal by evapotranspiration, and, therefore, it does not represent normal conditions. This argument is rejected as too speculative. Certainly, Mr. Hooper considered the wet conditions

⁹⁶ Tr. 203.

⁹⁷ Resp's. Br. at 24-25, 47.

⁹⁸ Tr. 200, 1843.

disclosed by the soil borings as reliable enough for his soil analysis.⁹⁹

It should also be noted that the high water table revealed by Mr. Hooper's borings is consistent with Muskego-Houghton soil indicated for Area B on the SCS Soils Survey.¹⁰⁰

Hoffman also argues that the information is for the undrained phase of the 903 Muskego-Houghton muck soil, and here the soil has been drained by Schaumburg Branch.¹⁰¹ The SCS Soil Survey in describing Muskego and Houghton muck soils states that in areas that are not drained or where drainage systems have failed a

⁹⁹ Again the question is what is the standard for measuring the normal or abnormal rainfall over time. If a period of several months is used, as Hoffman did in referring to the precipitation at the time of the aerial topographic map of May 15, 1979, there was in 1984 above average rainfall for May and October and below average rainfall in the months of June, July and August, and slightly above average rainfall in September. RX 31, p. 4A. During the months of September and October, only one rain of over 1" took place (on September 25, 1984). This event was not designated as an "extreme" rainfall event. CX 41. Moreover, evaporative and transpiration rates would appear to be dependent upon both the type of plant cover and the amount of plant cover. CX 15, p. 35. There is no evidence to indicate that there was any significant difference in either the amount or type of vegetation in Area B, between October and the early spring when Mr. Rogner inspected the site.

¹⁰⁰ The high water table in October would be consistent with the Houghton component of the Houghton-Muskego muck mapped for Area B. See CX 8, p. 213. Hoffman argues that this is general data for a wide range of Muskego-Houghton soils. Resp's. Br. at 48. It may be true that there is no guarantee that the water tables are as stated in every case, but this would not preclude using the information in conjunction with other data as Mr. Rogner did, to determine what the probability was that the area was a wetland. See Tr. 497-498.

¹⁰¹ Resp's. Br. at 48.

continuous or frequent high water table is near the surface.¹⁰² The high water table disclosed by the Hooper borings as well as the wet condition observed by Rogner show that the Schaumburg Branch was not draining the area efficiently enough to eliminate wetland conditions.¹⁰³

Hoffman relies on borings taken by Louis K. Walters, Jr. & Associates in July 1973.¹⁰⁴ This data, however, must be given less weight than Mr. Hooper's data insofar as the two appear to conflict on the hydrology of the delineated area because the person who took the borings was not available to explain the data.¹⁰⁵

There has been considerable controversy over how the perched water table in Mr. Hooper's Area 2 affects the hydrology of the part of the delineated area in the southeast arm lying east of the 793 foot contour. Mr. Kirschner asserted that the floor of this

¹⁰² CX 8, pp. 61-62.

¹⁰³ Hoffman argues that the effect of draining is more prominent up-slope in the filled area. Resp's. Br. at 48. The contour map indicates an almost flat terrain in most of Area B. RX 21(a). The exception is the eastern part of the southwest arm where the contours become more closely spaced together, and where conceivably slope may have some effect on drainage. Dr. Sander's testimony that in coastal and freshwater marshes a matter of inches difference in vertical elevation can make a difference in the type of vegetation (Tr. 1561) is too general to be of any use.

¹⁰⁴ Hoffman's proposed findings Nos. 139, 293 and 364. See RX 6 and RX 21(k) for the Walter borings and their location on the site.

¹⁰⁵ It is to be noted that the area was probably farmed at the time of Mr. Walter's borings and that this may have affected the drainage. See Tr. 471-473, and testimony with respect to the aerial photo taken in April 1970 (CX 30), Tr. 2065.

perched water table was 1.5 feet below the surface. He based this on his analysis of Mr. Hooper's Boring No. 11, the soil profile of which showed blacktop soil from the surface down to 1.5 feet, and from 1.5 feet to 3 feet a silty clay.¹⁰⁶ Mr. Kirschner testified that the blacktop soil will have a higher infiltration rate than the clay soil, and water will also percolate through the blacktop soil at a faster rate than through the clay soil.¹⁰⁷ According to Mr. Kirschner's calculations, the percolation downward through the blacktop soil would be impeded when the clay soil was reached. In the event of a rain, the area would be fed not only by rainfall directly upon it but also by groundwater movement and run-off from the adjacent uplands. One and one-half to one and three quarter inches of rainfall would be sufficient to saturate six inches of topsoil, thus bringing the water to the top 12 inches of soil which is the level of the root zone.¹⁰⁸

¹⁰⁶ CX 10.

¹⁰⁷ Tr. 2675, 2677-2678. The infiltration rate on the clay soil is 0.05 inches per hour compared to an infiltration rate of 0.4 inches per hour for the blacktop soil. Tr. 2773. The percolation rates were taken from the permeability definitions in the SCS Soil Survey. The value for clay of 0.4 inches per hour was the midrange value for a "moderately slow" rate (0.2 to 0.6 inches per hour). Hoffman chooses to use the percolation rate for Markham soil, which it argues was the clay soil, and thus comes to 0.33 inches per hour. Resp's. Br. at 64, and proposed finding No. 358. Consequently, this figure would not change Mr. Kirschner's analysis on differential rates. The percolation rate for the blacktop soil of 1.4 inches per hour was the midrange value for the "moderate rate" (0.6 to 2.0 inches per hour).

¹⁰⁸ Tr. 2681-2682; see also Tr. 2671-2673.

Hoffman points out that there are several flaws in Mr. Kirschner's testimony. First, it was Mr. Hooper's testimony that the floor of the perched water table would be at 5.2 feet where the glacial till was encountered and that it would be about one to two feet high.¹⁰⁹ Hoffman also argues that because water is percolating through the clay at 0.4 inches per hour and moving laterally through the clay down gradient, it is unlikely that the water level in the blacktop would rise high enough to saturate the top 12 inches of soil.¹¹⁰ While Mr. Kirschner believes this percolation through the clay did not prevent the buildup of a perched water table at a level higher than the glacial till, his testimony seems to be more conjecture than fact.

Also, it is not completely clear about what consideration Mr. Kirschner gave to lateral flow through the topsoil. The contour map discloses that there is some downward sloping from the 802' contour at the eastern tip to the 793' contour.¹¹¹ The EPA argues that the slow movement of the water laterally would still result in a buildup.¹¹² This is not what Mr. Kirschner actually testified to. His calculations on percolation rates appear to have been done for the purpose of demonstrating the difference in rates between

¹⁰⁹ Tr. 1418, 1420.

¹¹⁰ Resp's. Reply Br. at 27-28.

¹¹¹ Mr. Hooper noted that the swale like features of the area would slow the lateral migration of the water, but there would still be migration to his Area 4. Tr. 1416.

¹¹² Complainant's Reply Br. at 58.

the blacktop soil and the clay, and not to show that the rate of lateral percolation through the topsoil was so slow as to contribute to the creation of the perched water table. ¹¹³

There is also other evidence casting doubt about the propriety of the Corps delineation insofar as it includes Mr. Hooper's Area 2. Apparently, Mr. Rogner in including this area in his delineation relied on what he considered to be the concordance of soils and vegetation. ¹¹⁴ Mr. Hooper's soil boring 11, which is the only boring in his Area 2 (but outside the delineated area) apparently showed soil which did not meet the Muskego criteria. ¹¹⁵ The slope from the 793' to the 800' contour, which was the basis on which Mr. Rogner modified the Muskego mapping on the SCS Soil Survey, is approximately 2.2%, which is consistent with Markham, an upland soil, as well as with Muskego. ¹¹⁶

¹¹³ See Tr. 2683-2685. The EPA also argues that Hooper's Area 2 is concave. Complainant's Reply Br. at 60, n. 2. The topographical map shows that the filled area is a depressional area with higher ground on the north, east and south, but not that the slope toward the west is concave so as to impede the flow of water. One possible explanation is that saturated conditions in Mr. Hooper's Area 4 in the early spring would also obstruct the lateral flow of the water westward thereby contributing to the buildup of water in Mr. Hooper's Area 2. See Tr. 1423. If this were a factor, however, it would seem that Mr. Kirschner would have mentioned it.

¹¹⁴ Tr. 203.

¹¹⁵ Tr. 1666-1667.

¹¹⁶ Tr. 185-186. CX 8, pp. 99, 103, 108. In some parts, the Corps' delineation includes slopes that appear to be as steep as the area excluded. See Tr. 1663-1664. See also RX 21(a).

The evidence does support the Corps' wetland delineation up to the 795' contour, on a line roughly coinciding with the line between Mr. Hooper's soil Areas 4 and 2.¹¹⁷ It is inconclusive on whether the necessary vegetation, soils and hydrology are present east of that line. Accordingly, I find that the evidence does not support the Corps' delineation east of the 795' contour.

Conclusion as to Corp's Delineation

A. General Consideration

Hoffman argues that the definition of wetlands adopted by the Corps and the EPA does not give adequate notice of when an area is subject to Section 404 jurisdiction.¹¹⁸ The definition is clear enough as to what elements identify a wetland, namely, the degree and duration of its wetness and the type of vegetation prevalent on it.¹¹⁹ This conclusion is confirmed by the fact that the

¹¹⁷ Hoffman argues that the hydric soils do not extend east of the 793' contour. Resp's. Br. at 57. Even Dr. Sanders, however, agreed that Muskego soil could have extended to the 795' contour. Tr. 1667. This also borne out by Mr. Hooper's mapping of soil Area 4. CX 10.

¹¹⁸ Resp's. Br. at 75-76.

¹¹⁹ "Inundation" and "saturation" are used in their normal sense of defining a condition of wetness caused by ground or surface water. See e.g., definitions in Webster's New World Dictionary of the American Language (College Ed.). "Prevalent" in its normal sense means widespread. Id. The Corps and the EPA in their manuals have applied it in the narrower sense of over 50% of the dominant species being hydrophitic. Tr. 361-362. See also CX 15, p. 16; RX 5, p. 9. Conceivably, there could be instances when the Corps and the EPA would not take jurisdiction even though the vegetation parameter would be literally met. The wording, nevertheless, is clear enough to put a party on notice that if the wetlands vegetation in an area is widespread, the area is potentially subject to Section 404 jurisdiction and the party should act accordingly.

definition has been considered by the courts on numerous occasions. None have found it ambiguous or indefinite. Instead, the questions have turned on its application to particular situations. See e.g., United States v. Riverside Bayview Homes, 474 U.S. 121 (1985) (construction of wetlands definition to exclude wetlands that were not subject to flooding by adjacent navigable waters rejected as contrary to the "plain language" of the definition); Avoyelles Sportsmen's League, Inc. v. Marsh, 715 F.2d 897, 916-917 (5th Cir. 1983) (rejecting claim that definition was too vague in construing it to apply to a tract of land which had considerable flooding during a substantial portion of the year and served as a major overflow or backwater area for the Red River). Indeed, Hoffman itself admits that it has no problem with identifying areas that are permanently inundated or saturated as wetlands, such as swamps or bogs, but questions applying the definition to seasonal wetlands.¹²⁰ Thus, its argument is not whether the regulation is unclear, but whether it can be reasonably interpreted to include seasonal wetlands, which are saturated only at certain times of the

¹²⁰ Resp's. Br. at 75-76.

year.¹²¹ Read literally, the definition does include seasonal wetlands if they are saturated long enough and frequently enough to support and under normal circumstances do support a prevalence of hydrophitic vegetation.¹²² In sum, Hoffman's objection is not with the clarity of the definition but with the expansive reading that it fears can be given to it.

Hoffman also argues that the ambiguity in the definition is shown by the difference in identification procedures between the Corps' manual and the EPA's manual. Both agencies, however, have the same definition, and both have to show that the requisite hydrology, soils and vegetation are present. The Corps' manual warns that sole reliance on vegetation can be sometimes misleading because many plant species can grow successfully in both wetlands and non-wetlands.¹²³ The EPA manual, on the other hand, says that data on soils or hydrology may not be necessary if the area is dominated by one or more obligate wetland species.¹²⁴ The question, then, is whether the requisite hydrology can reasonably be inferred from the vegetation alone, not that the hydrology need

¹²¹ An area where there is a perched water table, for example, is likely to be saturated in the early spring when rainfall and snow melt contribute to the wetness of an area, but not later in the year when drier conditions exist.

¹²² All that is required is that the ground be saturated long enough to create anaerobic conditions so that upland plants can no longer thrive. This usually means that the area must be continuously saturated within the top 12 inches of soil for seven days or more. See supra, p. 8, n. 12.

¹²³ CX 15, p. 10.

¹²⁴ RX 5, p. 7.

not be present. The EPA believes that the necessary hydrological conditions can be inferred when the area is dominated by obligate wetland species which occur more than 99% in wetlands and less than 1% in uplands.¹²⁵ Where the area is dominated by facultative plants, the EPA's manual says that data on soils and hydrology should also be obtained.¹²⁶ The differences, in short, are differences in methodology and not in definition. Given the probability of an obligate wetland plant appearing on wetlands, the EPA premise that land dominated by obligate wetland plants is a wetland seems reasonable. If Hoffman is confused by what it sees as the difference in methodology, it is only because it has chosen to make the methodology controlling rather than the definition. This is an unjustified reading of the manual in view of the fact that it is intended to provide guidance only on how to delineate a wetland and approved solely for voluntary use.¹²⁷ In any event, Hoffman's argument about the Corps and the EPA arriving at different delineations is theoretical because there is no disagreement between the Corps and the EPA in this case.

If the question before me was whether at the outset the complaint would withstand a motion to dismiss, I would hold that the evidence relied on by the Corps - Mr. Rogner's own site visit, the aerial photo of April 19, 1980, the aerial topographic map of

¹²⁵ Both manuals define obligate wetland plants as occurring more than 99% on wetlands. CX 15, p. 18; RX 5, p. A-4.

¹²⁶ RX 5, p. 12.

¹²⁷ CX 15, p. 1.

May 15, 1979, the SCS Soil Survey, the National Wetland Inventory Map, and the soil borings of Mr. Hooper - is sufficient to make a prima facie case in support of its assertion of Section 404 jurisdiction. The question before me, however, is whether the EPA has shown by the preponderance of the evidence, after considering the entire record and taking into account whatever evidence fairly detracts from the Corps' delineation, that wetland areas have been filled. Thus, while the thoroughness of the Corps investigation initially is in the Corps' discretion, if the investigation is not thorough enough, the Corps and the EPA do run the risk of having their assertion of Section 404 jurisdiction rejected on review.

Area A

The weight of the evidence does support a finding that there is a wetland in Area A. I find, however, that it encompasses a smaller area than that delineated by the Corps. ¹²⁸

¹²⁸ Mr. Rogner's delineation based on interpreting the 1980 aerial photo as to the presence of wetland vegetation and the finding of a W.E. at 803.8 feet on the 1979 topographic map must be evaluated against the fact that the draft National Wetland Inventory Map showed a smaller area as having wetland vegetation. See Tr. 174; RX 21(a), 21(c) and 21(f). The SCS Soils Map also showed a smaller area as having hydric soils. RX 21(e). In assuming that wetlands hydrology extends into the non-hydric soils on the basis of the W.E. shown in the 1979 topological map, Mr. Rogner does not appear to have taken into account that heavier than average rainfall could have contributed to the depth of the ponding. Supra, p. 28. The evidence, however, does point to a perched water table in this depressional area which could produce ponding in the spring for a sufficient deviation to create an anaerobic condition. See CX 10 (free groundwater encountered above till in Area 3); CX 6, p. 212 (features for Peotone Soil). On evaluation of the entire evidence, I believe that the area mapped as hydric soils in the SCS Soils Map should be given the greatest weight in delineating the wetland.

A question also raised by Hoffman is whether Area A, even if it is a wetland within the Corps and EPA definition, is subject to Section 404 jurisdiction.

Jurisdiction over wetlands rests upon their qualifying as "waters of the United States." Congress intended "waters of the United States" to reach to the full extent permissible under the Constitution. United States v. Lambert, 695 F.2d 536, 538 (11th Cir. 1983); Natural Resources Defense Council, Inc. v. Callaway, 392 F. Supp. 685, 686 (DDC 1975). Enforcement of Section 404, however, is accomplished through the regulations. Under the Corps and EPA regulations, jurisdiction over waters of the United States as it applies to intrastate wetlands is spelled out in two sections.

First, waters of the United States is defined as meaning "intrastate . . . wetlands . . . the use degradation or destruction of which could affect interstate or foreign commerce including any such waters." ¹²⁹

Second, "waters of the United States" is defined as meaning "[w]etlands adjacent to waters (other than waters that are themselves wetlands)" that are identified in the definition of waters of the United States. ¹³⁰ "Adjacent" is defined as follows:

The term "adjacent means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made

¹²⁹ 33 C.F.R. Section 328.3(a)(3), 40 C.F.R. Section 230.3(s)(3).

¹³⁰ 33 C.F.R. 328.3(a)(7), 40 C.F.R. 230.3(s)(7).

dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands." ¹³¹

The EPA asserts jurisdiction over Area A on two grounds.

First, it argues that it is "adjacent" to the Schaumburg Branch even though it is approximately 750' away. ¹³²

The EPA has not shown that Area A has any surface or ground-water connection with the Schaumburg Branch. ¹³³ The EPA argues that Area A did perform sediment trapping and flood control functions. ¹³⁴ This is apparently because of its bowl shape. ¹³⁵ Contrary to what the EPA argues, however, it does not appear, to have performed these functions in connection with drainage into or the possible flooding of the Schaumburg Branch. ¹³⁶

Area A is not bordering on or contiguous to another waters of the United States within the normal meaning of bordering or contiguous. The word "neighboring", in itself, provides no key to how distant an isolated wetland can be and still be considered neighboring. The examples given in the second sentence of the

¹³¹ 33 C.F.R. 328.3(c), 40 C.F.R. 230.3(b).

¹³² Complainant's Br. at 52-53, Reply Br. at 69-70.

¹³³ See Tr. 2311. There also appears to be no drainage connection between Area A and the lake to the north. Tr. 2458-2459. See CX 32 for the lake. Water drains into Area A from the immediately surrounding areas, collects in the bowl and then slowly evaporates or dissipates. Tr. 1386-1387, 1405-1406.

¹³⁴ Complainant's Br. at 53.

¹³⁵ Tr. 1716-1717, 2541-2542.

¹³⁶ See e.g. CX 9; Tr. 2197-2198.

definition are not helpful for Area A is not separated from the Schaumburg Branch by man-made dikes or barriers, or natural river berms, or beach dunes. If the cases are looked to for guidance, those cited by the EPA are all instances where the wetland was in much closer proximity to what was clearly waters of the United States as defined by the Corps and the EPA, or had a direct drainage connection into those waters.

In United States v. Riverside Bayview Homes, 474 U.S. 121 (1985), the filled wetland was part of a larger area that extended to Black Creek, a navigable waterway. The court held that this was sufficient to make it a part of the waters of the United States as a wetland adjacent to a navigable waterway, and it reversed the lower court's holding that it had to be subject to flooding by a navigable waterway. 474 U.S. at 131.

In United States v. Byrd, 609 F.2d 1204 (7th Cir. 1979), the wetland did appear to border upon a lake which was a navigable water, but was higher than the lake. The landowner argued that there was a natural barrier that prevented the wetland from ever being inundated by water from the lake and that the regulation required proof that the wetlands were inundated by waters from the lake. The district court rejected this argument, which ruling was upheld on appeal. 609 F.2d at 1208, 1211.

In Conant v. United States, 786 F.2d 1008 (11th Cir. 1986), the facts are difficult to ascertain. The Corps, however, did find that the land in question lay in a wetlands area of the Santa Fe River and that it trapped undesirable pollutants and sediments

before they reached the area. Any such connection between Area A and Schaumburg Branch has not been established in this case.

In United States v. Lee Wood Contracting, 529 F.Supp. 119 (E.D. Mich. 1981) the exact facts are also difficult to discern. Again, however, it does appear that water from the land in question did eventually drain into the Quancassee River, a navigable water. Specifically, the court found that there was a direct water connection between the Terry Drain alongside which the land was located and the river. 529 F.Supp. at 120-121. The court held that this was sufficient to make it an adjacent wetland even though it was at some distance from the river.

There is no evidence here of any direct connection between Area A and the Schaumburg Branch. The water flows into Area A and stays there. There is also no basis for determining if Area A has any effect on the Schaumburg Branch, because it simply cannot be determined what the drainage or flow of water would be if Area A were not there.

"Adjacent" in its ordinary meaning connotes some spatial consideration. The courts, however, have extended it to include wetlands which can affect the water quality and aquatic ecosystems of navigable waters. As I read the cases there still must be some showing that the wetland to be an adjacent wetland must have some effect on the water quality and aquatic ecosystems of the waters of the United States it is claimed to be adjacent to, even though

it may not be significant.¹³⁷ In short, neither the facts nor the case law support the EPA's construction of adjacent as applying to Area A and I find that Area A is not, therefore, an adjacent water within the meaning of the regulations.

The other grounds for asserting jurisdiction over Area A under the regulation is that it can be used potentially by migratory birds.¹³⁸ There is no evidence that any migratory birds actually used the area.¹³⁹ Wetlands that "could affect" interstate or foreign commerce are part of the waters of the United States under the regulation. There is no evidence, however, that Area A contains any characteristic that would render it any more attractive to birds than any other land that at one time or another contains water. As Mr. Gerald Bade, a fish and wildlife biologist with the Fish and Wildlife Service, stated in testifying about the potential use of the area by waterfowl, "I have seen ducks sitting in puddles in a parking lot."¹⁴⁰

To sum up the evidence, Area A is an isolated depressional area of about 1 acre in size.¹⁴¹ It has not been shown to have

¹³⁷ See *United States v. Riverside Bayview Homes*, 474 U.S. at 135, n. 9.

¹³⁸ Complainant's Br. at 53-54, Reply Br. at 70-73.

¹³⁹ See Tr. 792-793, 932.

¹⁴⁰ Tr. 542. Area A is not a prairie pothole, which is the prime nesting grounds for North American waterfowl. Tr. 567.

¹⁴¹ According to the Corps' delineation, Area A is approximately 1.41 acres. RX 16. The actual wetland has been found to be smaller than the area delineated by the Corps. Supra, p. 43.

any connection with waters of the United States, as defined in the regulations, except as all waters can be considered to be hydrologically interconnected. Potentially it could be used by migratory birds, although it does not appear to play any special role in their ecology. The extent to which it would be used and indeed that it would have any effect at all on migratory birds is questionable. It seems to me that to include Area A as a wetland subject to Section 404 is tantamount to making all wetlands subject to Section 404 jurisdiction. Congress may indeed have jurisdiction under the Clean Water Act to put all wetlands under Section 404 jurisdiction but we are dealing with the construction of a regulation. The regulation qualifies wetlands subject to regulation by requiring that they be adjacent wetlands or that their destruction could affect interstate commerce. It is not an adjacent wetland for the reasons noted above. As to the possible effects on migratory birds, the rationale for asserting jurisdiction is that the area is a wetland. It is reasonable to construe the regulation, accordingly, as meaning more than the theoretical possibility that the area could be used by migratory birds, which presumably would also be true of many other areas besides wetlands. In this respect, it is relevant to consider a memorandum commenting on the Clean Water Act's jurisdiction over isolated waters, by Francis S. Blake, then General Counsel of the EPA, written in September 1985. After summarizing the legislative history, Mr. Blake stated as follows:

With this background, I now turn to the specific question at hand. In simplified terms, the answer is that if the evidence reasonably shows that the waters "are used or would be used" by migratory birds or endangered species, it is covered by EPA's regulation. Of course, as the preamble to the 1979 regulation points out, the clearest evidence would be evidence showing actual use in at least a portion of the stream. In addition, if a particular waterbody shares the characteristics of other waters whose use by and value to migratory birds is well established and those characteristics make it likely that the waterbody in question will also be used by migratory birds, it would also seem to fall clearly within the definition (unless, of course, there is other information that indicates the particular waterbody would not in fact be so used).¹⁴²

It has not been shown by the preponderance of the evidence that Area A has characteristics whose use by and value to migratory birds is well established and that it is likely that it will be used by migratory birds.

In sum, I am unwilling to construe the regulation as including an isolated wetland like Area A, when there is a considerable doubt as to whether such construction was intended by the drafters. Accordingly, I find that Area A is not a "waters of the United States" within the meaning of the regulation.

Area B

The preponderance of the evidence does support the Corps' delineation of filled Area B, with the exception of the area east of the 795' contour line, where the requisite hydrology was not shown, and the northern end which admittedly had not been filled.

Hoffman argues that the Corps in its delineation did not take account of the fact that drainage into the southeastern part had

¹⁴² CX 22.

been altered by off-site development.¹⁴³ Mr. Bruce Kirschner disagreed that wetlands hydrology had been cut off from Area B. He pointed out that there was an extensive drainage from the upland part of Victoria Estates into Area B, and there was also a ground-water flow into the area.¹⁴⁴ It was also his opinion that the straight drain across the southeastern arm into which water east of the site flowed was ineffective in draining the area.¹⁴⁵

The testimony of Mr. Kirschner is more persuasive than Dr. Straw's. Dr. Straw's testimony assumes that it was the drainage into the area from outside that created the hydrology necessary for a wetland, without giving consideration to whether drainage from the upland part of Victoria Crossing was not also a principal factor. Coupled with this is the fact that his testimony was inconclusive on whether there was, less water entering into the east drain after the development of Partridge Hills than before. He did testify that he thought there was but the basis for his opinion is obscure since he also testified that it has not been established either way.¹⁴⁶ While Mr. Kirschner also testified only generally to the drainage into the southeast arm, his testimony is consistent with the other evidence of wetland hydrology of Area B.

¹⁴³ Resp's. Br. at 58-60.

¹⁴⁴ Tr. 2671-2674. Most of the run-off would be as surface water. Tr. 2836. The drainage from the upland portion of Victoria Estates into Area B was also confirmed by Mr. Hooper. Tr. 1388-1389, and admitted by Dr. Straw. Tr. 2255, 2270.

¹⁴⁵ Tr. 2687, 2693-2694, 2703-2704.

¹⁴⁶ See Tr. 2369-2370, 2376-2377, 2461.

I conclude, then, that Hoffman has violated Section 301 of the Clean Water Act by a discharge of pollutants from a point source into navigable waters without a Section 404 permit.

The Penalty

Section 309(g), 33 U.S.C. Section 1319(g), authorizes the Administrator to assess a penalty not to exceed \$10,000 for each day of violation of unpermitted fill, up to a maximum of \$125,000. When determining the penalty, the Administrator is directed by Section 309(g)(3) as follows:

In determining the amount of penalty assessed under this subsection, the Administrator or the Secretary, as the case may be, shall 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.

The penalty proposed by the EPA is the maximum penalty of \$125,000.

The starting point is that Hoffman knew or should have known that there were wetlands on the site. On November 13, 1984, Hoffman was sent a copy of natural resources assessment sent to the Village of Hoffman Estates in connection with Hoffman's petition to rezone the tract. This assessment specifically mentioned the presence of wetlands on the parcel on the south and west. It stated specifically that "[a]ny work that is done in the wetland should be done under the auspices of these agencies having regulatory authority to protect wetlands," and mentioned the Corps'

Regulatory Function Branch as the agency to be contacted.¹⁴⁷ This report was entered as a Hoffman exhibit at a meeting of the Plan Commission for the Village of Hoffman Estates at which Mr. William Griffin, a Vice President of Hoffman was present.¹⁴⁸ During the meeting two of the members of the Commission commented on their concern over wetlands being filled in.¹⁴⁹

It is Hoffman's contention that it was nevertheless unaware of any permit requirements for filling in wetlands.¹⁵⁰ The permit requirements were the subject of published regulations and of court decisions.¹⁵¹ Hoffman admits to knowing generally that the Corps required permits for certain activities but apparently was not interested enough to familiarize itself with the regulations to determine the extent of the Corps' jurisdiction.¹⁵² This is inexcusable given Hoffman's size and the fact that it was likely

¹⁴⁷ CX 34.

¹⁴⁸ The report was introduced by Michael Ives, a land planning consultant for Hoffman. CX 40, p. 11; Tr. 1039. Hoffman dismisses the report as providing notice of a permit requirement because it was directed to the Village and Mr. Griffin was not under any obligation to review it. Resp's. Reply Br. at 37. Yet the report was introduced as an exhibit in support of its petition and it is difficult to believe that Hoffman or Michael Ives as its agent would not have read the report to determine what problems were identified.

¹⁴⁹ CX 40, pp. 83-84 (remarks of Mr. Bednar); pp. 95-96 (remarks of Mr. Chapins). See Tr. 1155.

¹⁵⁰ Resp's. Br. at 91; Reply Br. at 4.

¹⁵¹ One such case was *Avoyelles Sportsmen's League, Inc. v. Marsh*, 715 F.2d 897 (5th Cir. 1983), upholding the regulations.

¹⁵² Tr. 1017, 1020-1021, 1201-1202.

to encounter the permitting requirements in its work.¹⁵³ In short, Hoffman's ignorance of the program may excuse a charge of willful violation but under the circumstances is of little weight as a mitigating factor in appraising Hoffman's culpability.

Hoffman also argues that the amount of acreage involved is relatively small and its value as a wetland was low. There is evidence that Area B did perform several functions associated with wetlands, namely, serving as a habitat for a variety of animals, filtering pollutants from storms and flood-flow alteration.¹⁵⁴ What is in dispute is how important it was in performing these functions. Mr. Rogner also testified to seeing erosion problems caused by fill on the site.¹⁵⁵ The Corps as a standard condition of its permit requires that erosion control measures be taken. Hoffman, however, had not taken any.¹⁵⁶

Hoffman's argument that the filled wetland was small and of little value misses the point. The significant fact is that wetlands, a valuable but disappearing ecological resource, have

¹⁵³ Hoffman is one of the largest developers in the Chicagoland area. Tr. 1103.

¹⁵⁴ See, e.g., Tr. 1728-1733, 2556-2557, 2564-2570, 2574-2575. The predevelopment WET assessment by Dr. Sanders assumed that the Victoria Crossing site had not been developed into housing. The post-development assessment assumed that the upland area of Victoria Crossing had been developed, except for Area A. Tr. 1701-1705. Dr. Sanders did not give weight to Mr. Hooper's deposition testimony that he saw standing water in the southeast arm of Area B or to the fact that cattails dominated the area, but I find his reasons for not doing so unpersuasive. See Tr. 2557.

¹⁵⁵ Tr. 119.

¹⁵⁶ Tr. 107.

been destroyed.¹⁵⁷ Pertinent here is language of the Supreme Court in United States v. Riverside Bayview Homes, 474 U.S. 121 (1985). The Court in holding that the Corps' regulation of adjacent wetlands was within the Corps' authority under Section 404, stated as follows:

Of course, it may well be that not every adjacent wetland is of great importance to the environment of adjoining bodies of water. But the existence of such cases does not seriously undermine the Corps' decision to define all adjacent wetlands as "waters." If it is reasonable for the Corps to conclude that in the majority of cases, adjacent wetlands have significant effects on water quality and the aquatic ecosystem, its definition can stand. That the definition may include some wetlands that are not significantly intertwined with the ecosystem of adjacent waterways is of little moment, for where it appears that a wetland covered by the Corps' definition is in fact lacking in importance to the aquatic environment - or where its importance is outweighed by other values - the Corps may always allow development of the wetland for other uses simply by issuing a permit. See 33 CFR Section 320.4(b)(4) (1985).¹⁵⁸

In short, the permit program is the means for the Corps, and the EPA, to preserve to the fullest extent wetland values.¹⁵⁹ This can only be done if the permit program is strictly complied

¹⁵⁷ For significance of wetlands in general, see 33 C.F.R. 320.3(b)(1) and (2) and 40 C.F.R. 230.41. For significance of wetlands in Chicago area, see CX 34; Tr. 814-815, 819-820.

¹⁵⁸ United States v. Riverside Bayview Homes, 474 U.S. at 135, n. 9.

¹⁵⁹ The EPA is authorized to veto any permit issued by the Corps, CWA, Section 404(e), 33 U.S.C. 1344(c). The EPA also has the final administrative authority for construing the term "navigable waters." See CX 21 (opinion by Benjamin Civiletti, Attorney General).

with. Encroachment bit by bit can be as destructive of valuable wetlands as a single large fill, unless such action is stopped in its incipiency. Also, there is always the risk that the relationship of the wetlands to the environment is too delicate and subtle to allow for its complete restoration by remedial measures taken after an unauthorized fill, and the Corps and the EPA should not have to grapple with that problem. These considerations require that there be a penalty large enough not only to deter Hoffman from future violations but also to serve notice generally that non-compliance with the permit program brings with it a heavy penalty.¹⁶⁰

Nevertheless, I do find that a \$125,000 penalty is excessive. First, the filled wetlands are not as large as was charged in the complaint and upon which the original penalty was assessed. Second, Hoffman has spent over \$50,000 on mitigation efforts involving approximately 2.3 acres in a good faith effort to resolve matters.¹⁶¹

In assessing the proposed penalty consideration must also be given to any economic benefit Hoffman derived from the violation. Most, if not all of the fill took place in conjunction with grading and seeding of Area B in order to make it acceptable to the Park

¹⁶⁰ Hoffman complains that it is being made an example of. Resp's. Reply Br. at 39. The facts establish Hoffman's liability and it is no more being made an example of than any other violator against whom the EPA proceeds. In any penalty case, the precedential effect of the decision cannot be ignored.

¹⁶¹ Tr. 1077-1079, 1214-1216; RX 21(d).

District.¹⁶² In the southeast arm, it also took place in conjunction with construction of a detention basin.¹⁶³ Much of the building appears to have taken place in Area A or in land in Area B found not to be a wetland.¹⁶⁴ The creation of parkland and construction of a detention basin no doubt contributed to Hoffman's success in obtaining zoning and plan approval for constructing houses on the site. If a permit had been first applied for but had not been granted or granted with conditions, Hoffman, presumably, would have had to take other action to receive zoning and plan approval, but it is impossible with any reasonable degree of accuracy to estimate even roughly what this would have meant in terms of additional costs, if any, to Hoffman.¹⁶⁵ Under the circumstances, I do not find that Hoffman benefitted to any significant extent by its violation.

Finally, it should be noted that Hoffman was cited for another unpermitted fill of wetlands on September 2, 1987.¹⁶⁶ Hoffman says this was not a prior violation because it happened subsequent to the fill at Victoria Crossing.¹⁶⁷ The violation is certainly relevant to determining the appropriate penalty. If it is not to

¹⁶² Tr. 1035-1037, 1079-1083; Tr. 125, 1174.

¹⁶³ Tr. 125, 1174.

¹⁶⁴ See Resp's. Br. at 92-93.

¹⁶⁵ See Tr. 1085.

¹⁶⁶ CX 13; Tr. 276-277, 899, 1086-1087.

¹⁶⁷ Resp's. Reply Br. at 35, n. 43. For authority it cites EPA General Counsel's Enforcement Policy, GM-22, p. 21.

be considered as a prior violation because of its timing, it can certainly be taken into account in determining whether a reduction in penalty that would otherwise be assessed would be justified on the grounds of no prior violation. I find that no reduction would be warranted on any such grounds.

On consideration of the statutory factors, accordingly, I conclude that an appropriate penalty for the violation found herein is \$50,000.

ORDER ¹⁶⁸

Pursuant to Section 309(g)(2)(B) of the Clean Water Act, 33 U.S.C. 1319(g)(2)(B) a civil penalty of \$50,000, is hereby assessed against Respondent, The Hoffman Group, Inc.

Payment of the full amount of the civil penalty assessed shall be made within sixty (60) days of the service of the final order by submitting a certified or cashier's check payable to the United States of America and mailed to:

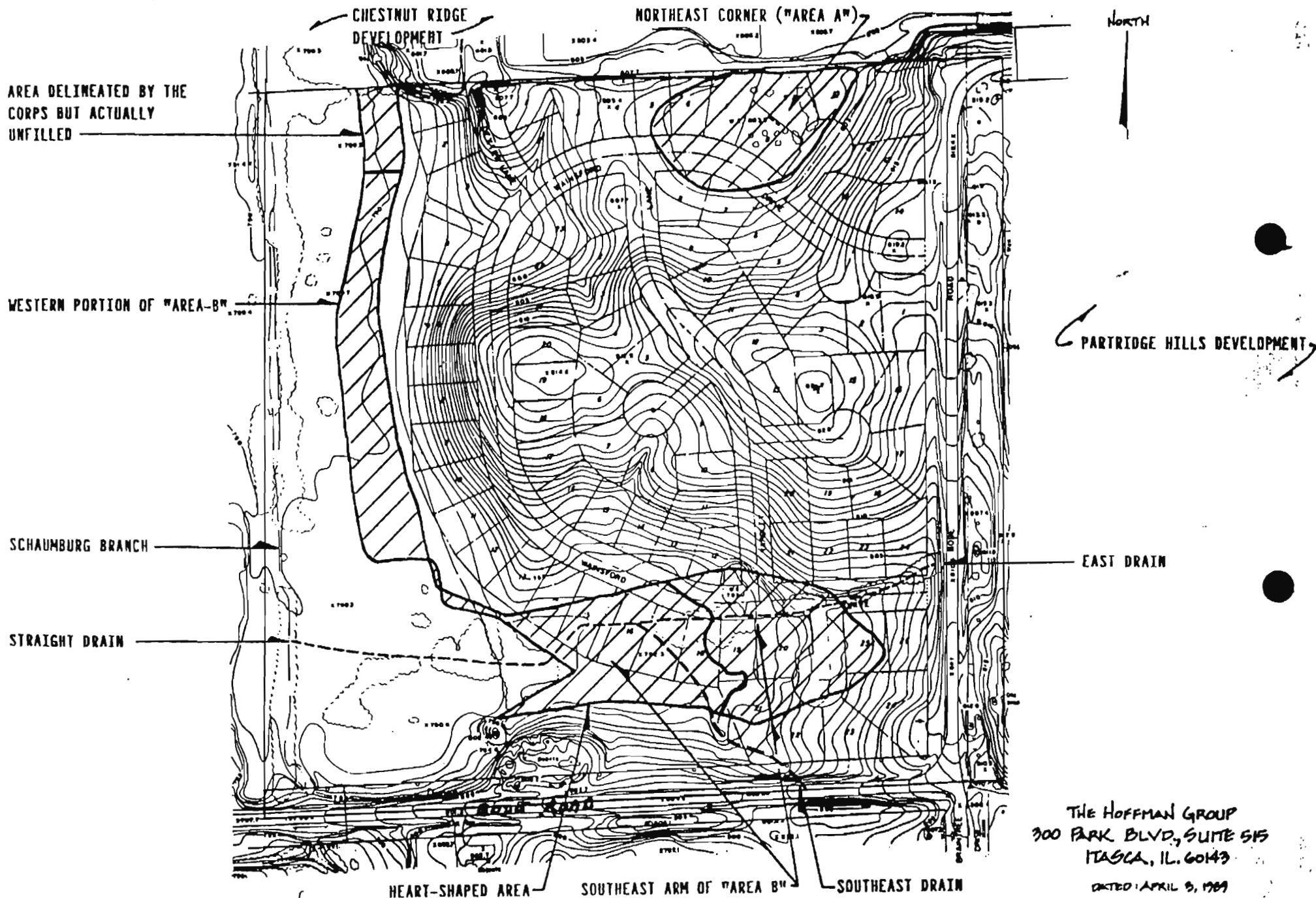
EPA - Region V
 (Regional Hearing Clerk)
 P.O. Box 70753
 Chicago, IL 60673

Gerald Harwood
 Gerald Harwood
 Chief Administrative Law Judge

DATED: September 14, 1989
 Washington, D.C.

¹⁶⁸ Unless an appeal is taken pursuant to the Rules of Practice, 40 C.F.R. 22.30, or the Administrator elects to review this decision on his own motion, the Initial Decision shall become the final order of the Administrator. See 40 C.F.R. 22.27(c).

VICTORIA CROSSING — LOCATION MAP



THE HOFFMAN GROUP
 300 PARK BLVD., SUITE 515
 ITASCA, IL. 60143
 DATED: APRIL 9, 1989

NOTE: THIS MAP IS INTENDED TO SHOW GENERAL LOCATIONS ONLY. IT IS NOT INTENDED TO SHOW