



# **Wetland & Stream Permitting in North Carolina**

**with an update based on the  
Rapanos Decision**

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# Questions to Be Answered

- **What is the result of the Rapanos decision?**
- **When do I need a permit?**
- **How much stream/wetland area can I impact?**
- **What type of permit do I need?**
- **Who approves my permit?**
- **How long does it take to get my permit?**
- **How much will it cost?**

# Rapanos Et ux., et al. v. United States

- U.S. Supreme Court consolidated two cases: Rapanos Et ux. v. United States and Carabell et al. v. United States Army Corps of Engineers (ACOE)
- Both cases involved parcels of land in Michigan
- Argued on February 21, 2006
- Decided June 19, 2006

## **Key Facts in *Rapanos* site**

**Involved three sites;  
conducted fill activities  
without a permit:**

- Salzburg Parcel 230 ac. with 28 ac. of wetland; filled 22 ac.
- Hines Road Parcel 275 ac. with 64 ac. of wetland; filled 17 ac.
- Pine River Parcel 200 ac. with 49 ac. of wetland; filled 15 ac.
- Nearest body of navigable-in-fact water was 11 to 20 mi. away via man-made drains, which flow into creeks, rivers and ultimately into Lake Huron in Michigan.

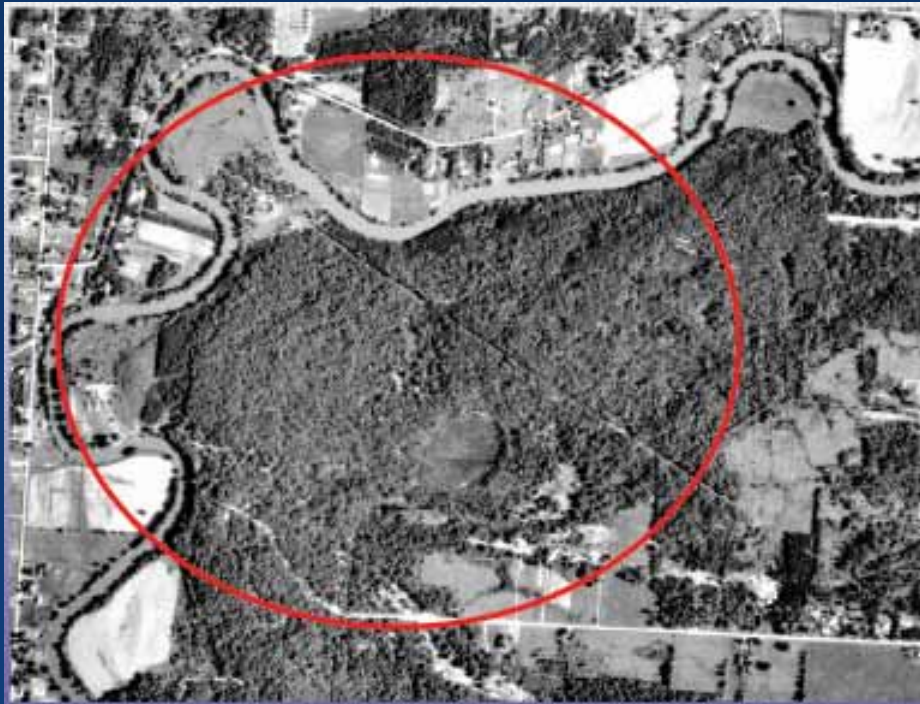
## **Key Facts in *Carabell* site**

**Carabell was denied a permit to fill about 16 ac. of wetlands on 20 ac. parcel**

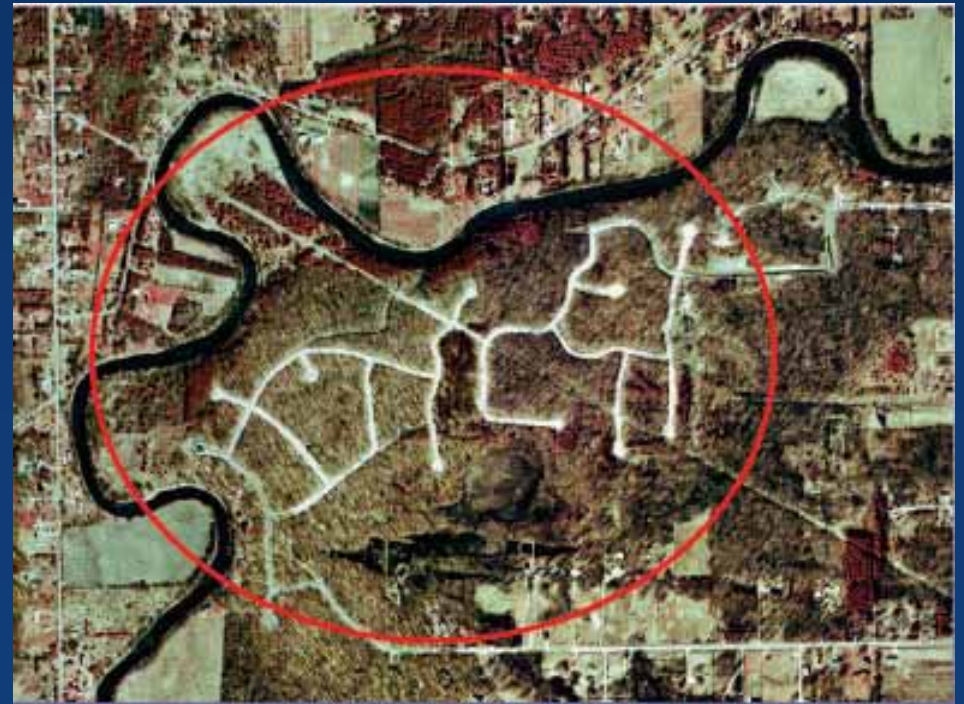
- **Wetland separated from a tributary to Lake St. Clair by a 4 ft. wide manmade berm.**
- **Berm blocked drainage of surface water from the parcel.**

# *Rapanos Salzburg site before and after*

**Pre Disturbance**



**Post Disturbance**



# Questions posed to Supreme Court in *Rapanos* and *Carabell*

- 1) Are wetlands that are adjacent to, and have a surface hydrologic connection with non-navigable waters a part of "the waters of the United States within the meaning of the Clean Water Act?
- 2) Are wetlands that are hydrologically isolated from any "waters of the United States" subject to the Clean Water Act?
- 3) Did the Clean Water Act jurisdiction exceed Congress' power under the Commerce Clause?

## *Rapanos Decision*

- Four justices (Scalia writing decision) concluded that regulatory authority extends only to “*relatively permanent, standing or continuously flowing bodies of water*” connected to *traditional navigable waters* and to “wetlands with a continuous surface connection to” such relatively permanent waters.
- Terms Relatively Permanent Waters (RPW) and Traditional Navigable Waters (TNW) included in EPA/ACOE Memorandum



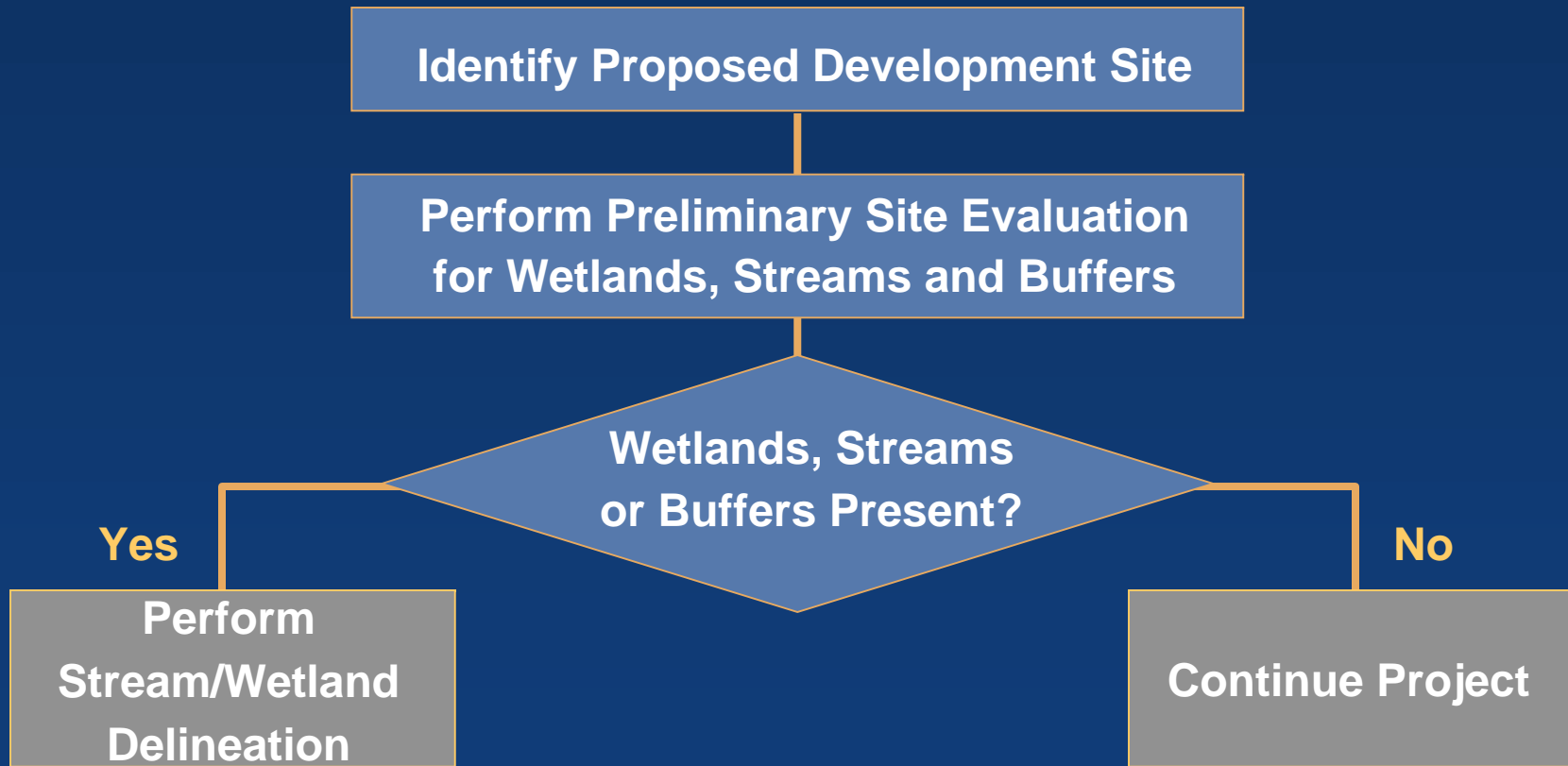
## *Rapanos Decision*

- Kennedy concluded that wetlands are “waters of the United States” ... “if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable.’ ”
- The term Significant Nexus (SN) included in EPA/ACOE memorandum

## Results from *Rapanos* and *Carabell*

- EPA and ACOE issued Memorandum “Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States* & *Carabell v. United States*, June 5, 2007
- ACOE issued Jurisdictional Form and Instructional Guidebook

# Wetland-Stream Permitting Decision Flow Chart



# Wetland Delineation Requirements

- Hydrology
- Hydrophytic Vegetation
- Hydric Soils



# ACOE Wetland Delineation Form

**DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Determination Manual)**

<b>Project / Site:</b> _____ <b>Applicant / Owner:</b> _____ <b>Investigator:</b> _____	<b>Date:</b> _____ <b>County:</b> _____ <b>State:</b> _____
Do normal circumstances exist on the site? Yes ___ No ___ Is the site significantly disturbed (Atypical situation)? Yes ___ No ___ Is the area a potential problem area? Yes ___ No ___ (explain on reverse if needed)	<b>Community ID:</b> _____ <b>Transect ID:</b> _____ <b>Plot ID:</b> _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator

**Hydric Soil Indicators:**

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed On Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: \_\_\_\_\_

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present? Yes ___ No ___	Is the Sampling Point Within a Wetland? Yes ___ No ___
Wetland Hydrology Present? Yes ___ No ___	
Hydric Soils Present? Yes ___ No ___	

**DATA FORM  
ROUTINE WETLAND DETERMINATION  
(1987 COE Wetlands Determination Manual)**

<b>Project / Site:</b> _____ <b>Applicant / Owner:</b> _____ <b>Investigator:</b> _____	<b>Date:</b> _____ <b>County:</b> _____ <b>State:</b> _____
Do normal circumstances exist on the site? Yes ___ No ___ Is the site significantly disturbed (Atypical situation)? Yes ___ No ___ Is the area a potential problem area? Yes ___ No ___ (explain on reverse if needed)	<b>Community ID:</b> _____ <b>Transect ID:</b> _____ <b>Plot ID:</b> _____

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator

Percent of Dominant Species that are OBL, FACV, or FAC excluding FAC): \_\_\_\_\_

Remarks: \_\_\_\_\_

**HYDROLOGY**

<b>Recorded Data (Describe in Remarks):</b> <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other _____ No Recorded Data Available	<b>Wetland Hydrology Indicators</b> <b>Primary Indicators:</b> <input type="checkbox"/> Stagnated <input type="checkbox"/> Saturated in Upper 12" <input type="checkbox"/> Water Marks <input type="checkbox"/> Dirt Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators:</b> <input type="checkbox"/> Oxidized Roots Channels in Upper 12" <input type="checkbox"/> Water-Stamped Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
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Field Observations:  
 Depth of Surface Water: \_\_\_\_\_ (in.)  
 Depth to Free Water in Pit: \_\_\_\_\_ (in.)  
 Depth to Saturated Soil: \_\_\_\_\_ (in.)

Remarks: \_\_\_\_\_

**SOILS**

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed On Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input type="checkbox"/> Gleyed or Low-Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks: \_\_\_\_\_

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present? Yes ___ No ___	Is the Sampling Point Within a Wetland? Yes ___ No ___
Wetland Hydrology Present? Yes ___ No ___	
Hydric Soils Present? Yes ___ No ___	

# NC DWQ Stream Identification Form

North Carolina Division of Water Quality - Stream Identification Form; Version 3.1

Date:	Project:	Latitude:
Evaluator:	Site:	Longitude:
Total Points: <small>Stream is at least intermittent P's 18 or perennial P's 30</small>	County:	Other <small>e.g. Quad Name:</small>

**A. Geomorphology (Subtotal = \_\_\_\_\_)**

	Absent	Weak	Moderate	Strong
1 <sup>*</sup> . Continuous bed and bank	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
2. Sinuosity	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
3. In-channel structure: riffle-pool sequence	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
4. Soil texture or stream substrate sorting	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
5. Active/relic floodplain	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
6. Depositional bars or benches	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
7. Braided channel	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
8. Recent alluvial deposits	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
9 <sup>*</sup> . Natural levees	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
10. Headcuts	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
11. Grade controls	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
12. Natural valley or drainageway	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
13. Second or greater order channel on existing USGS or NRCS map or other documented evidence	<input type="checkbox"/> No = 0		<input type="checkbox"/> Yes = 3	

\* Man-made ditches are not rated; see discussions in manual

**B. Hydrology (Subtotal = \_\_\_\_\_)**

14. Groundwater flow/discharge	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
15. Water in channel and > 48 hrs since rain, <u>or</u> Water in channel -- dry or growing season	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
16. Leaf/litter	<input type="radio"/> 1.5	<input type="radio"/> 1	<input type="radio"/> 0.5	<input type="radio"/> 0
17. Sediment on plants or debris	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
18. Organic debris lines or piles (Wack lines)	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
19. Hydric soils (pedomorphologic features) present?	<input type="checkbox"/> No = 0		<input type="checkbox"/> Yes = 1.5	

**C. Biology (Subtotal = \_\_\_\_\_)**

20 <sup>*</sup> . Fibrous roots in channel	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	<input type="radio"/> 0
21 <sup>*</sup> . Rooted plants in channel	<input type="radio"/> 3	<input type="radio"/> 2	<input type="radio"/> 1	<input type="radio"/> 0
22. Crayfish	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
23. Bivalves	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
24. Fish	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
25. Amphibians	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
26. Macroinvertebrates (note diversity and abundance)	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
27. Filamentous algae, periphyton	<input type="radio"/> 0	<input type="radio"/> 1	<input type="radio"/> 2	<input type="radio"/> 3
28. Iron oxidizing bacteria/fungus	<input type="radio"/> 0	<input type="radio"/> 0.5	<input type="radio"/> 1	<input type="radio"/> 1.5
29 <sup>*</sup> . Wetland plants in streambed	FAC <sup>*</sup> 0.5; FACW <sup>*</sup> 0.75; OBL <sup>*</sup> 1.5; SAV <sup>*</sup> 2.0; Other <sup>*</sup> 0			

\* Items 20 and 21 focus on the presence of upland plants. Item 26 focuses on the presence of aquatic or wetland plants.

Notes: (use back side of this form for additional notes.)

Sketch:

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- **Geomorphology**  
(Stream Relief Features)
- **Hydrology**
- **Biology**
- **Stream is scored in each area**
  - < 19 = Ephemeral
  - ≥ 19 = Intermittent
  - ≥ 30 = Perennial

# A COE Stream Assessment Worksheet

STATE: \_\_\_\_\_ COUNTY: \_\_\_\_\_ DATE: \_\_\_\_\_ (date of assessment)

## STREAM QUALITY ASSESSMENT WORKSHEET

Provide the following information for the stream reach under assessment:

1. Stream name \_\_\_\_\_
2. Stream location \_\_\_\_\_
3. Date of assessment \_\_\_\_\_
4. State of origin \_\_\_\_\_
5. Approximate drainage area \_\_\_\_\_
6. Stream order \_\_\_\_\_
7. Length of reach evaluated \_\_\_\_\_
8. County \_\_\_\_\_
9. Site coordinates (if known) \_\_\_\_\_
10. Latitude/longitude \_\_\_\_\_
11. Elevation of reach \_\_\_\_\_
12. Substrate composition \_\_\_\_\_
13. Location of reach (provide latitude/longitude and state map showing stream location)
14. Proposed stream reach ID \_\_\_\_\_
15. Reach number \_\_\_\_\_
16. Use of stream (if any) \_\_\_\_\_
17. Identify any special waterway classifications known: \_\_\_\_\_
18. Does channel appear on USGS quad map? YES NO
19. Does channel appear on USDA Soil Survey? YES NO
20. Does channel appear on USGS Soil Survey? YES NO
21. Estimated watershed land use: \_\_\_\_\_

**ECOREGION POINT RANGE**

ECOREGION	Coastal	Piedmont	Mountain	SCORE
1	0-5	0-4	0-5	
2	0-6	0-5	0-5	
3	0-6	0-4	0-5	
4	0-5	0-4	0-4	
5	0-2	0-4	0-4	
6	0-4	0-4	0-2	
7	0-5	0-4	0-2	
8	0-6	0-4	0-2	
9	0-5	0-4	0-5	
10	0-5	0-4	0-4	
11	3/4*	0-4	0-5	
12	0-5	0-4	0-5	
13	0-5	0-5	0-5	
14	0-3	0-4	0-5	
15	0-5	0-4	0-5	
16	0-3	0-5	0-6	
17	0-6	0-6	0-6	
18	0-5	0-7	0-5	
19	3/4*	0-4	0-4	
20	0-4	0-3	0-5	
21	0-4	0-4	0-4	
22	0-4	0-4	0-4	
23	0-4	0-4	0-4	
24	0-6	0-5	0-5	
25	100	100	100	

**TOTAL SCORE:** (also enter on first page)

**STREAM QUALITY ASSESSMENT WORKSHEET**

Provide the following information for the stream reach under assessment:

17. Identify any special waterway classifications known: Section 10 Tidal Waters Essential Fisheries Habitat  
Trout Waters Outstanding Resource Waters Nutrient Sensitive Waters Water Supply Watershed (I-IV)

18. Is there a pond or lake located upstream of the evaluation point? YES NO If yes, estimate the water surface area: \_\_\_\_\_

19. Does channel appear on USGS quad map? YES NO 20. Does channel appear on USDA Soil Survey? YES NO

21. Estimated watershed land use:     % Residential     % Commercial     % Industrial     % Agricultural

CHARACTERISTICS	Coastal	Piedmont	Mountain	SCORE
9. Sediment composition (0 = 0, natural material = max points)	0-5	0-4	0-5	
10. Sediment input (0 = 0, high or no sediment = max points)	0-5	0-4	0-4	
11. Size & diversity of channel bed substrate (0 = 0, low diversity = 0, high diversity = max points)	3/4*	0-4	0-5	
12. Evidence of channel incision or widening (0 = 0, no evidence = 0, evidence = max points)	0-5	0-4	0-5	
13. Presence of major bank failures (0 = 0, no failures = 0, failures = max points)	0-5	0-5	0-5	
14. Bank depth and density on banks (0 = 0, no banks = 0, banks = max points)	0-3	0-4	0-5	
15. Impact for agriculture, forests, or timber production (0 = 0, no impact = 0, impact = max points)	0-5	0-4	0-5	
16. Presence of open-pit/strip-mine and associated (see reference in note) (0 = 0, no open-pit/strip-mine = max points)	0-3	0-5	0-6	
17. Habitat complexity (0 = 0, no habitat = 0, habitat = max points)	0-6	0-6	0-6	
18. Campy streper overabundance (0 = 0, no campy streper = 0, campy streper = max points)	0-5	0-7	0-5	
19. Substrate embeddedness (0 = 0, no embeddedness = max points)	3/4*	0-4	0-4	
20. Presence of stream invertebrates (see page 4) (0 = 0, no invertebrates = 0, invertebrates = max points)	0-4	0-3	0-5	
21. Presence of amphibians (0 = 0, no amphibians = 0, amphibians = max points)	0-4	0-4	0-4	
22. Presence of fish (0 = 0, no fish = 0, fish = max points)	0-4	0-4	0-4	
23. Evidence of wildlife use (0 = 0, no wildlife use = 0, wildlife use = max points)	0-6	0-5	0-5	
24. Total Points Possible	100	100	100	

\* These characteristics are not assessed in coastal streams.

# ACOE Jurisdictional Determination Form

## APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

### SECTION I. BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER:

C. PROJECT LOCATION AND BACKGROUND INFORMATION:  
 State: South Carolina County/parish/borough: \_\_\_\_\_ City: \_\_\_\_\_  
 Center coordinates of site (listing in degree decimal format): Lat. \_\_\_\_\_ ° N, Long. \_\_\_\_\_ ° W  
 Universal Transverse Mercator:  
 Name of nearest watershed: Four Hole Swamp  
 Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows:  
 Name of watershed or Hydrologic Unit Code (HUC): \_\_\_\_\_  
 Check if map/diagram of review area and/or potential jurisdictional areas is available upon request.  
 Check if other sites (e.g., effluent mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- Office (Desk) Determination, Date: 5-6-07  
 Field Determination, Date(s): \_\_\_\_\_

### SECTION II. SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

These **Pick List** "waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) is the review area. [Required]

- Waters subject to the ebb and flow of the tide.  
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
 Explain: \_\_\_\_\_

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

These **Pick List** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) is the review area. [Required]

1. Waters of the U.S.  
 a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>  
 TNWs, including seasonal areas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:  
 Non-wetland waters: linear feet width (ft) and/or area.  
 Wetlands: area.

c. Limits (boundaries) of jurisdiction based on **Pick List**  
 Elevation of established OHWM (if known): \_\_\_\_\_

2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
 Explain: \_\_\_\_\_

<sup>1</sup> Items checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III F.

## APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

- New 7-page form for documenting Section 404 jurisdiction by the Corps resulting from the Rapanos Court Decision.

- Contains Sections:
  - I. Background Info
  - II. Summary of Findings
  - III. CWA Analysis
  - IV. Data Sources



# ACOE Jurisdictional Determination Forms

APPROVED JURISDICTIONAL DETERMINATION FORM  
U.S. Army Corps of Engineers

- **New Terms that supercede the terms of Ephemeral, Perennial, and Intermittent**
- **Traditional Navigable Waters (TNW's)**  
Include all “navigable waters of the U.S.” that now, or in the past, have been used for interstate commerce.
- **Relatively Permanent Waters (RPW's)**  
Flows directly or indirectly into TNW's. Exhibits at least seasonal flow.
- **Significant Nexus (SN)**  
Require use of SN section of JD form to tie a wetland to a TNW. Used when wetlands are adjacent (not abutting) to waters other than TNW's.

# ACOE New Jurisdictional Features

- 1) **TNW's including territorial seas**
- 2) **Wetlands adjacent to TNW's**
- 3) **RPW's**  
Flowing directly or indirectly into TNW's
- 4) **Wetlands directly abutting RPW's**  
Flowing directly or indirectly into TNW's
- 5) **Wetlands adjacent to but not directly abutting RPW's**  
Flowing directly or indirectly into TNW's.
- 6) **Non-RPW's**  
Flowing directly or indirectly into TNW's.
- 7) **Wetlands adjacent to non-RPW's**  
Flowing directly or indirectly into TNW's.
- 8) **Impoundments of Jurisdictional Waters**
- 9) **Isolated (interstate or intrastate) waters, including isolated wetlands**

