

Regulatory Guidance Letter 96-02

SUBJECT: Applicability of Exemptions under Section 404(f) to "Deep-Ripping" Activities in Wetlands

DATE: 12 December 1996

EXPIRES: 31 December 2001

Department of the Army, U.S. Army Corps of Engineers

United States Environmental Protection Agency

MEMORANDUM TO THE FIELD

SUBJECT: Applicability of Exemptions under Section 404(f) to "Deep-Ripping" Activities in Wetlands

PURPOSE: The purpose of this memorandum is to clarify the applicability of exemptions provided under Section 404(f) of the Clean Water Act (CWA) to discharges associated with "deep-ripping" and related activities in wetlands.¹

¹ As this guidance addresses primarily agricultural-related activities, characterizations of such practices have been developed in consultation with experts at the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service.

BACKGROUND:

1. Section 404(f)(1) of the CWA exempts from the permit requirement certain discharges associated with normal farming, forestry, and ranching practices in waters of the United States, including wetlands. Discharges into waters subject to the Act associated with farming, forestry, and ranching practices identified under Section 404(f)(1) do not require a permit except as provided under Section 40.4(f)(2).

2. Section 404(f)(1) does not provide a total automatic exemption for all activities related to agricultural silvicultural or ranching practices. Rather, Section 404(f)(1) exempts only those activities specifically identified in paragraphs (A) through (F), and "other activities of essentially the same character as named" [44 FR 34264]. For example, Section 404(f)(1)(A) lists discharges of dredged or fill material from "normal farming, silviculture and ranching activities, such as plowing, seeding, cultivating, minor drainage,

harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices."

3. Section 404(f)(1)(A) is limited to activities that are part of an "established (i.e., ongoing) farming, silviculture, or ranching operation." This "established" requirement is intended to reconcile the dual intent reflected in the legislative history that although Section 40.4 should not unnecessarily restrict farming, forestry, or ranching from continuing at a particular site, discharge activities which could destroy wetlands or other waters should be subject to regulation.

4. EPA and Corps regulations [40 CFR 230 and 33 CFR 320] and preamble define in some detail the specific "normal" activities listed in Section 404(f)(1)(A). Three points may be useful in the current context:

a. As explained in the preamble to the 1979 proposed regulations, the words "such as" have been consistently interpreted as restricting the section "to the activities named in the statute and other activities of essentially the same character as named," and "preclude the extension of the exemption ... to activities that are unlike those named." [44 FR 34264].

b. Plowing is specifically defined in the regulations not to include the redistribution of surface material in a manner which converts wetlands areas to uplands [See 40 CFR 233.35(a)(1)(iii)(D)].

c. Discharges associated with activities that establish an agricultural operation in wetlands where previously ranching had been conducted, represents a "change in use" within the meaning of Section 404(f)(2). Similarly, discharges that establish forestry practices in wetlands historically subject to agriculture also represent a change in use of the site (See 40 CFR 233.35(c)).

5. The statute includes a provision at Section 404(f)(2) that "recaptures" or reestablishes the permit requirement for those otherwise exempt discharges which:

a. convert an area of the waters of the U.S. to a new use, and

b. impair the flow or circulation of waters of the U.S. or reduce the reach of waters of the U.S.

Conversion of an area of waters of the U.S. to uplands triggers both provisions (a) and (b) above. Thus, at a minimum any otherwise exempt discharge that results in the conversion of waters of the U.S. to upland is recaptured under Section 404(f)(2) and requires a permit. It should be noted that in order to trigger the recapture provisions of Section 404(f)(2), the discharges themselves need not be the sole cause of the destruction of the wetland or other change in use or sole cause of the reduction or impairment of reach, flow, or circulation of waters of the U.S. Rather, the discharges need only be "incidental to" or "part of" an activity which is intended to or will foreseeably bring about that result. Thus, in applying Section 404(f)(2), one must consider discharges in context, rather than isolation.

ISSUE:

- 1.** Questions have been raised involving "deep-ripping" and related activities in wetlands and whether discharges associated with these actions fall within the exemptions at Section 404(f)(1)(A). In addition, the issue has been raised whether, if such activities fall within the exemption, they would be recaptured under Section 404(f)(2).
- 2.** "Deep-ripping" is defined as the mechanical manipulation of the soil to break up or pierce highly compacted, impermeable or slowly permeable subsurface soil layers, or other similar kinds of restrictive soil layers. These practices are typically used to break up these subsoil layers (e.g., impermeable soil layer, hardpan) as part of the initial preparation of the soil to establish an agricultural or silvicultural operation. Deep-ripping and related activities are also used in established farming operations to break up highly compacted soil. Although deep-ripping and related activities may be required more than once, the activity is typically not an annual practice. Deep-ripping and related activities are undertaken to improve site drainage and facilitate deep root growth, and often occur to depths greater than 16 inches and, in some cases, exceeding 4 feet below the surface. As such it requires the use of heavy equipment, including bulldozers, equipped with ripper-blades, shanks, or chisels often several feet in length. Deep-ripping and related activities involve extending the blades to appropriate depths and dragging them through the soil to break up the restrictive layer.
- 3.** Conversely, plowing is defined in EPA and Corps regulations [40 CFR 230 and 33 CFR 320] as "all forms of primary tillage ... used ... for the breaking up, cutting, turning over, or stirring of soil to prepare it for the planting of crops" [40 CFR 232.3(d)(4)]. As a general matter, normal plowing activities involve the annual or at least regular, preparation of soil prior to seeding or other planting activities. According to USDA, plowing generally involves the use of a blade, chisel or series of blades, chisels, or discs, usually 8-10 inches in length pulled behind a farm vehicle to prepare the soil for the planting of annual crops or to support an ongoing farming practice. Plowing is commonly used to break up the surface of the soil to maintain soil tilth and to facilitate infiltration throughout the upper root zone.

DISCUSSION:

- 1.** Plowing in wetlands is exempt from regulation consistent with the following circumstances:
 - a.** it is conducted as part of an ongoing, established agricultural, silvicultural or ranching operation; and
 - b. c.** the plowing is not incidental to an activity that results in the immediate or gradual conversion of wetlands to non-waters.
- 2.** Deep-ripping and related activities are distinguishable from plowing and similar practices (e.g., discing, harrowing) with regard to the purposes and circumstances under

which it is conducted, the nature of the equipment that is used, and its effect, including in particular the impacts to the hydrology of the site.

a. Deep-ripping and related activities are commonly conducted to depths exceeding 16 inches, and as deep as 6-8 feet below the soil surface to break restrictive soil layers and improve water drainage at sites that have not supported deeper rooting crops. Plowing depths, according to USDA, rarely exceed one foot into the soil and not deeper than 16 inches without the use of special equipment involving special circumstances. As such, deep-ripping and related activities typically involve the use of special equipment, including heavy mechanized equipment and bulldozers, equipped with elongated ripping blades, shanks, or chisels often several feet in length. Moreover, while plowing is generally associated with ongoing operations, deep-ripping and related activities are typically conducted to prepare a site for establishing crops not previously planted at the site. Although deep-ripping may have to be redone at regular intervals in some circumstances to maintain proper soil drainage, the activity is typically not an annual or routine practice.

b. Frequently, deep-ripping and related activities are conducted as a preliminary step for converting a "natural" system or for preparing rangeland for a new use such as farming or silviculture. In those instances, deep-ripping and related activities are often required to break up naturally-occurring impermeable or slowly permeable subsurface soil layers to facilitate proper root growth. For example, for certain depressional wetlands types such as vernal pools, the silica-cemented hardpan (duripan) or other restrictive layer traps precipitation and seasonal runoff creating ponding and saturation conditions at the soil surface. The presence of these impermeable or slowly permeable subsoil layers is essential to support the hydrology of the system. Once these layers are disturbed by activities such as deep-ripping, the hydrology of the system is disturbed and the wetland is often destroyed.

c. In contrast, there are other circumstances where activities such as deep-ripping and related activities are a standard practice of an established on-going farming operation. For example, in parts of the Southeast, where there are deep soils having a high clay content, mechanized farming practices can lead to the compaction of the soil below the soil surface. It may be necessary to break up, on a regular although not annual basis, these restrictive layers in order to allow for normal root development and infiltration. Such activities may require special equipment and can sometimes occur to depths greater than 16 inches. However, because of particular physical conditions, including the presence of a water table at or near the surface for part of the growing season, the activity typically does not have the effect of impairing the hydrology of the system or otherwise altering the wetland characteristics of the site.

CONCLUSION:

1. When deep-ripping and related activities are undertaken as part of an established ongoing agricultural silvicultural or ranching operation, to break up compacted soil layers and where the hydrology of the site will not be altered such that it would result in

conversion of waters of the U.S. to upland, such activities are exempt under Section 404(f)(1)(A).

2. Deep-ripping and related activities in wetlands are not part of a normal ongoing activity, and therefore not exempt, when such practices are conducted in association with efforts to establish for the first time (or when a previously established operation was abandoned) an agricultural silvicultural or ranching operation. In addition, deep-ripping and related activities are not exempt in circumstances where such practices would trigger the "recapture" provision of Section 404(f)(2):

a) Deep-ripping to establish a farming operation at a site where a ranching or forestry operation was in place is a change in use of such a site. Deep-ripping and related activities that also have the effect of altering or removing the wetland hydrology of the site would trigger Section 404(f)(2) and such ripping would require a permit.

b) Deep-ripping a site that has the effect of converting wetlands to non-waters would also trigger Section 404(f)(2) and such ripping would require a permit.

3. It is the agencies' experience that certain wetland types are particularly vulnerable to hydrological alteration as a result of deep-ripping and related activities. Depressional wetland systems such as prairie potholes, vernal pools and playas whose hydrology is critically dependent upon the presence of an impermeable or slowly permeable subsoil layer are particularly sensitive to disturbance or alteration of this subsoil layer. Based upon this experience, the agencies have concluded that, as a general matter, deep-ripping and similar practices, consistent with the descriptions above, conducted in prairie potholes, vernal pools, playas, and similar depressions wetlands destroy the hydrological integrity of these wetlands. In these circumstances, deep-ripping in prairie potholes, vernal pools, and playas is recaptured under Section 404(f)(2) and requires a permit under the Clean Water Act.

/signed/

Robert H Wayland III

Director

Office of Wetlands, Oceans and Watersheds

U.S. Environmental Protection Agency

/signed/

Daniel R Burns, P.E.

Chief, Operations, Construction and Readiness Division

Directorate of Civil Works

U.S. Army Corps of Engineers