

Assessment of Scour-Critical Data Collected at Selected Bridges and Culverts in South Carolina, 1990-92

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
feet (ft)	0.3048	meter
mile (mi)	1.609	kilometer
feet per mile (ft/mi)	0.1894	meter per kilometer
square mile (mi ²)	2.590	square kilometer

Sea level: In this report, “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

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Abstract

Data at bridges and culverts were collected at 3,506 stream crossings in South Carolina during 1990-92. The data include general information unique to the structure; structural data; and hydraulic, geomorphic, and vegetation information. The data are stored in the U.S. Geological Survey South Carolina District Bridge-Scour Data Base.

Observed- and potential-scour indexes were computed from the applicable data variables. Sites with observed-scour indexes exceeding ten and (or) potential-scour indexes exceeding 20 are considered to have significant scour-related problems. Of the 3,506 sites inspected, 257 sites had an observed-scour index exceeding ten, 214 sites had a potential-scour index exceeding 20, and 85 sites had observed- and potential-scour indexes exceeding both threshold values.

INTRODUCTION

Scour is water-caused erosion that degrades stream beds and erodes banks. The most common cause of damage to and failure of bridge foundations is scour, and a single flood is often sufficient to create scour conditions that initiate foundation failures (Richardson and others, 1993). For example, floods caused by rainfall from Tropical Storms Klaus and

Marco in October 1990 caused 80 bridges in South Carolina to fail. Seventy-nine of these failures were caused by the washout of abutment-end fill (William Hulbert, S.C. Department of Transportation, oral commun., 1991). Bridge failures cause inconvenience to travelers, but more importantly, can result in serious injuries or death. Therefore, it is necessary to analyze bridges that cross water to determine if they are 'scour-critical'. A scour-critical bridge has abutment or pier foundations that are unstable due to either observed scour at the site or has the potential to become unstable as determined by a scour evaluation at the site (Federal Highway Administration, 1988).

Stream-channel scour in the vicinity of river-crossing structures can be caused by long-term adjustment of the river to past disturbances (degradation), or short-term erosion such as contraction scour or localized scour around piers or abutments. In addition, stream-channel scour is not limited to sand-bed channels, but affects streams with beds of gravel or cohesive soils as well. Degradation is usually caused by changes in basin hydrology or hydraulics, and is not caused by the structure. Contraction scour is the lowering of the streambed at a stream-crossing structure caused by increased flow velocities associated with the constriction of flow by the structure. These increased velocities also can cause bank failures, which could eventually threaten flood-plain piers and bridge abutments. Local scour is localized erosion caused by increased flow velocities and agitation around flow obstructions such as piers and abutments. Local scour depths can be increased by skewed alignments of piers

and (or) abutments relative to flow and (or) by the accumulation of debris on the piers. Total scour is the summation of degradation, and contraction and local scour.

During 1990-92, the U.S. Geological Survey (USGS), in cooperation with the South Carolina Department of Transportation (SCDOT), collected data to document observed scour and to estimate the potential for scour at bridge and culvert sites selected by the SCDOT throughout the state of South Carolina. The SCDOT uses this information along with other variables to select the sites that require additional investigation.

Purpose and Scope

This report documents the methodologies used to collect scour data at 3,506 bridge and culvert sites in South Carolina during 1990-92. The collected data are separated into three categories: index, structural, and channel. A Scour-Critical Information Form was developed to ensure that a standard set of data could be collected at each site. Applicable variables relating to observed and potential scour were taken from the Scour-Critical Inspection Form and used to rank the sites in categories of observed scour and potential for scour-related problems to occur. The observed- and potential-scour indexes for each site are listed in the appendix. The scour-critical data and the observed- and potential-scour indexes are stored in the South Carolina Bridge-Scour Data Base, an Ingres data base that allows the desired output to be structured to the needs of the user. The user can obtain copies of the completed assessment form for selected sites or specific data subsets from the data base.

Acknowledgments

The author is grateful to William Hulbert, SCDOT, for his guidance and technical support of this project. The author also wishes to thank Randall Williamson, SCDOT, for providing the bridge and culvert inspection lists.

Description of Study Area

The study area includes the entire state of South Carolina. The SCDOT has divided the 46 counties of the state into seven districts (fig. 1). South Carolina

has an area of 31,055 mi² and consists of parts of three physiographic provinces: the Blue Ridge, Piedmont, and Coastal Plain (Cooke, 1936). The Coastal Plain Province is divided into the upper and lower Coastal Plains (fig. 1).

The Blue Ridge physiographic province includes approximately two percent of the State's area and is entirely located in SCDOT District 3. Land-surface elevations range from 1,000 to more than 3,500 ft above sea level because of dissected, rugged mountains with narrow valleys. The geology of the Blue Ridge Province is characterized by intrusive granite and metamorphosed volcanic rock (Zalants, 1990). This terrain creates streams with gradients as steep as 250 ft/mi (Guimaraes and Bohman, 1991). Twenty-nine bridge sites and one culvert site were inspected in the Blue Ridge Province (table 1).

The Piedmont physiographic province covers approximately 35 percent of South Carolina and lies between the Blue Ridge and Coastal Plain Provinces. The majority of the province is located in SCDOT Districts 2, 3, and 4 with a small area in the western part of District 1. Land-surface elevations range from about 400 ft near the Fall Line (Coastal Plain boundary) to roughly 1,000 ft at the Blue Ridge boundary (fig. 1). The Piedmont typically has rolling hills with moderately deep to shallow valleys. The geology of the Piedmont is varied; it is mainly composed of fractured crystalline rock and metamorphosed volcanic rock, but also includes deposits of sand, silt, and clay along the valley floors (Zalants, 1990). The stream slopes range from 5 to 60 ft/mi (Guimaraes and Bohman, 1991). The total number of bridge and culvert sites inspected in the Piedmont was 1,597 and 11, respectively (table 1).

The upper Coastal Plain covers about 20 percent of the State. This area ranges from 20- to 50-mi wide and is located just east of the Piedmont Province. The general topography consists of rounded hills with gradual slopes; land-surface elevations range from less than 200 to more than 700 ft. The geology of this area consists primarily of sedimentary rocks composed of layers of sand, silt, clay, and gravel underlain by igneous rocks (Zalants, 1990). The stream slopes range from 5 to 20 ft/mi (Guimaraes and Bohman, 1991). Many of the larger drainage features are bordered by swamps with extensive flood plains. In addition, near the Fall Line, bedrock crops out in the beds of upper Coastal Plain streams. The majority of the upper Coastal Plain lies in SCDOT District 1, whereas

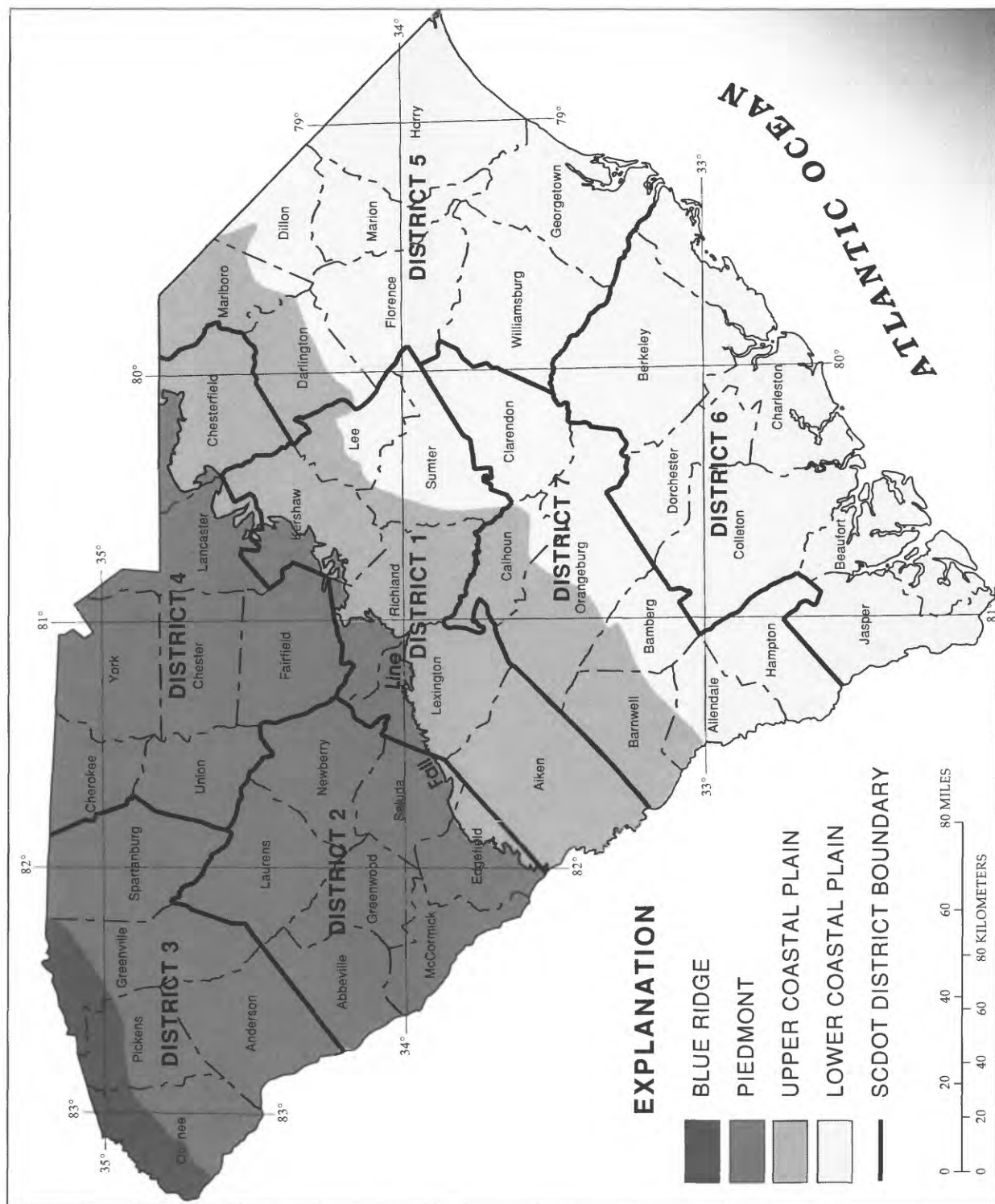


Figure 1. South Carolina physiographic provinces and South Carolina Department of Transportation (SCDOT) Districts.

Table 1. Number of bridge and culvert sites inspected in each South Carolina Department of Transportation District in the Blue Ridge, Piedmont, and upper and lower Coastal Plain physiographic provinces

[SCDOT, South Carolina Department of Transportation]

SCDOT District (fig. 1)	Physiographic province				Total
	Blue Ridge	Piedmont	Upper Coastal Plain	Lower Coastal Plain	
1	0	112	223	91	426
2	0	345	5	0	350
3	30	710	0	0	740
4	0	441	66	0	507
5	0	0	95	438	533
6	0	0	0	551	551
7	0	0	112	287	399
Total	30	1,608	501	1,367	3,506

smaller areas are located in the extreme southern part of District 2, southeastern Lancaster and eastern Chesterfield Counties of District 4, and the northwestern parts of Districts 5 and 7. The total number of bridge and culvert sites inspected in the upper Coastal Plain was 498 and 3, respectively (table 1).

The lower Coastal Plain covers 43 percent of the State. Land-surface elevations range from sea level at the Atlantic Ocean to nearly 200 ft at the boundary with the upper Coastal Plain. The lower Coastal Plain is underlain by loosely consolidated sedimentary rocks of silt, sand, clay, and gravel overlain by permeable sandy soils (Zalants, 1991). Stream slopes range from 1 to 20 ft/mi, and stream-flow patterns become tidally influenced near the coast. In addition, most streams in the lower Coastal Plain have large swamps with wide flood plains or marshes (Guimaraes and Bohman, 1991). All of SCDOT District 6 is located in this area as are the southeastern parts of Districts 1, 5 and 7. In the lower Coastal Plain, 1,364 bridge and 3 culvert sites were inspected (table 1).

DATA-COLLECTION METHODOLOGY

Stream channels were inspected in the vicinity of the bridges and culverts and a standard set of scour-related data were collected at each of the 3,506 bridge and culvert sites using a Scour-Critical Information Form. This form was developed using the scour-inspection form developed by the USGS, Tennessee District, as a guide, and modified to include the specific needs of the South Carolina sites. The form is divided into 17 numbered sections; explanations of the data collected in each numbered block will be provided later in the report.

The collected data are separated into three categories: index, structural, and channel. The index data refer to the structure number, stream name, county, and other general information unique to the structure. Structural data include pier and (or) pile-bent location, size, and type; and abutment type and condition. Channel data include hydraulic, geomorphic, and vegetative information.

Much of the index data was provided by the SCDOT, and the structural and channel data were collected by the USGS during visits to each site. The sites were visited during periods of relatively low flow so that the streambed and banks would be adequately exposed. The stream channel and bank conditions were observed as the inspector walked along the stream for at least one bridge-opening width upstream and downstream of the structure. Data were collected at locations along the channel banks that were representative of the overall site conditions. The site visit generally lasted from 1.5 to 2 hours, depending upon the size of the structure and stream being inspected, and the type of scour-related problems encountered.

Scour-Critical Information Form

This section describes each numbered block on the 6-page **Scour-Critical Information Form** (fig. 2). The **comments** and **photographs and sketches** sections were not numbered on the form but are described in this section. The word crossing, as used here, refers to the channel reach from upstream to downstream limits of hydraulic influence at the bridge. The USGS convention for right or left bank is facing downstream. The descriptions are modified from Bryan and others, 1995.

(1) Introduction:

- The **date** is the date of inspection.
- The **stream** name is provided by the SCDOT. Consistent abbreviations such as, Cr(Creek), Rv(River), Br(Branch), Fk(Fork), and so forth, are used when applicable.
- Vicinity**, generally, is the nearest town on county maps. However, if the site is not near a town or community, a short description is used to locate the site.
- The **inspector** is the person who inspected the site or the party leader when more than one person participates in the inspection.
- Land use** refers to the general area around the site and is based on what the inspector knows about the area or what is observed while approaching the site.

(2) Location:

- The site is located by **route** number, **county** code, SCDOT **District number**, and SCDOT **structure number**. The 46 counties are desig-

nated numerically in alphabetical order, and in instances where a stream forms the county boundary, both county numbers are entered. The SCDOT provides the route, District, and structure numbers. The structure number contains 12 digits that identify the site. The first two digits note the county in which the bridge is located. The third digit identifies the route type: 1, interstate routes; 2, U.S. routes; 4, state primary routes; 6, primary routes; 7, state secondary routes; and 9, local routes. Digits 4-7 are the route number (right justified). The eighth digit notes the traffic direction of multi-lane highways: 1, north; 2, east; 3, south; 4, west. Digits 9-10 indicate bridge location by sequential order on the route while traveling through the county from south to north or west to east. Digits 11-12 are auxiliary numbers used to identify unique structures, such as those located on frontage roads to limited-access highways. For example, Structure 204020000200 is located in Fairfield County on Route S.C. 200 and is the second structure crossed while traveling east on Route S.C. 200 in Fairfield County.

- The sequence number, **seq.no.**, is used to identify dual bridges at the same site with sequence number 1 being the upstream bridge and sequence number 2 marking the downstream bridge. **Lat(itude)** and **Long(itude)** data were not collected for this study.
- The **tot(al) br(idge) length**, **max(imum) span length** and the **original channel point locations** are provided by the SCDOT. The “current channel point locations” are determined in the field and are used as an indicator of channel migration when compared to the “original channel point location.” All measurements are referenced from the left edge of the bridge. The “1st (first) channel p(oin)t” corresponds to the top of the left bank and the “2nd (second) channel p(oin)t” corresponds to the top of the right bank at the upstream bridge face.
- The **physiographic reg(ion)**, also known as the physiographic province, is determined from maps and can be used to check for regional trends in the data.

(1) Intro: Date _____ Stream _____ Vicinity _____

Inspector _____ Land use __, 1=urban 2=row crop 3=pasture 4=forest
5=swamp 6=suburban 7=rangeland

(2) Location: Route __, County __, District No. __, Structure No. _____,

Seq. No. __ Lat _____ Long _____ Tot.br. length _____, ft. Max.span length _____, ft.

Original left edge of bridge to 1st channel pt., _____ ft, 2nd channel pt., _____ ft.

Current left edge of bridge to 1st channel pt., _____ ft, 2nd channel pt., _____ ft.

Physiographic reg. _____ 1=Blue Ridge 2=Piedmont 3=Upper C.P. 4=Lower C.P.

Number of overflow bridges: Left _____ Right _____.

(3) Flow conditions: Inspectable _____ 0=no, 1=yes. Flow regulated _____ 0=no, 1=yes

Gaging station at site _____ 0=no, 1=yes.

Orig. bridge deck to channel centerline bed depth _____ ft.

Bridge deck to channel centerline water surface _____ ft. Depth of flow _____ ft.

Tidal _____ 0=no, 1=yes; Wave action _____ 0=no, 1=yes; undercutting _____ 0=no, 1=yes

High flow angle of approach _____ degrees (+ = toward right bank, - = toward left bank).

Deflected flow (debris) _____, 0=no 1=yes; Impact pt. _____ ft., _____ 1=LB 2=RB; +=US -=DS

Cause of deflection and effect on bridge crossing:

Capacity of bridge opening (qualitative), can the bridge handle all flow or is there some restriction for certain flow stages:

Capacity of channel (qualitative):

Observed High-Water Marks (HWM) _____ ft. above/below _____ (reference pt.)

Road overflow risk (qualitative)

Figure 2. Scour-Critical Information Form.

(4) Bank condition:

	Height from bed		Angle		Woody Veg. cover(%)		Material		Erosion	
	1	2	1	2	1	2	1	2	1	2
	LB	RB	LB	RB	LB	RB	LB	RB	LB	RB
1 U/S	—	—	—	—	—	—	—	—	—	—
2 D/S	—	—	—	—	—	—	—	—	—	—
3 AT BRIDGE										

Note: Bank angle sketch with heights and angles. Woody vegetation, approx. age, species if recognized.

Material 1=silt/clay 2=sand 3=bedrock 4=gravel/cobble

Erosion 0=none 1=mass wasting 2=fluvial erosion

- (5) Bed material characteristics: ____ 1=sand, 2=silt/clay, 3=gravel, 4=cobble/boulder, 5=bedrock, 6= alluvium

Resistant to scour ____ 0=no 1=yes

Estimated depth of gravel deposits ____ ft. (enter 999 if not observed).

- (6) Channel profile: 1 U/S: 1=pool 2=riffle 3=smooth. Note: Code lake sites as 3=smooth.
2 D/S: 1=pool 2=riffle 3=smooth.

- (7) Distance to confluences, diversions, road ditches, if any: 0=no 1=yes; +=US -=DS.

Comments

____ ft. 1= LB entry, 2= RB entry.

____ ft. 1= LB entry, 2= RB entry.

____ ft. 1= LB entry, 2= RB entry.

____ ft. 1= LB entry, 2= RB entry.

Figure 2. Scour-Critical Information Form--Continued.

(8) Piers: To be listed from left to right. Stop at first flood plain pier past top bank.
Also inspect the two piers nearest the left and right abutments.

B or P	shape	skew	depth	1	2	3	4	5	6	7	8	9	local	Expos
(circle appropriate choice below)														
				Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				
_____	_____	_____	_____	Loc: lfp, ltb, lb, mcl, mcm, mcr, rb, rtb, rfp.	0	1	2	N	F	P				

Notes: B = Bent = 1, P = Pier = 2

Shape is a standard: 1=squared 2=rounded 3=pointed

4=square piles 5=round piles 6=pointed piles 7=tower piles

Skew will be from upstream to downstream based on high flow

alignment: + = skew to right, - = skew to left

Depth: distance from bridge deck to channel bed, ft

Location: lfp=left flood plain, ltb=left top bank, lb=left bank, mcl=main channel

left, mcm=main channel middle, mcr=main channel right rb=right bank,

rtb=right top bank, rfp=right flood plain

Local scour: 0=none 1=observed 2=undefinable

Piers: N=no exposure, F=footing exposed, P=piling exposed

Bents: N=slight, F=moderate, P=severe

(9) Abutment:

	1	2	exposed	ftgs.
	or piles	guide banks		
1= left: skew _____ Loc: 0, + _____ ft, - _____ ft, sloping or vertical.	1=yes 0=no	1=yes 0=no		
2=right: skew _____ Loc: 0, + _____ ft, - _____ ft, sloping or vertical.	1=yes 0=no	1=yes 0=no		

Notes: Skew is measured for high-flow conditions as difference between normal flow and abutment; + = right skew, - = left skew.

Loc: + indicates the abutment is set back from the bank. - indicates the abutment extends into the stream. 0 indicates the abutment is even with the bank.

Figure 2. Scour-Critical Information Form--Continued.

(10) Debris accumulation: % of channel opening blocked; horizontal ____ to ____%,
vertical ____ to ____%.

Type and size: ____ 1=brush 2=whole trees 3=trash 4=all of others

Potential for debris (qualitative):

Obstructions (describe):

Note: Horizontal: Left bank to right bank. 0 % = LB, 100 % = RB.

Vertical: Bed to low steel. 0% to 100%.

Take pictures, make notes.

(11) Bank or channel protection on:

1= U/S rt bank: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

2= U/S lf bank: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

3= At rt bank: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

4= At lf bank: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

5= D/S rt bank: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

6= D/S lf bank: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

Type and size (qualitative):

If slumped, where and why:

7= bed: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=moved.

If moved, to what extent?

Type and size (qualitative)

8= At rt abut: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

9= At lf abut: 0=absent, 1=present, 2=good cond, 3=weathered to size smaller, 4=slumped.

Type and size (qualitative):

If slumped, where and why:

Figure 2. Scour-Critical Information Form--Continued.

(12) Channel width, measured from tops of banks: U/S_____, at_____, D/S_____

Blowhole ____ 0=no, 1=yes; ____ ft downstream, ____ ft wide, ____ ft long.

(13) Meander characteristics in vicinity of bridge (impact points):

	1 Low flow	2 High flow
	If straight, ft=999	
	1=Lb,2=RB ft.	1=Lb,2=RB ft.
U/S (ft)	_____	_____
D/S (ft)	_____	_____

Meander wavelength ____ ft. ____ ft.

Notes: Must impact opposite banks to calculate meander wavelength.

Entry will be LB or RB and distance from bridge. 0 = impact at bridge.

(14) Point bar location: ____, 0=absent 1=present
____ to ____% (0% = LB, 100% = RB)

Distance U/S (+)____ft or D/S (-)____ft.

Width at mid bar ____ ft.

(15) Alluvial fan/delta in vicinity of bridge: 0=no 1=yes 2=questionable
If "questionable," then describe.

(16) Stage of reach evolution: 1=undisturbed, 2=constructed channel, 3=degradational bed,
4=degradation and bank failure, 5=aggradation or stable, with bank failure, 6=fully
recovered

Figure 2. Scour-Critical Information Form--Continued.

(17) Culverts: No. of barrels _____

Underflow: ____ 0=no 1=yes; sidewall flow: ____ 0=no 1=yes; apron: ____ 0=no 1=yes

Overfall: ____ 0=no 1=yes, distance from invert to soil contact, _____, ft.

Cut-off wall exposure: ____ 0=no 1=yes, Depth exposed at entrance _____, ft.

Wingwall exposure: ____ 0=no exposure, 1=caused by high angle of approach,
2=caused by embankment runoff,
3=other:

Depth exposed;

LB RB

U/S ____ ft ____ ft

D/S ____ ft ____ ft

____ Pictures taken, frames ____ to ____ on roll ____.

Plan view sketch on back completed _____ (Date, time)

Place other sketches as needed on back.

Figure 2. Scour-Critical Information Form--Continued.

- The **number of overflow bridges** documents the presence of relief openings. Normally, entries here indicate that bridges are in place specifically for overflow relief. Small bridges that span their own creek are not considered overflow bridges, even though the large river being inspected might use the same bridge at flood flow.

(3) Flow Conditions:

- Inspectable** refers to the ability of the inspector to see enough of the site (banks, vegetation, and so on) to properly complete the inspection. It is important to know whether the stream is at flood stage or some lower stage, because the inspector must be assured that he is getting the best, most extensive view of the channel possible. If the inspector is unable to see the channel banks, an effective inspection can not be made. However, if low-flow conditions are bankfull, this is the best condition possible and the inspection is completed. All observations are noted in the comments.
- The **orig(inal) bridge deck to the channel-centerline bed depth** was provided by the SCDOT. This was compared to the sum of the **bridge deck to water-surface** and **depth of flow** measurements during the inspection. The comparison could indicate if bed lowering had occurred.
- Additional site information includes **gaging station at site**, **flow regulation**, and **tidal influence**. At lake and coastal sites, the presence of **wave action** and bank **undercutting** caused by wave action is noted. Wave-action undercutting can undermine the bridge abutments and banks.
- The **high-flow angle of approach** refers to the relative change in angle between the approach flow and the departing flow at the bridge (fig. 3). This angle is measured in reference to the channel banks under the bridge irrespective of the orientation of the bridge to flow. To estimate the high-flow angle of approach, the inspector visualizes the site at approximately bankfull flow. For swamp-type settings, the inspector imagines the flow approaching the structure when the swamp is full. The inspector estimates how flow may affect the channel at the bridge and thereby affect the bridge. To

help visualize the **high-flow angle of approach** at low water levels, the inspector uses at-site features, such as, channel configuration, observed debris accumulation, and bank erosion. To determine the skew direction, the inspector looks downstream and imagines how flow approaches the banks at the structure. If the flow impacts the right bank, the skew is positive; if the flow impacts the left bank, the skew is negative.

- Deflected flow (debris)** is used to identify any abnormal channel obstruction that may be affecting the crossing, such as cars, pipelines, large quantities of trash, and so forth. This type of obstruction probably is temporary. It is usually upstream, but can be downstream. **Impact p(oin)t** refers to the bank the deflected flow is affecting. The cause of the deflection and its effect on the crossing are noted qualitatively.

- There are qualitative entries on the form and enable the inspector to note unquantifiable details. The **capacity of bridge opening** and **capacity of channel** are strictly qualitative and based on the inspector's knowledge of the hydrology of the area, and on what he has been seeing in the area. In addition, the inspector uses the **observed high-water marks** to assist in determining the hydrology of the area and to consider the potential high-flow effects on the crossing. These data can be used by engineers as part of bridge replacement design at that site or on the same stream. A qualitative estimation of the **road overflow risk** also can be made. This refers to either the road approach or the bridge, depending upon the location of the low spot.

(4) Bank Condition:

- Bank characteristics in the reach upstream and downstream of the bridge are good indicators of channel processes that could significantly effect the banks and bed under the structure. Stable banks in the upstream and downstream reach indicate that any bank problems observed at the bridge are localized and perhaps caused by the bridge, and not related to a system-wide response that could adversely effect the structure. However, sites with unstable banks at the structure and on the upstream

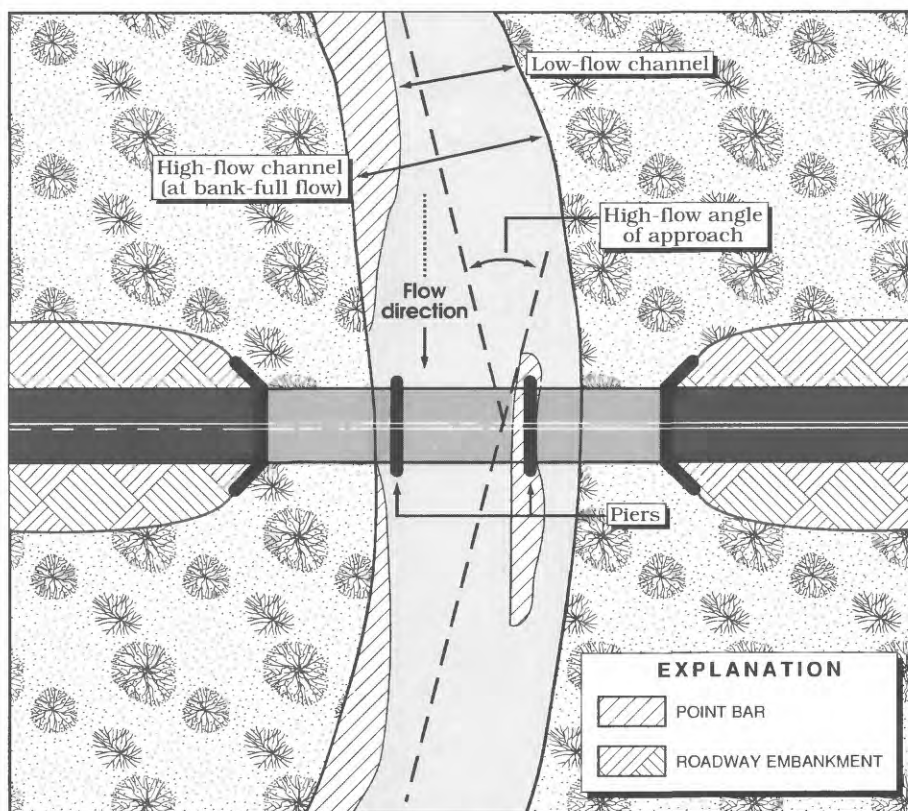


Figure 3. The high-flow angle of approach (modified from Huizinga and Waite, 1994).

and (or) downstream banks indicate an unstable channel system that may threaten the structure.

- **Bank height from bed and angle** are collected at points in the channel representative of the overall site condition (fig. 4). High, steep banks are more likely to fail, and are generally indicative of rapidly occurring bank-forming processes.
- The amount of **woody veg(etation) cover** on the banks is an indicator of the overall health or stability of the channel banks. Percent cover is determined based on the amount of crown cover from woody vegetation. Herbaceous vegetation may cover the banks during the growing season, but die back and leave the banks relatively unprotected during the winter months. In addition, herbaceous vegetation usually has a less substantial root system, and therefore, does not provide as much bank protection as woody vegetation. Large numbers of small woody vegetation can have crown closure, and a high percentage of vegetation coverage. Sparser distribution of older trees may have crown closure and also receive a high percentage of vegetation coverage. Low

amounts of woody plant coverage may indicate the existence of, or the potential for mass wasting, frequent scouring flows, or that the area is cleared often.

- The bank **material** is important in controlling what type of erosion will take place. Silt and clay banks are susceptible to either fluvial erosion or mass wasting; sand and gravel banks can be susceptible to rapid erosion. The material present is important in determining the overall character of the site.
- **Bank erosion** identifies whether erosion is occurring, and if so, whether it is fluvial erosion or mass wasting (bank failure). At most sites, some type of erosion is occurring. Fluvial erosion is the removal of bank material one particle at a time, and is generally part of the normal channel-forming process. Exposed, but unbroken, roots are evidence of fluvial erosion, but exposed, broken roots are one indicator of bank failure. Bank failure occurs when the cohesive strength of the soil has been exceeded and a large mass of the bank fails at once. These failures can appear as a slab, a wedge, a rotated mass or a combination of

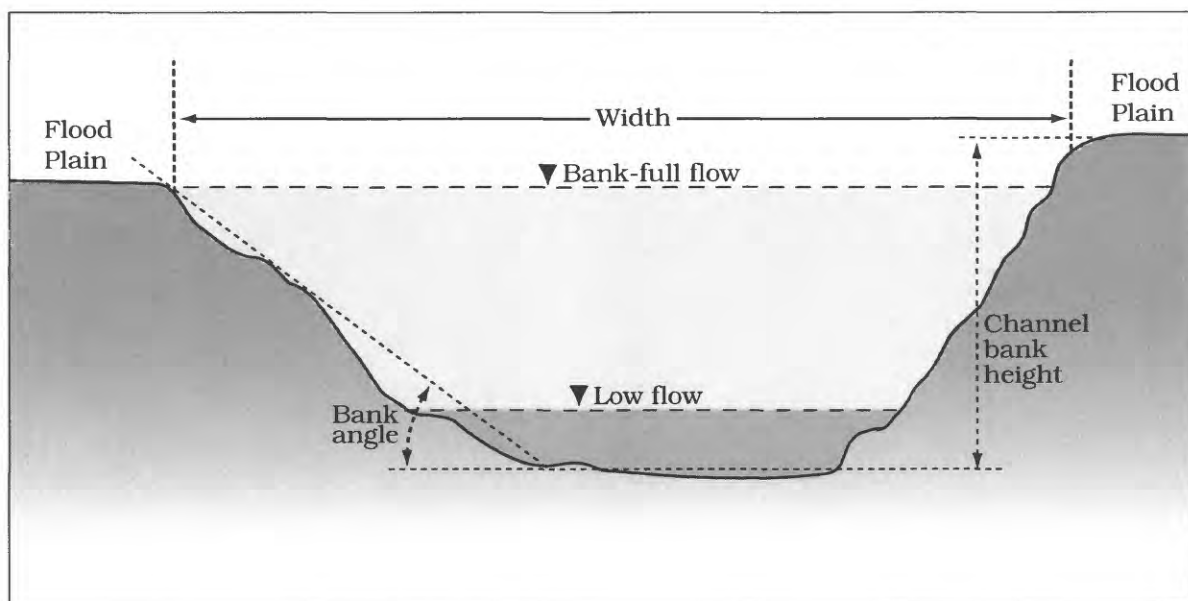


Figure 4. Selected channel-bank data collected in the channel upstream and downstream from the bridge (modified from Huizinga and Waite, 1994).

these. Mass wasting is more serious than fluvial erosion, because the channel is changing quickly and can affect the structure in a relatively short period of time. A photograph of mass wasting (bank failure) is shown in figure 5. However, long-term fluvial erosion should not be discounted because channel migration can eventually undermine the structure (Bryan, 1989).

(5) **Bed-Material Characteristics:**

- Sand, silt/clay, and gravel beds are very susceptible to local scour. Bedrock beds may not scour, but extreme flows in streams having a bedrock channel and soil banks may cause excessive channel widening and affect the bridge. The bed material should be classified as unknown alluvium for streams that are too deep for the inspector to determine the actual bed material.

- **Resistant to scour** or armored is a qualitative judgement that should be made by the inspector in regard to resistance to bed-material movement, and therefore, resistance to scour. If the material is assumed to not move during bankfull flow conditions, it is considered resistant. If it is obvious that most flood flows move the majority of the bed material, it is not classified as resistant.

- **Estimated depth of gravel deposits** is used only when a depth of gravel can be observed. The observation is relative to a gravel deposit and the underlying bed material. If the underlying material is scour resistant such as bedrock, a deep gravel deposit can allow scour to proceed vertically. If the deposit is relatively shallow, vertical scour stops at the scour-resistant material and then begins to act horizontally. In addition, if the gravel deposit overlies a more erosive material such as a silt/clay bed, the gravel will initially retard the scour process,



Figure 5. Mass wasting occurring along a stream bank downstream from Structure 204020000200, on Route S.C. 200, crossing Reedy Creek near Winnsboro, S.C., January 1991.

but the process accelerates once the gravel is removed. The depth of gravel gives some indication of the protection for the more erosive bed material.

(6) Channel Profile:

- Channel profiles containing pools and riffles have an energy gradeline indicative of scour and deposition. A smooth profile indicates a generally stable energy gradeline and consequently, a more uniform bed-material transport capability. Lake sites are classified as **smooth**.

(7) Distance to Confluences, Diversions, Road Ditches:

- Contributions of flow and sediment from a tributary in the vicinity of the bridge crossing, either upstream or downstream, can affect flow patterns and scour through the structure. Road drains and diversions also can affect the bridge, and therefore, are noted. The size and

contributing flow of the tributaries are noted as comments.

(8) Piers:

- For this study, data are collected at the two flood-plain piers closest to each abutment, the flood-plain piers closest to each bank of the main channel, and all bank and channel piers. The data include the type, shape, skew, depth, location, local scour, and exposure of pier substructure.
- B or P** identified the type of support (pile bent or pier). The methodology used by the USGS assumes that piers have footings and bents do not. Bents are generally driven piles.
- Shape** has an effect on turbulence. Less streamlined piers cause more turbulence. Piers and pile bents are differentiated by the **B or P** coding variables. The piers are coded as 1 = squared, 2 = rounded, or 3 = pointed; and the pile bents are coded as 4 = square, 5 = round, 6 = pointed, or 7 = tower.
- Skew** refers to the flow angle approaching the pier, not the flow angle relative to the bridge deck (fig. 6). As the skew increases, the potential for more turbulence is created, which can cause larger scour depths at the pier. The skew angle is determined while looking upstream. To determine the skew direction, the inspector visualizes that the downstream end of the pier is on a pivot and assigns a positive angle if the flow pushes the pier toward the right bank and a negative angle if the flow pushes the pier toward the left bank.
- The **depth** is the maximum distance from the deck of the bridge or culvert to the bed. This can be compared to existing information to quantify changes in local scour conditions.
- Loc(ation)** indicates the general placement of the pier or pile bent in the channel referenced from the left end of the bridge. The channel and flood-plain locations of the piers at a typical bridge are shown in figure 7.
- Local scour and Expos(ure)** are used in computing the scour indexes, and information regarding severe problems is supplied to the SCDOT immediately. When local scour is undefinable (2), an appropriate warning is appended to that data indicating that the inspection is incomplete.

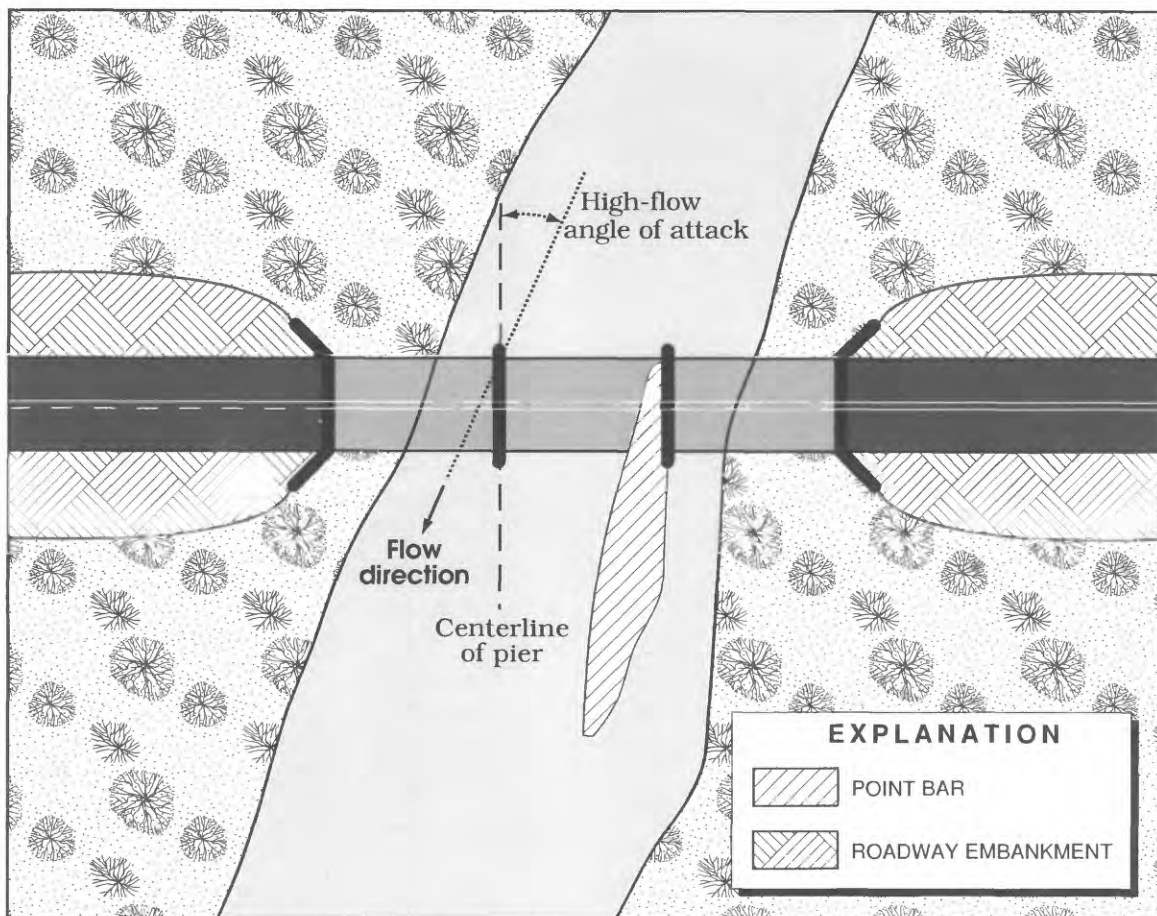


Figure 6. The high-flow angle of attack on piers (modified from Huizinga and Waite, 1994).

- For **Expos(ure)**, pile bents are ranked as 0 = slight, 1 = moderate scour, or 2 = severe scour depending on how much of the piling has been exposed. Pile exposure can be caused by local pier scour or by degradation of the bed and (or) banks. The degree of pile exposure due to local pier scour is estimated by comparing the ambient bed elevation near the pile bent to the deepest bed elevation next to the piles. The degree of exposure due to channel degradation is determined by estimating the amount of bed or bank degradation and assuming this to be an estimate of the degree of pile exposure. Because the inspector does not know the bed elevation at the end of construction, it is more difficult to estimate pile exposure due to channel degradation. Relative size of the scour hole or channel degradation, and inspector experience are used to estimate the severity of the scour at the bents. For example, if the channel has degraded moderately or there is a moderate local scour hole at the pile bent, there is moderate piling exposure (1 = moderate scour).

Likewise, if the channel has severely degraded or there is a large local scour hole at the bent, there is severe piling exposure (2 = severe exposure). Piers are ranked as 0 = no exposure, 1 = pier footing exposed, or 2 = pilings beneath the pier footing were exposed.

(9) **Abutment:**

- Abutment skew** refers to flow angle to the abutment, not flow angle to the bridge deck. The skew direction is determined by the same methods used to determine pier skew.
- Loc(ation)** is measured in regard to the channel bank, and gives the inspectors some estimate for how soon bank erosion can affect the abutment. The distance is measured to the toe of the abutment slope, unless the abutment forms the channel bank. In this case, distance equals 0. If the toe of the abutment protrudes into the channel, the distance is measured from the

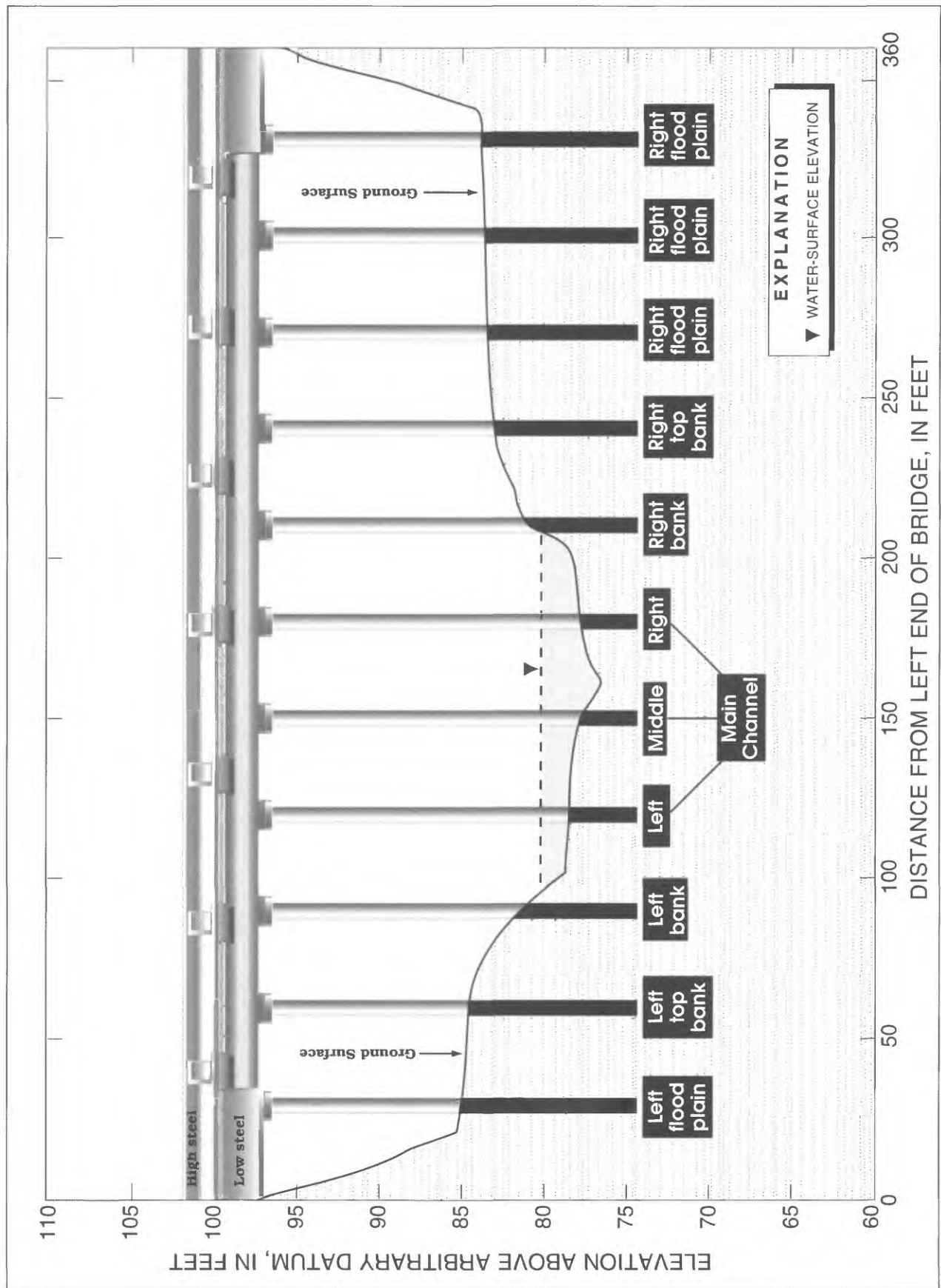


Figure 7. The pier and (or) pile-bent location plan (looking downstream).

abutment toe back to the natural banks and is assigned a negative value.

- The type of abutment is noted as **sloping or vertical**. Sloping abutments usually consist of compacted fill; vertical abutments are constructed of either concrete or wood. **Exposed ftgs (footings) or piles** are used to document erosion occurring at the abutments. The exposure may be caused by high flows, road runoff, or method of construction. The inspector uses his experience to determine if the exposure is related to scour.
- Guide banks** also are known as spur dikes or other names. They guide the flow around the abutment slope and usually extend some distance upstream and (or) downstream. Guide banks protect abutments from local scour by shifting the turbulent flow at a contraction from the abutments to the upstream or downstream limits of the guide banks.

(10) Debris Accumulation:

- By specifying percent of **horizontal** and **vertical** channel debris accumulation, the total size of channel blockage can be computed, and the

location of blockage can be specified. The computation programs used in this study do not identify separate debris stacks, but data on separate stacks of debris can be collected by adding another section to the form. Percent blocked is based on the main channel opening and the low steel of the structure, and is an integration of all debris in the channel at the bridge (fig. 8). Low steel is the lowest point of the bridge understructure.

- Debris type and size** is often indicative of channel-forming processes ongoing upstream. Many trees or parts of trees can indicate extensive mass wasting upstream, and that debris accumulations can be expected to occur during all significant high flows. This also may indicate that the normal in-channel debris accumulation and flushing process no longer is in effect.
- Potential for debris production** refers to how much debris the site might generate in the near future. The debris generally is composed of brush and trunks and is generated by bank erosion and sometimes agricultural practices

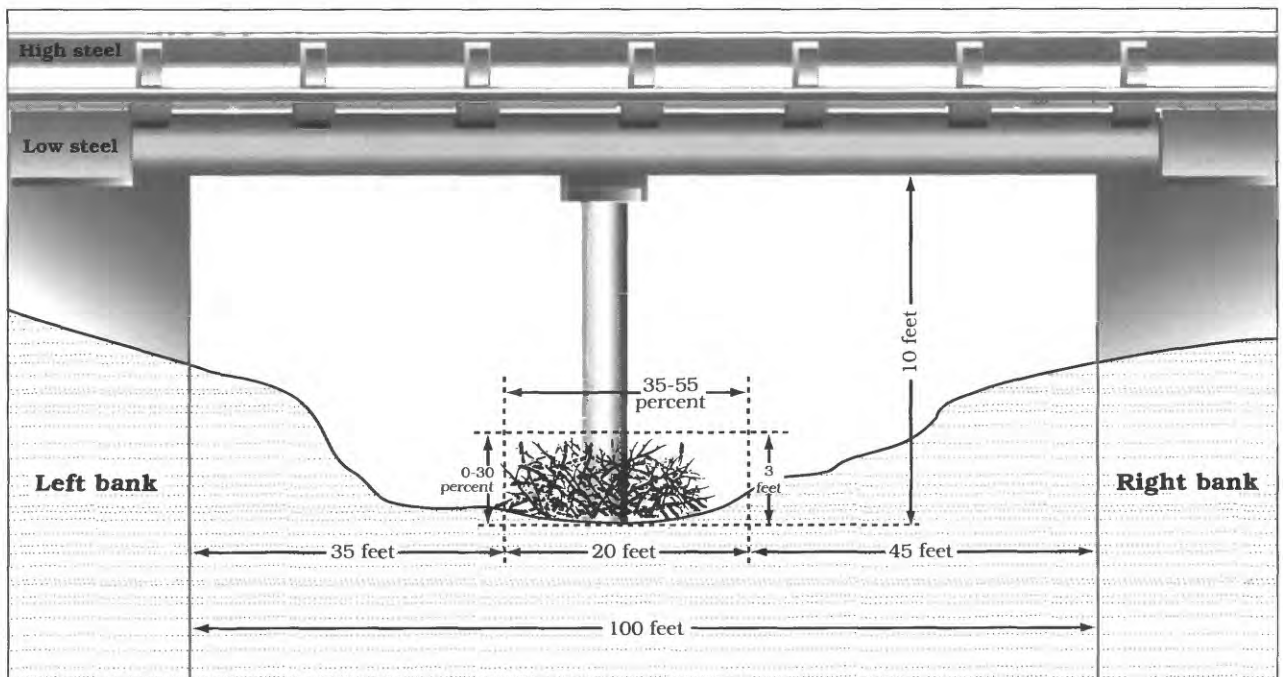


Figure 8. Bridge opening showing designation of debris pile dimensions, looking downstream (modified from Huizinga and Waite, 1994)

(clearing, plowing up to the bank, and so forth). The entry is qualitative and is based on field experience, an understanding of erosion processes, the normal appearance of vegetation at streamside, and the condition of the banks at the site as described on the form. A rating of high, medium, or low is recorded, along with a short discussion describing the rationale for the rating given.

- **Other obstructions** at the site affecting flow are noted; because they can cause deflected flow. Pipelines and abandoned automobiles are two common obstructions.

(11) **Bank or Channel Protection:**

- **Bank and channel protection** is material that has been placed on purpose or by default such as an old bridge deck left where it fell. In addition, even though bedrock and boulder bank material are not artificial channel protection, it is noted as channel protection.
- The boundary for determining the location of the channel protection is the limit of the hydraulic influence of the bridge. If the material is placed beyond this limit of influence, the channel is considered to be protected upstream, U/S, or downstream, D/S, from the bridge. **At** refers to the banks at the bridge. Material wrapping an abutment is considered to be **At** the bridge and noted as abutment protection. Guide banks set back into the flood plain are not channel protection, nor are they abutment protection.
- The **type and size** of material is important, because it indicates the magnitude of flow energy needed to move it. If the banks are protected and the bed is not, a structure may be open not only to local scour, but also system-response type degradation. In addition, if the bed is protected, but not the bank, the crossing is left open to lateral energy dissipation and bank widening.

(12) **Channel Width:**

- **Channel width** data are used to estimate the constriction to flow caused by the structure and indicate channel scouring at or downstream of the structure caused by the constricted flow. The upstream and downstream channel widths are measured at representative locations (fig. 4). The channel width at the structure is measured under the bridge, or for culverts is the

cumulative width of the barrels. If there is a large constriction of the channel at the bridge, it is likely that flow velocities will increase, creating potential for contraction and local scour. In addition, crossings that severely constrict flows can create overwidened sections where flow expands just downstream of the opening. This is called a **blowhole**. The blowhole can expand upstream and threaten the structure.

(13) **Meanders:**

- **Meander characteristics in the vicinity of the bridge** is a different consideration than **high-flow angle of approach** in section 3 of the form. They can correspond, but do not always. Meanders are evaluated because they shift. It is important to appreciate the power and tenacity of the channel-evolution process. Notes in this section may indicate that a meander-impact point is moving into the crossing or that one already exists at the crossing. A meander-impact point at a crossing can result in bank undercutting and either mass wasting or very rapid fluvial erosion and endangerment of the bridge. Channel migration caused by a meander impact during a ten-month period is shown in figure 9. In comparing photographs 1 and 2 on figure 9, the left bank has migrated and exposed the downstream piles of the left top bank bent.
- **Meander wavelength** as used in this project is a local phenomenon, not an overall consideration made after review of an extensive river reach. The meander wavelength distance is an indicator of the sinuosity of the channel. Meander wavelength is measured from peak to peak in the wave and will probably be different for high and low flow. In some cases, the long-term low-flow pattern can have a more serious effect on the crossing.

(14) **Point Bar Location:**

- **Point-bar location** provides data about the changing hydraulics in the vicinity of the crossing. Point bars are usually located opposite of cut banks. As bars build, the thalweg shifts and bank undercutting or erosion proceeds. The location of a bar dictates how much effect it will have on flow and therefore, the crossing and structure.



Figure 9. Channel Migration and bank erosion caused by a meander effect on the left bank of Reedy Creek at Structure 204020000200, on Route S.C. 200 near Winnsboro, S.C., (1) January 1991 and (2) November 1991.

(15) **Alluvial Fan:**

- **An alluvial fan/delta in the vicinity of bridge** indicates the site is in a reach where bed material from the upper parts of the basin is being deposited. This large supply of bed material can be transported and deposited at the site, causing flow concentrations at piers or abutments. In addition, if this supply of bed material is interrupted, downstream degradation can begin. Alluvial fans are infrequent in South Carolina.

(16) **Stage of Reach Evolution:**

- **Stage of reach evolution** was developed by Simon and Hupp (1986) for west Tennessee streams and modified for applicability to South Carolina streams. The stage of evolution is based on the state of channel stability, and is estimated based on the data previously collected by the inspector. The inspector should be able to summarize the overall site conditions with one of the six stages of evolution. A description of the six stages follows (modified from Simon and Hupp, 1986):

Stage 1. Undisturbed: The stream is acting and reacting naturally and shows only long-term changes. The banks are eroding fluvially on the outside bends and deposition is occurring on the inside bends. The flow line is high relative to the top of bank. The channel bars alternate and the banks are vegetated to the flow line.

Stage 2. Constructed channel: The channel has been altered by man, either by straightening and (or) widening. The cross section is trapezoidal with linear-bank surfaces. The flow line is lower relative to the top of bank than in an undisturbed stream, and the woody vegetation along the banks has been removed.

Stage 3. Degradational bed: The streambed is lowering and there is some basal erosion of the banks. The banks are steepening and getting higher relative to the bed. The flow line is lower relative to the top bank and the channel bars have eroded. The vegetation is located high relative to the flow line and trees may lean unnaturally toward the chan-

nel (trees naturally lean away from the channel for light).

Stage 4. Degradational bed and bank failure: The streambed is lowering, and mass wasting of the banks is occurring. Large scallops develop in the banks as they retreat. The banks have a vertical face and an upper bank. Failure blocks can appear on the upper banks and the flow line is low relative to the top bank. The bank vegetation has tilted and (or) fallen.

Stage 5. Aggradation or stable bed with bank failure: The streambed is stable or aggrading, a meandering thalweg is developing, and the alternate channel bars are reappearing. Slab, rotational, and pop-out failures of the banks are still occurring as well as some low-angle slides of previously failed material. The retreating banks can have a vertical face and an upper bank. The overall bank angles are flattening and the flow line is low relative to the top bank. The bank vegetation has tilted and (or) fallen.

Stage 6. Fully recovered: The channel has recovered from degradation and widening, and looks and responds hydrologically, or hydraulically, like an undisturbed stream.

(17) **Culverts:**

- **Culverts** are inspected in the same manner as bridge sites; however, problems unique to culverts also are noted. The **no(number) of barrels** is noted.
- The presence of **Underflow** and (or) **sidewall flow** indicates that streamflow is passing under or around the culvert. These are serious problems because flow under the culvert, in particular, can undermine the culvert and cause failure. This situation requires immediate notification of the SCDOT.
- The existence of **cutoff wall exposure** at the culvert entrance or **overfall** at the exit are evidence of streambed lowering and can eventually lead to underflow. The distance from the culvert invert to soil contact for overfall at the exit and the depth exposed at the entrance of a cut-off wall at the entrance are measured and recorded. An entrance **apron**

protects the culvert by transferring the point of bed scour from the culvert entrance to some point upstream of the culvert.

- Wingwall ends are normally buried. **Wingwall exposure** can be an indicator of future under-flow or sidewall flow. If a wingwall is exposed, the depth of exposure and the cause of exposure is noted.

Comments: Qualitative comments are recorded on the forms and entered into the data base. Two 80-column lines are provided for each comment heading. The comments are obtained from notes and data on the Scour-Critical Information Form and are used to succinctly describe the conditions observed by the inspector. Comments are made for the following headings:

1. Introduction
2. Location
3. Inspectable
4. Tidal (under Flow Conditions section)
5. High-flow angle
6. Deflected flow (caused by debris)
7. Capacity of bridge opening
8. Capacity of channel
9. Road overflow risk
10. Bank condition
11. Bed material
12. Channel profile
13. Confluences
14. Piers
15. Abutments
16. Debris accumulation
17. Debris production
18. Obstructions
19. Channel protection on banks
20. Channel protection on bed
21. Channel protection on abutments
22. Blowhole
23. Meander characteristics
24. Bar location
25. General

Photographs and Sketches: Photographs are used to document conditions observed at the site. The standard set of photographs include upstream and downstream views of the structure and upstream and downstream views from the structure. In addition, extra photographs should be taken to document haz-

ardous or unusual conditions. Sketches are used to supplement the photographs and to summarize conditions observed at the structure. A plan view sketch of a hypothetical bridge site is shown in figure 10. The photographs and sketches are used to describe any problems at the site and in quality control of data-collection activities.

Quality Assurance and Control

Adequate quality-assurance and control procedures ensure that the data collected are of high quality. Proper quality-assurance procedures are critical when part of the data collected is subjective; the inspectors should be trained to view site conditions and make qualitative judgements from similar perspectives. The assessments should follow set guidelines and be consistent throughout.

Quality assurance is the procedures used to ensure that the data are complete and correct. Quality assurance procedures were developed from meetings with USGS District, Regional, and National personnel and from reviews by the SCDOT and the Federal Highway Administration.

The first step in quality assurance was adequate training. Personnel from the USGS Tennessee District provided training for the original members of the project. Subsequent training of existing and new members of the project group was done by the project chief. This training was used to introduce project personnel to the scour-critical data-collection form, scour-critical variables, and the data-collection methods to be used in the field.

Field training consisted of group assessments of selected sites, followed by individual assessments of additional sites. At the group-training sites, the finished evaluations were reviewed by the project chief, and the assessments were discussed by the trainees and the instructor. These discussions reduced conceptual misinterpretations and increased understanding of the data-collection process. At the conclusion of the group training, the trainees were allowed to individually assess two to three sites. Then, the project chief returned to these sites with the trainee to evaluate the data-collection methods and to answer any questions. The trainee-inspector was allowed to inspect sites independently after the project chief was satisfied that the inspector was qualified to collect data accurately and make consistent interpretations. However, at sites that had multi-lane highways, required the use of a

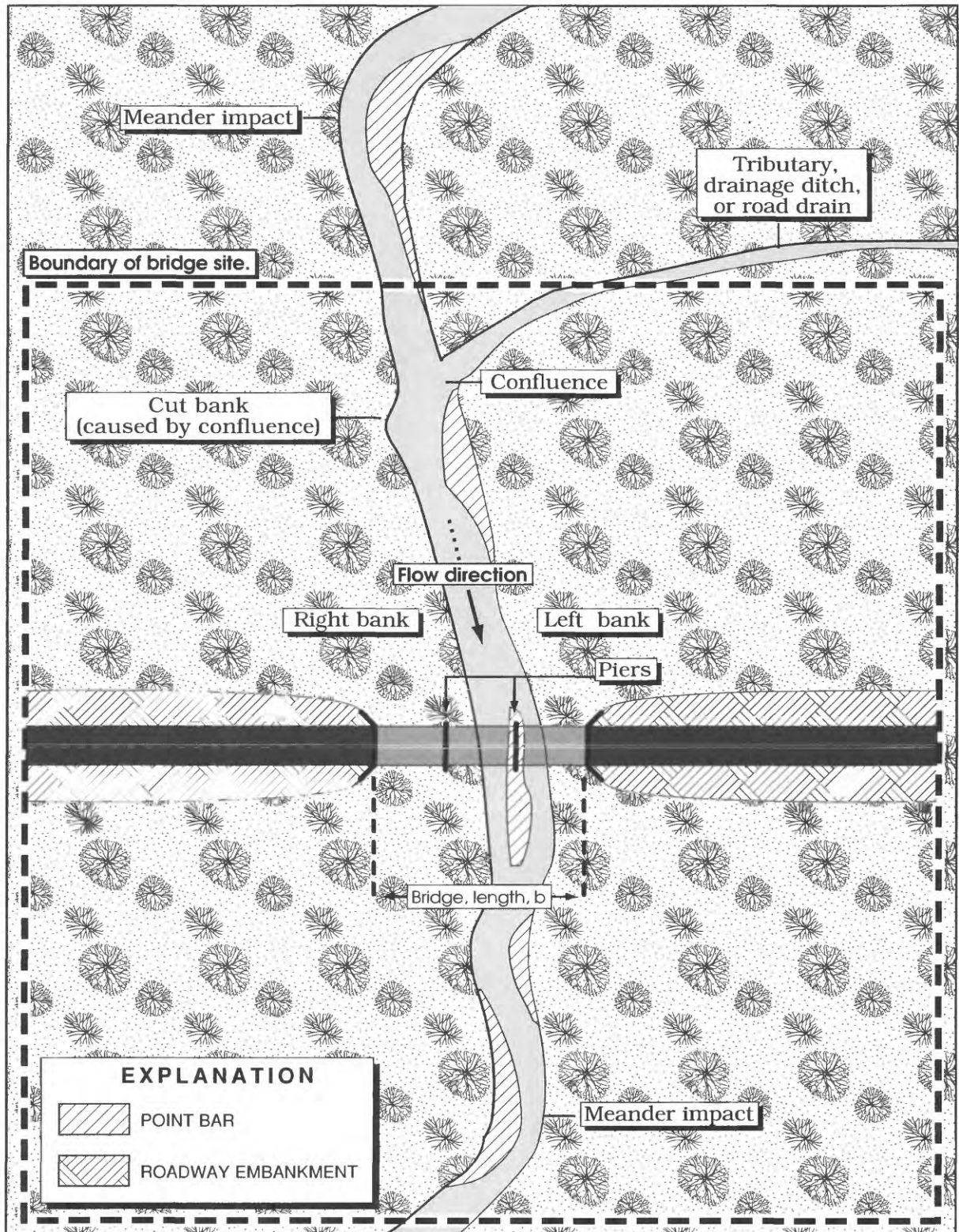


Figure 10. Generalized plan view of hypothetical bridge site (modified from Huizinga and Waite, 1994).

boat, or had other obvious difficulties, at least two inspectors participated in the assessment for safety.

In addition, periodic group inspections were made to ensure that the inspectors continued to collect data in a consistent manner. These group inspections were made at regular intervals and whenever a review of the data indicated consistently occurring problems in data interpretation. Finally, the bridge-scour project chief from the Tennessee District provided an external review of data-collection and data-management procedures during the project.

Quality control is the routine procedures used to ensure the quality of data collection. Quality control was monitored by individual inspectors and the project chief.

Initially, the project chief assigned the sites weekly and assisted in scheduling field trips to reduce travel time and to utilize inspectors efficiently. Once the inspectors had obtained sufficient experience, they were assigned sites monthly and were allowed to plan data-collection trips. At the sites, the field forms were completed, sketches drawn, and photographs taken. The photographs and sketches were used later as part of the office review. A minimum of two sketches and four photographs was made. Additional photographs were taken to document severe or unusual conditions.

The office review consisted of four steps. The first step was a peer-review process, in which another inspector, unfamiliar with the site, reviewed the photographs and sketches to verify the perceptions and assumptions of the field inspector. Discrepancies were referred to the project chief, and if the problem could not be resolved in the office, the field inspector would return to the site to clarify any questions or collect missing data. For sites having complex or unique problems, the inspector and the project chief or a more experienced inspector returned to the site to complete the inspection.

Once peer review was satisfactorily completed, the data were entered into the data base. During the second and third review steps, the entered data were compared to the original form by the person entering the data and by an independent checker. Prior to submittal to the SCDOT, the data and scour indexes were reviewed by the project chief.

As an additional means of quality control, the project chief would assess sites independently of the inspector. The results of the assessments would be compared and necessary adjustments to perceptions or data-collection procedures would be made.

Methodology Limitations

The Scour-Critical Information Form and the data-collection procedures were developed such that a relatively large, standard set of data could be collected at the bridge and culvert sites during a 1.5- to 2-hour inspection. The data provide adequate information to develop observed- and potential-scour indexes that can be used to assist in determining the sites that require additional analysis. In addition, much of the data are qualitative and therefore, require some judgment to be used during the inspection. Even though inspections are made during periods of low flow, the data are collected from the perspective of bankfull-flow conditions. Because most channel-forming processes occur during the bankfull flood, the data collected do not document conditions at extreme events.

The data collected document the stream and channel conditions at the time of inspection. The data are generally valid for 1 to 3 years. However, streams are dynamic entities and severe floods, droughts, and (or) changes in the drainage basin hydrology can result in rapid alterations of site conditions. Therefore, periodic future site inspections are necessary to document changes at the site and to update the scour indexes. In 1992, the SCDOT bridge inspectors began using a modified version of the Scour-Critical Information Form to collect selected structural and channel data during bi-annual bridge inspections. These data are used by the SCDOT to document changes in bridge and channel conditions that may have occurred from the time of the initial USGS inspection.

ASSESSMENT OF SCOUR-CRITICAL DATA

The scour-critical data were stored in an Ingres data base that allowed the desired output to be structured to the needs of the user. The user can obtain copies of the completed assessment form for selected sites or specific data subsets, which can be analyzed for regional trends.

To provide a means to rapidly assess the scour conditions at bridge sites, observed- and potential-scour indexes were developed. The observed- and potential-scour indexes were created to document existing scour-related problems, and to estimate the potential for a site to develop scour-related problems. Applicable variables relating to observed and potential scour were taken from the Scour-Critical Inspection

Form and quantified. The sum of these variables was the observed- and potential-scour indexes. The variables were quantified such that more severe problems were assigned higher rankings; therefore, sites with larger numerical rankings had more observed scour-related problems or had a greater potential for scour-related problems to occur.

Computation of the Observed-Scour Index

The observed-scour index quantifies scour-related problems at the inspection site at the time of reconnaissance. Ten variables taken from the Scour-Critical Information Form are quantified and the sum of these variables is the observed-scour index. These variables are usually easily observed; however, if the stream is too deep, some data regarding piers and pile bents cannot be collected and some other means of inspection, such as underwater inspection, would be necessary to document scour at the site. Underwater inspections were beyond the scope of this study and therefore, were not made. In addition, the user of this data base is advised that in instances where pier scour was not determined, the observed-scour index is incomplete.

The maximum observed-scour index for bridges is 12 (excluding pier and (or) pile-bent scour and abutment scour) and 10 for culverts (excluding local scour at the culvert-barrel divider(s), also known as webs). The observed-scour index can be influenced by the number of piers/pile bents at the site. For example, a site with several piers may have a relatively large observed-scour index because some scour is observed at many of the piers, but the overall site condition is stable. Conversely, a site with only one pier/pile bent may have a relatively low observed-scour index but have severe scour-related problems along the streambed and banks. The user is encouraged to evaluate the individual scour variables when assessing the observed-scour index of a particular site, because the site may have one or two severe site-specific problems. The variables and assigned values used in the observed-scour index computation are listed in table 2.

Observed-Scour Index Variables

Local scour at piers or pile bents, variable 1, are ranked from 0 to 3 with the larger numbers indicating

the most severe scour problems. Piers are considered to be support structures with footings resting on piles. The local-scour variable descriptors, in ascending order of severity, are no scour observed, some scour, pier footing exposed, or support piling exposed. In addition, pile bents are assumed to be driven into the ground and have no footings. The local-scour descriptors range from no scour to severe local scour. However, if the stream is too deep for the inspector to wade, visually inspect, or probe the streambed in the vicinity of the pier, the local scour variable is noted as indeterminate, assigned a value of 0, and the observed-scour index is classified as incomplete. In these cases, underwater inspection is an option that can be used to determine local scour at support structures. If the penetration depths of the piers or piles is unknown, the inspector must rely on experience and engineering judgement when assigning local-scour descriptors. Moreover, at lower streamflows, scour holes around flood-plain piers or piles can assist the inspector in assessing the local scour at in-channel piers. This method can be used because flood-plain piers experience clear-water scour, and therefore, unlike the scour holes at in-channel piers, flood-plain scour holes do not fill in as the flood recedes.

Variable 2 addresses the rip rap condition of the streambanks at the bridge. Unstable, slumped rip rap can indicate bank instability or high-energy streamflows at the structure. If the streamflow is strong enough to destabilize the bank protection, it can eventually threaten the structure. The stability of the bank protection is determined for both banks, with unstable bank protection assigned a value of 1. The sum of the bank protection condition is the value used in the computation of the observed-scour index.

The condition of any streambed protection is noted in variable 3. If the streamflow has sufficient energy to move the bed protection, degradation can occur, and threaten the structure. A value of 1 is assigned if the streambed protection has been moved.

Streamflow through a constrictive bridge or culvert can cause flow to expend energy rapidly as it exits the structure. This excess energy can result in enlargement of the channel width and depth. These conditions are commonly called blowholes. Blowholes, variable 4, receive a ranking value of 3, because they can expand rapidly upstream into the structure and threaten the stability of piers or abutments.

Table 2. Variables and assignable values for the calculation of the observed-scour index for streams in South Carolina

Bridges and Culverts				
1. Pier, pile bent, and abutment scour (local scour; sum for all)				
If pier:	no scour	some scour observed	footing exposed	piling exposed
	0	1	2	3
If pile bent:	no scour	some scour observed	moderate scour	severe scour
	0	1	2	3
2. Failed rip rap at bridge (variable value is the sum of both sides)				
left		right		
yes	no	yes	no	
1	0	1	0	
3. Moved bed rip rap				
yes	no			
1	0			
4. Blowhole observed				
yes	no			
3	0			
5. Abutment (end) pile exposure (variable is the sum of both abutments)				
left		right		
yes	no	yes	no	
1	0	1	0	

Table 2. Variables and assignable values for the calculation of the observed-scour index for streams in South Carolina--Continued

6. Mass wasting at pier or pile bent located on either bank			
yes	no		
3	0		
7. Mass wasting of bank at bridge (variable is the sum of both banks)			
left		right	
yes	no	yes	no
1	0	1	0
Unique to Culverts			
8. Overfall at culvert exit			
yes	no		
1	0		
9. Flow around sidewalls			
yes	no		
1	0		
10. Flow under culvert floor			
yes	no		
1	0		

Note: Observed-scour index equals the sum of assignable values.

The exposure of the end piles of either abutment, variable 5, signifies that the abutment fill is being eroded by either high streamflows or road runoff. Loss of the end fill can destabilize the structure, and could eventually cause failure. The ranking value for abutment pile exposure is 1 and the observed-scour value for end-pile exposure is the sum of both abutments.

Variable 6 describes the very serious condition of bank failure when a pier/pile bent is present. The bank failure could undermine not only the pier, but could result in excessive lateral strains on the piers. This variable is assigned a ranking of 3 for each pier affected. Sites that have piers on banks where mass wasting is occurring have the potential for scour-related problems to develop rapidly; consequently, frequent follow-up inspections to document the ongoing bank failure or remedial protective action may be necessary to stabilize the banks.

Variable 7 describes the bank conditions at the structure. Even though this condition is not as serious as bank failure with piers present, failing banks represent a highly mobile channel with migrating banks. This condition could ultimately affect the piers or abutments. The ranking for variable 7 is the sum of the values assigned for each bank.

Variables 8-10 apply to scour conditions observed at culverts. Overfall, variable 8, is the distance from invert to bed at the culvert exit. This presence of overfall indicates that streambed erosion is occurring and can result in flow under the culvert floor, variable 10, and eventually undermine the structure. Flow around the sidewalls, variable 9, or under the culvert floor, occurs at sites where the bed and banks have eroded to the point that culvert integrity is threatened.

The sum of the 10 variables is the observed-scour index. A high index value identifies the site as having substantial scour-related problems and corrective measures may be necessary to protect the structure. The individual variables should be checked for sites with relatively low observed-scour indexes, because these sites may have a low index yet have one or two severe problems. Finally, the data-base user should be aware that if the local scour at the piers or pile bents was not determined, additional inspection is needed to accurately compute the observed-scour index. An example of the observed-scour index computation output by variable is listed in table 3. The

sites in each SCDOT District by 5-unit range of observed-scour indexes are listed in table 4.

Computation of the Potential-Scour Index

The potential-scour index represents the relative probability of an individual site to develop scour-related problems. Sixteen variables from the Scour-Critical Information Form are quantified and the sum of these variables is the potential-scour index. The maximum potential-scour index for bridges is 34 (excluding skewed piers or pile bents) and 31 for culverts. However, even though a structure may have a relatively low potential-scour index, it is not exempt from scour damage. The variables and assigned values used in the potential-scour index computation are listed in table 5.

Potential-Scour Index Variables

The potential-scour ranking for variable 1, bed material, is a function of relative erodibility. Silt or clay beds are the most susceptible to erosion and therefore, have the larger index value. In channels where the flow depth was too great to accurately determine the bed material type, it was classified as unknown alluvium. Alluvium was assigned a conservative ranking of 3.5 because it is more likely to erode faster than sand and less likely to erode faster than silt or clay.

Bed protection, variable 2, retards channel erosion. If the bed and (or) either or both banks are protected, the assigned potential-scour ranking is 0, because bed lowering is less likely to occur if protection is present. When no bed or bank protection exists the ranking is 1. However, if the bed is not protected and one or both banks are protected, the assigned ranking is 2 or 3, respectively. The values increase if one or both banks are protected, because the energy must be dissipated by the unprotected bed, and bed scour is more likely to occur.

The potential-scour ranking for variable 3, stage of channel evolution, ranges in value from 0 for stages 1 and 6 to 4 for stage 4. The variable rankings indicate the relative potential for a site to develop scour-related problems or can be used as an indicator of current scour problems. These values are based on the channel-evolution model described by Simon (1989).

Table 3. Example output of the observed-scour index computation for Structure 204020000200, on Route S.C. 200, crossing Reedy Creek near Winnsboro, S.C., January 16, 1991

STRUCTURE NUMBER: 204020000200		STREAM: REEDY CREEK
COUNTY: FAIRFIELD	DISTRICT NUMBER: 4	ROUTE: SC 200
OBSERVED SCOUR		
Bridge and Stream Data		
Variable		Ranking
1. Pier 1:		0.00
1. Pier 2:		3.00
1. Pier 3:		2.00
1. Pier 4:		0.00
1. Pier 5:		0.00
1. Pier 6:		0.00
1. Pier 7:		0.00
1. Pier 8:		0.00
1. Pier 9:		0.00
1. Pier 10:		0.00
1. Pier 11:		0.00
1. Pier 12:		0.00
2. At right bank, rip rap:		0.00
2. At left bank, rip rap:		0.00
3. Bed rip rap:		0.00
4. Blowhole:		0.00
5. Left abutment, exposed piles:		0.00
5. Right abutment, exposed piles:		0.00
6. Mass wasting at left bank pier:		0.00
6. Mass wasting at right bank pier:		0.00
7. Mass wasting at bridge, left and (or) right bank:		1.00
Culvert Data		
8. Overfall:		0.00
9. Sidewall flow:		0.00
10. Underflow:		<u>0.00</u>
Total:		6.00

Table 4. Summary of observed-scour indexes of sites in each South Carolina Department of Transportation District, 1990-92

[SCDOT, South Carolina Department of Transportation; \geq , greater than or equal to]

SCDOT District (fig. 1)	Number of sites with an observed-scour index in designated range					Total
	0-4.99	5.00-9.99	10.00-14.99	15.00-19.99	≥ 20	
1	330	68	24	2	2	426
2	230	87	22	8	3	350
3	530	156	43	10	1	740
4	259	154	63	25	6	507
5	462	54	12	3	2	533
6	466	72	10	1	2	551
7	343	38	12	2	4	399
Total	2,620	629	186	51	20	3,506

Table 5. Variables and assignable values for the calculation of the potential-scour index for streams in South Carolina

Bridges and Culverts					
1. Bed material					
bedrock	boulder/cobble	gravel	sand	unknown alluvium	silt or clay
0	1	2	3	3.5	4
2. Bed protection					
yes	no	no bed protection with 1 bank protected		no bed protection with both banks protected	
0	1	2		3	

Table 5. Variables and assignable values for the calculation of the potential-scour index for streams in South Carolina--Continued

3. Stage of channel evolution					
Stage 1 undisturbed	Stage 2 constructed channel	Stage 3 bed degradation	Stage 4 bed degradation with bank failure	Stage 5 stable bed with bank failure	Stage 6 fully recovered
0	1	2	4	3	0
4. Percent of channel constriction					
0-5	6-25	26-50	51-75	76-100	
0	1	2	3	4	
5. Number of piers or pile bents in channel					
0	1-2	more than 2			
0	1	2			
6. Percent of horizontal blockage (assignable value divided by 3):					
0-5	6-25	26-50	50-75	76-100	
0	1	2	3	4	
7. Percent of vertical blockage (assignable value divided by 3):					
0-5	6-25	26-50	50-75	76-100	
0	1	2	3	4	
8. Percent of total blockage (assignable value divided by 3):					
0-5	6-25	26-50	50-75	76-100	
0	1	2	3	4	
9. Bank erosion for left bank					
no erosion	fluvial erosion	mass wasting			
0	1	2			

Table 5. Variables and assignable values for the calculation of the potential-scour index for streams in South Carolina--Continued

10. Bank erosion for right bank				
no erosion	fluvial erosion	mass wasting		
0	1	2		

11. Distance to meander-impact point from bridge, feet				
0-25	26-50	51-100	more than 100	
3	2	1	0	

12. Skew for each pier or pile bent (sum of all piers or pile bents in channel)	
yes	no
1	0

13. Mass wasting at pier or pile bent on bank (calculated for each pier)	
yes	no
3	0

14. High-flow angle of approach, degrees				
0-10	11-25	26-40	41-60	61-90
0	1	2	2.5	3

Unique to Culverts

15. Exposure at wingwall		
both wing-walls exposed	one wingwall exposed	no wingwall exposure
2	1	0

16. Cut-off wall exposure	
yes	no
1	0

Note: Potential-scour index equals the sum of assignable values.

Stages 1, undisturbed, and 6, fully recovered, receive a ranking of 0 because these sites are characterized by stable banks and beds where natural, fluvial-erosion processes are predominant. At these sites, some bank instability may exist at meander-impact points but overall, the channel is changing slowly. In addition, some sites can have undisturbed conditions except in the vicinity of the bridge or culvert where, for example, channel widening and (or) bed lowering may be occurring. At these sites, the problems are noted as site specific and properly documented. Stream-channel evolution is then determined based upon the entire study reach.

Constructed-channel sites, stage 2, are assigned a potential-scour ranking of 1. Even though the channel may be stable at the time of inspection, the channel has been altered and the potential for scour to occur has increased. For example, the channel area available for flow may have decreased or the channel may have become more efficient and therefore the streamflow velocities and the potential for scour may have increased. Frequent inspection of sites with constructed channels is needed to determine whether the site evolution has changed to stage 3, 4, or 5.

A site with a degrading channel and stable banks is classified as a stage 3 site and assigned an index value of 2. A site with a degradational bed has current scour problems, because the lowering of the bed decreases the penetration depth of the piers or pile bents and could eventually undermine the structure. In addition, bed lowering can lead to bank scalloping and destabilization, and bank failure.

Stage 4 sites receive a value of 4 because both bed lowering and bank failure are the predominant processes. Not only can the structure be threatened by bed lowering, but the piers on or near the banks, flood-plain piers and the abutments can ultimately be damaged as the bank widening progresses.

Sites having a stable or aggradational bed with bank failure, stage 5, have a potential-scour ranking of 3. Stage 5 sites are ranked higher than stage 3 sites because the bank widening can affect the crossing structure more insidiously than bed lowering. For example, many flood-plain piers have shallower penetration than channel piers. Bank widening can undermine the shallower piers and cause serious problems or even bridge failure. This process was the cause of the Hatchie River bridge failure on Route U.S. 51 in Tennessee in 1989 (B.A. Bryan, U.S. Geological Survey, oral commun., 1995).

Variable 4 addresses the flow constrictions at the bridge and channel scouring at the bridge caused by the contraction of flood flows. The potential-scour ranking value increases as the percent of channel constriction increases with a maximum ranking of 4. The reduction of available channel flow area at the crossing will cause higher streamflow velocities and can cause larger scour depths in the vicinity of the structure.

Piers or pile bents are local obstructions that cause turbulence and increased streamflow velocities. As the number of piers in the channel increases, the potential for larger scour depths and debris problems increases as well. Therefore, the potential-scour ranking for variable 5, piers in channel, increases as the number of piers in the channel increases, up to a maximum value of 2.

The amount of debris lodged on the upstream side of the structure can increase the potential for scour, because the debris constricts the channel and causes increased streamflow velocities through the structure. Debris also can deflect flow direction into a bank, abutment, or pier. This flow deflection forces more energy into the bank or abutment, and may result in bank failure or abutment washout. Variables 6-8 apply to the percent of horizontal, vertical, and total blockage, respectively, of the channel by debris. The ranking values increase from 0 to 4 as the percentage of blockage increases. In the potential-scour computation, the ranking values of these three variables are divided by three so debris accumulation will not be overemphasized in the potential-scour index.

Variables 9 and 10 address the predominant erosion processes occurring at the left and right banks, respectively. The descriptors are no erosion, fluvial erosion, and mass wasting, with mass wasting being the more severe case with a potential-scour ranking of 2. The most severe bank condition at the three bank inspection points (upstream, at the structure, and downstream) is used when assigning the ranking. Most unprotected banks have some form of fluvial erosion or mass wasting taking place. Fluvial erosion is usually symbolic of relatively stable channels. However, mass wasting indicates the banks are changing rapidly and are failing in large sections. This rapid bank widening can threaten or damage the crossing structure and therefore, receives the higher ranking.

The location of meander impacts, variable 11, relative to the structure is important because meander impacts can cause bank failure and (or) undermine the

structure. The potential-scour ranking decreases as the distance of the meander impact from the structure increases. These rankings range from 3 for a meander impact at the structure to 0 for meander impacts greater than 100 ft from the structure. Furthermore, it should be noted that meanders migrate upstream and downstream, especially during high streamflow events, and that any site with a meander impact in the proximity of the structure can potentially be affected by that meander.

Piers or pile bents skewed to streamflow increase the amount of flow area blocked and increase the turbulence in the flow. This creates a higher potential for local scour at the piers. A potential-scour ranking of one is assigned for each pier in the channel that is skewed to streamflow; variable 12 is the sum of these values and can be as high as the number of piers in the channel or equal to zero if the piers are normal to the flow.

For variable 13, a potential-scour ranking of 3 is assigned to piers that are located on banks where mass wasting is occurring. Mass wasting causes large sections of the bank to fail instantaneously and can cause the pier to be weakened or to fail. If there is no mass wasting observed at the piers, a ranking value of 0 is assigned.

Variable 14 addresses the high-flow angle of approach. The potential-scour ranking increases as the high flow angle increases. As the high-flow angle of approach increases, the potential for scour to occur increases on the bank the flow is directed toward, because the majority of the flow is attacking that particular bank. Furthermore, a large high-flow angle of attack usually indicates a meander impact zone in the vicinity of the structure.

Aspects unique to culverts include wingwall exposure, variable 15, and cut-off wall exposure, variable 16. Wingwall exposure is calculated for each wingwall and the maximum potential-scour ranking is 2. Wingwall exposure can lead to flow around the culvert side walls. Cut-off wall exposure indicates streambed lowering and can result in flow under the culvert floor. Both of these problems, if left unchecked, can ultimately result in culvert failure.

The data-base user is encouraged to inspect each variable in the potential-scour index because sites with relatively low-index values can have severe site specific problems. An example of the potential-scour index computation is listed by variable in table 6. The

sites in each SCDOT District by 5-unit range of potential-scour indexes are listed in table 7.

Interpretation of the Observed- and Potential-Scour Indexes

The observed- and potential-scour indexes were developed such that sites with the most severe problems received highest rankings. Sites with observed-scour indexes exceeding ten require a closer review of each variable and may require additional field inspection to determine whether remedial action is necessary. As previously stated, the user of this data base is advised that in instances where pier scour was not defined because of site conditions, the observed-scour index is incomplete and should be used with caution.

Sites with potential-scour indexes exceeding 20 are considered to have a substantial probability of developing scour-related problems. The value of 20 was selected based on field observations, discussions with the SCDOT, and engineering judgement. However, the user is free to select the appropriate threshold value based on his needs.

The user is encouraged to evaluate the individual scour variables when assessing the potential for a particular site to develop scour-related problems, because many sites have stable banks and beds upstream and downstream of the bridge, but have severe site-specific problems. For example, sites with relatively low potential-scour indexes but with large observed-scour indexes, could be experiencing site-specific scour. Moreover, sites with a relatively low potential-scour index are not immune to scour-caused problems. For example, debris can become lodged on a bridge pier, alter flow, and cause scour at the bridge. In addition, the user should inspect the ranking of each variable at sites with relatively high indexes because these sites may be stable except for one or two variables with large rankings. The data base user should be aware that the potential-scour index does not consider foundation information for a site, but only indicates the potential for scour to occur at a site based on observable surface features. Therefore, the potential-scour index indicates the susceptibility of a site to scour processes but does not address the vulnerability of the foundations. The number of sites in each SCDOT District with an observed-scour index of ten or greater, a potential-scour index of 20 or greater, or both is listed in table 8.

Table 6. Example output of the potential-scour index computation for Structure 204020000200, on Route S.C. 200, crossing Reedy Creek near Winnsboro, S.C., January 16, 1991

STRUCTURE NUMBER: 204020000200		STREAM: REEDY CREEK
COUNTY: FAIRFIELD	DISTRICT NUMBER: 4	ROUTE: SC 200
POTENTIAL SCOUR		
Bridge and Stream Data		
Variable		Ranking
1. Bed material condition:		3.00
2. Bed protection:		1.00
3. Stage of evolution:		3.00
4. Constriction:		0.00
5. Number of piers:		0.00
6. Horizontal blockage:		0.00
7. Vertical blockage:		0.00
8. Total blockage:		0.00
9. Erosion of left bank:		2.00
10. Erosion of right bank:		2.00
11. Meander-impact point:		3.00
12. Pier skew:		0.00
13. Mass wasting on left bank pier:		0.00
13. Mass wasting on right bank pier:		0.00
14. High-flow angle of approach:		2.00
Culvert Data		
15. Wingwall exposure:		0.00
16. Cutoff wall exposure:		<u>0.00</u>
Total:		16.00

Table 7. Summary of potential-scour indexes of sites in each South Carolina Department of Transportation District, 1990-92

[SCDOT, South Carolina Department of Transportation; \geq , greater than or equal to]

SCDOT District (fig. 1)	Number of sites with a potential-scour index in designated range					Total
	0-4.99	5.00-9.99	10.00-14.99	15.00-19.99	> 20	
1	1	85	238	92	10	426
2	5	68	160	86	31	350
3	5	152	337	185	61	740
4	5	73	224	144	61	507
5	0	73	345	103	12	533
6	0	93	319	113	26	551
7	1	60	240	85	13	399
Total	17	604	1,863	808	214	3,506

Application of the Bridge-Scour Data Base

The output from the Bridge-Scour Data Base can be tailored to the desires of the user. The user can obtain copies of the completed assessment form for selected sites or specific data subsets, which can be analyzed for regional or basin-wide trends.

For example, tables 9 and 10 list the number of sites in each SCDOT District and physiographic province, respectively, by stage of channel evolution. The data show that 83 percent (2,914) of the inspected sites are classified as stage 1, undisturbed (table 9). This indicates that even though there may be localized areas of scour, such as at channel bends or debris-deflected flow, channels in the vicinity of the majority of crossings inspected are undergoing natural evolution processes. The next most common stage of evolution was stage 5, stable bed with bank widening, at 13 percent (453) of the sites (table 9). Of the stage 5 sites, 88 percent (398 sites) are located in the Piedmont (table 10). Possible causes for the majority of the bank-widening sites to occur in the Piedmont include relatively steep channel slopes, as great as 60 ft/mi, coupled with silt/clay banks; an increased likelihood of more scour-

resistant bed material, such as cobbles/boulders, or bedrock/concrete that shifts scour processes to the banks; and (or) clearing practices in which all woody vegetation is removed to the tops of the stream banks, which eliminates the root structure that supports the banks. Even though the channel piers and (or) pile bents generally are not threatened at stage 5 sites, the channel widening can progress and threaten flood-plain piers, which may have shallower penetration than channel piers, or threaten the bridge abutments, which usually consist of compacted fill. Stage 2, constructed channel, sites comprise 3.6 percent (126) of the inspected sites. At these sites, the natural channel and flow patterns have been altered by methods such as straightening and (or) widening. This construction disturbs the equilibrium of the stream. Consequently, the stream attempts to return to a state of equilibrium similar to the conditions prior to construction. The changes caused by the stream can include degradation and (or) bank widening. Therefore, periodic site visits are necessary to determine if any changes that may have occurred are detrimental to the bridge.

Table 8. Number and percent of sites in each South Carolina Department of Transportation District with an observed-scour index of 10 or greater, or a potential-scour index of 20 or greater, or both, 1990-92

[SCDOT, South Carolina Department of Transportation; \geq , greater than or equal to]

SCDOT District (fig. 1)	Number of sites with a scour index exceeding designated level		
	Observed Index > 10 (percent of sites)	Potential Index > 20 (percent of sites)	Observed Index > 10 and Potential Index > 20 (percent of sites)
1	28 (6.5)	10 (2.3)	4 (0.9)
2	33 (9.4)	31 (8.9)	15 (4.3)
3	54 (7.3)	61 (8.2)	25 (3.4)
4	94 (18.5)	61 (12.0)	37 (7.3)
5	17 (3.2)	12 (2.3)	2 (0.4)
6	13 (2.4)	26 (4.7)	0 (0.0)
7	18 (4.5)	13 (3.3)	2 (0.5)
Total	257 (7.3)	214 (6.1)	85 (2.4)

Table 9. Number of sites in each South Carolina Department of Transportation District by stage of channel evolution, 1990-92

[SCDOT, South Carolina Department of Transportation; Stage of Evolution: 1, undisturbed; 2, constructed; 3, degradational bed; 4, degradational bed with bank failure; 5, stable or aggradational bed with bank failure; 6, fully recovered]

SCDOT District (fig. 1)	Number of sites in a designated stage of channel evolution						Total
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	
1	386	10	0	2	28	0	426
2	248	15	2	2	83	0	350
3	571	10	2	2	155	0	740
4	336	12	3	0	156	0	507
5	488	38	0	0	7	0	533
6	497	35	0	0	19	0	551
7	388	6	0	0	5	0	399
Total	2,914	126	7	6	453	0	3,506

Table 10. Number of sites in each physiographic province of South Carolina by stage of channel evolution, 1990-92

[Stage of Evolution: 1, undisturbed; 2, constructed; 3, degradational bed; 4, degradational bed with bank failure; 5, stable or aggradational bed with bank failure; 6, fully recovered]

Physiographic province (fig. 1)	Number of sites in a designated stage of channel evolution						Total
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	
Blue Ridge	25	0	0	0	5	0	30
Piedmont	1,163	36	6	5	398	0	1,608
Upper Coastal Plain	462	19	1	1	18	0	501
Lower Coastal Plain	1,264	71	0	0	32	0	1,367
Total	2,914	126	7	6	453	0	3,506

In addition, the distribution of a single variable such as bed-material type can be determined for the SCDOT Districts and physiographic provinces (tables 11 and 12, respectively). Data show that 43 percent (1,493) of the sites have sand or gravel beds, which are more susceptible to local scour at the piers. Moreover, 9.5 percent (335) of the sites have bed material of either cobble/boulder or bedrock/concrete. These bed materials are highly resistant to local scour and bed degradation but increase the chance for bank widening to occur.

Other applications include determining the effect of individual variables on the scour indexes, and selecting basins for trend analyses of the data and (or) scour indexes. The observed- and potential-scour indexes, ranked by potential-scour index, for each site are listed by county for SCDOT District in the appendix.

The SCDOT uses the potential-and observed-scour indexes, and the channel-migration and bed-depth data from the Bridge-Scour Data Base in conjunction with other data to develop the SCDOT Hazard-Potential Ranking (R. Williamson, South Carolina Department of Transportation, written commun., 1993). This ranking is used to determine the bridges that are susceptible to scour and would require more-detailed analysis. The six variables used by the SCDOT are average daily traffic, general or contraction scour depth, importance classification, substructure,

superstructure, and channel migration. The variables are quantified and the sum of these variables is the Hazard-Potential Ranking. The variables and rankings used to compute the SCDOT Hazard-Potential Ranking are listed in table 13.

Sites with the highest rankings were compared to the USGS potential- and observed-scour indexes and were designated to be the first sites for detailed analysis. Of the approximately 7,800 bridges over water in South Carolina (of which 3,488 bridges and 18 culverts were inspected by the USGS), approximately 1,200 bridges had Hazard-Potential Rankings that indicated more detailed analysis was required. Approximately 1,500 maintenance-type bridges were classified as scour critical and placed by the SCDOT on its replacement list (R. Williamson, South Carolina Department of Transportation, oral commun., 1995). Maintenance-type bridges are generally located on relatively low-use, secondary roads. The bridges consist of 15-ft long concrete slabs placed on timber piles. The bridge length ranges from 15 to 45 ft and the bridge width is approximately 20 ft. In addition, these bridges are constructed without hydraulic design (R. Williamson, South Carolina Department of Transportation, oral commun., 1996).

Table 11. Bed-material distribution of inspected sites in each South Carolina Department of Transportation District, 1990-92

[SCDOT, South Carolina Department of Transportation]

SCDOT District (fig. 1)	Number of sites with the designated type of bed material						Total
	Sand	Silt/clay	Gravel	Cobble/ boulder	Bedrock/ concrete ¹	Unknown alluvium	
1	169	109	10	8	39 (2)	91	426
2	193	26	22	14	36 (3)	59	350
3	387	67	23	47	95 (2)	121	740
4	256	56	45	32	60 (0)	58	507
5	104	195	0	0	0 (0)	234	533
6	140	290	0	0	0 (0)	121	551
7	144	131	0	0	4 (4)	120	399
Total	1,393	874	100	101	234 (11)	804	3,506

¹Man-made bed material such as concrete or interlocking concrete block were assumed to act like bedrock. The number of streams with man-made bed material are listed in parentheses.

Table 12. Bed-material distribution of inspected sites in each physiographic province of South Carolina, 1990-92

Physiographic province (fig. 1)	Number of sites with the designated type of bed material						Total
	Sand	Silt/ clay	Gravel	Cobble/ boulder	Bedrock/ concrete ¹	Unknown alluvium	
Blue Ridge	11	3	1	2	9 (0)	4	30
Piedmont	826	160	96	97	205 (6)	224	1,608
Upper Coastal Plain	232	94	3	2	19 (4)	151	501
Lower Coastal Plain	324	617	0	0	1 (1)	425	1,367
Total	1,393	874	100	101	234 (11)	804	3,506

¹Man-made bed material such as concrete or interlocking concrete block were assumed to act like bedrock. The number of streams with man-made bed material are listed in parentheses.

Table 13. Variables and assignable values for calculation of the South Carolina Department of Transportation Hazard-Potential Ranking for streams in South Carolina (R. Williamson, South Carolina Department of Transportation, written commun., 1993)

[ft, feet; >, greater than; =, equals; x, times]

1. Average daily traffic (ADT)

<u>ADT</u>	<u>Value</u>
0-100	1
101-300	3
301-500	5
501-1,500	7
1,501-3,000	9
>3,000	12

2. General or contraction scour

Defined as the difference in elevation between the bed profile shown on the original bridge plans and the bed profile observed during the U.S. Geological Survey (USGS) site visit. The value is in feet.

3. Importance classification

<u>Route</u>	<u>Value</u>
Interstate	5
Primary	3
Secondary	1

4. Substructure

<u>Type</u>	<u>Value</u>
Footing on rock	0
Pile bearing on rock:	
Depth of penetration: 5 ft	12
10 ft	8
15 ft	4
>15 ft	2

Table 13. Variables and assignable values for calculation of the South Carolina Department of Transportation Hazard-Potential Ranking for streams in South Carolina (R. Williamson, South Carolina Department of Transportation, written commun., 1993)--Continued

[ft, feet; >, greater than; =, equals; x, times]

Pile no bearing on rock:	<u>Value</u>
Depth of penetration	<u>1,000</u> (penetration depth in feet, squared)
Spread footing or abutment not on rock	10
5. Superstructure	
<u>Type</u>	<u>Value</u>
Single span	5
Multi-span, Non-continuous	5
Multi-span, Continuous	2
6. Channel migration	
$\text{Chan_mig} = \text{Sub_val} \times 2 \times (1 - 0.99^{\text{num_yrs}})$	
Maximum value = 12	
where	
Chan_mig is the channel migration value, based on a comparison of the original channel points from the South Carolina Department of Transportation (SCDOT) bridge plans with the channel points at the time of the USGS site inspection;	
Sub_val is the substructure value, from the SCDOT files; and	
num_yrs is the number of years of channel migration, determined from the date on the SCDOT bridge plans in comparison with the date of the USGS site inspection.	
Values are based on the distance the channel has moved, the number of years it took to move this distance, the distance from the channel bank to the nearest bent/pier, and the substructure rating for the bent/pier in question, assuming the pier is in the channel.	

Note: Hazard-Potential Ranking equals the sum of assignable values.

SUMMARY

Scour-related bridge failures have led to increased awareness of scour processes occurring at and near bridges and culverts. This led to the development of methods to quickly and uniformly collect data to assess and document scour at bridges and culverts. In 1990, the U.S. Geological Survey and the South Carolina Department of Transportation began a cooperative program to develop a scour-critical data-collection form to be used at streams in the state. Data were collected at 3,506 bridge or culvert crossings in South Carolina from 1990-92. The collected data included index, structural, and channel information. The index data refer to the structure number, stream name, county, and other general information unique to the structure. Structural data included pier and (or) pile-bent location, size, and type; and abutment type and condition. The channel data include the hydraulic, geomorphic, and vegetative information. The data were stored in the Bridge-Scour Data Base. The user-specified outputs from the data base range from copies of completed assessment forms to subsets of specific data, which can be analyzed for regional or basin-wide trends.

Variables relating to observed and potential scour were taken from the scour-critical inspection form and quantified. These variables were used to document existing scour-related problems and to estimate the potential for a site to develop scour-related problems. The sum of specified variables was the observed- and potential-scour indexes. The variables were quantified such that more severe problems were assigned higher rankings; therefore, sites with larger numerical rankings had more observed scour-related problems or had a greater potential for scour-related problems to occur. Sites with observed-scour indexes exceeding ten and (or) potential-scour indexes exceeding 20 are considered to have significant scour-related problems. Of the 3,506 sites inspected, 257 sites had an observed-scour index exceeding ten, 214 sites had a potential-scour index exceeding 20, and 85 sites had observed- and potential-scour indexes exceeding both threshold values. In addition, the South Carolina Department of Transportation used the observed- and potential-scour indexes and other selected data from the Bridge-Scour Data Base to assist in determining which bridges were susceptible to scour and would require more-detailed analysis.

This data base provides an overview of conditions from 1990-92. Information from this data base

can be supplemented with data collected by the South Carolina Department of Transportation inspectors during bi-annual inspections.

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APPENDIX

The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92

[SCDOT, South Carolina Department of Transportation; Structure_no, structure number; Obs_scour, observed-scour index; Pot_scour, potential-scour index; S-, state secondary route; SC, state primary route; US, U.S. route; I-, Interstate route; E, east; W, west; N, north; S, south; L-, local route; P-, primary route; No., number; trib, tributary; CR, creek; LTL, little; RV, river; BR, branch; RR, railroad; SWP, swamp]

SCDOT District 1

Aiken County

Structure_no	Stream	Route	Obs_scour	Pot_scour
027014500100	HORSE CREEK	S-145	3.000	18.500
027025400100	HORSE CREEK	S-254	10.000	18.330
027010400300	HORSE CREEK	S-104	0.000	18.000
024019100300	BRIDGE CREEK	SC 191	0.000	17.500
027022500100	UNNAMED STREAM	S-225	7.000	17.330
022000100600	BIG HORSE CREEK	US 1	17.000	16.333
027010500200	HORSE CREEK	S-105	0.000	15.500
027007900200	CEDAR CREEK NO.2	S-79	2.000	15.500
024030200100	LAKE FLORENCE	SC 302	3.000	15.500
027007000100	HORSE CREEK	S-70	0.000	15.000
027080900100	BIG HORSE CREEK	S-809	2.000	15.000
027022500200	UNNAMED DRAINAGE DITCH	S-225	2.000	15.000
027004800100	HORSE CREEK	S-48	8.000	15.000
027006700200	LITTLE HORSE CREEK	S-67	7.000	14.340
021002021400	NORTH EDISTO RIVER	I-20E	0.000	14.330
024039400100	DEAN CREEK	SC 394	1.000	14.000
027002900100	SHAWS CREEK	S-29	4.000	14.000
022000101000	SHAWS CREEK	US 1	4.000	14.000
022027800200	HORSE CREEK	US 278	5.000	14.000
027011000100	NORTH EDISTO RIVER	S- 110	14.000	14.000
024019100500	SHAWS CREEK	SC 191	5.000	13.670
027020600100	JOYCE BRANCH	S-206	0.000	13.000
027004900100	SOUTH EDISTO BACKWATER	S-49	0.000	13.000
022027800500	THREE RUNS CREEK	US 278	0.000	13.000
022000100500	LITTLE HORSE CREEK	US 1	1.000	13.000
027003300300	LITTLE HORSE CREEK	S- 33	2.000	13.000
027015300100	SHAWS CREEK	S-153	2.000	13.000
024012520500	HOLLOW CREEK	SC 125E	5.000	13.000
022000110300	SAVANNAH OVERFLOW	US 1	6.000	13.000
022027800400	HOLLOW CREEK	US 278	6.000	13.000
024030200300	SOUTH EDISTO RIVER	SC 302	12.000	13.000
024002810100	SAVANNAH RIVER	SC 28N	0.000	12.500
027152900100	CHINQUAPIN CREEK	S-1529	4.000	12.330
027167100100	TRIB TO HORSE CREEK	S-1671	0.000	12.000
021002041400	NORTH EDISTO RIVER	I-20W	2.000	12.000
027004900200	SOUTH EDISTO RIVER	S-49	2.000	12.000
024012540500	HOLLOW CREEK	SC 125W	3.000	12.000
027006700100	HORSE CREEK	S-67	4.000	12.000
024042100200	HORSE CREEK	SC 241	8.000	11.670
027002100100	SOUTH EDISTO RIVER	S-21	0.000	11.660
027003300100	GREGG CANAL	S-33	4.000	11.500
027003300200	HORSE CREEK	S-33	9.000	11.330
024030200400	CEDAR CREEK	SC 302	0.000	11.000
024030200700	NORTH EDISTO RIVER	SC 302	0.000	11.000
021002040900	SHAWS CREEK	I-20W	1.000	11.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Aiken County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
024019100200	CANAL	SC 191	0.000	10.500
022000101300	SOUTH EDISTO RIVER	US 1	0.000	10.000
024030200200	SHAWS CREEK	SC 302	1.000	10.000
027020600200	SHAWS CREEK	S-206	2.000	10.000
027000500100	HOLLOW CREEK	S-5	3.000	9.500
027025400200	LITTLE HORSE CREEK	S-254	0.000	9.000
024019100100	HORSE CREEK/KELLEY CREEK	SC 191	0.000	9.000
024012500600	UPPER THREE RUNS CREEK	SC 125	2.000	9.000
022000109100	SAVANNAH OVERFLOW	US 1	2.000	9.000
027010900100	CHINQUAPIN CREEK	S-109	0.000	8.000
022000101100	BRIDGE CREEK	US 1	0.000	8.000
021002020900	SHAWS CREEK	I-20E	0.000	7.000
021002040600	BIG HORSE CREEK	I-20W	0.000	7.000
021002020600	BIG HORSE CREEK	I-20E	2.000	7.000
021002021200	SOUTH EDISTO RIVER	I-20E	12.000	7.000
021002041200	SOUTH EDISTO RIVER	I-20W	12.000	7.000
024002830100	SAVANNAH RIVER	SC 28S	0.000	6.500
024039100100	CHINQUAPIN CREEK	SC 391	2.000	6.000

Kershaw County

Structure_no	Stream	Route	Obs_scour	Pot_scour
282000100700	BIG LYNCHES RIVER	US 1	7.000	32.160
284034100100	LITTLE LYNCHES RIVER NO.2	SC 341	7.000	22.490
287001500200	LYNCHES RIVER	S-15	20.000	19.500
287004200100	BEAVER DAM CREEK	S-42	13.000	19.000
284009700400	GRANNEYS QUARTER CREEK	SC 97	8.000	18.330
281002041100	BIG PINE TREE CREEK	I-20W	13.000	18.330
287004500100	BOLTON CREEK	S-45	3.000	18.000
287005300100	25-MILE CREEK	S-53	1.000	17.670
287001500100	BIG PINE TREE CREEK	S 15	2.000	17.000
287004200300	LITTLE LYNCHES RIVER	S-42	4.000	17.000
287000500200	25-MILE CREEK	S-5	4.000	16.670
287005800400	TRIB TO FLAT ROCK CR	S-58	2.000	16.330
284015700100	LITTLE LYNCHES RIVER	SC 157	9.000	16.330
281002040800	WATEREE RIVER	I-20W	4.000	16.000
287004700300	SPEARS CREEK	S-47	5.000	16.000
284034100300	LITTLE LYNCHES RIVER	SC 341	7.000	16.000
287014700100	BOLTON CREEK	S-147	0.000	15.830
287002000200	LITTLE LYNCHES RIVER	S-20	10.000	15.500
287005800300	LITTLE FLAT ROCK CR	S-58	0.000	15.000
287002100200	25-MILE CREEK	S-21	2.000	15.000
281002020700	LUGOFF FARMS POND	I-20E	0.000	14.500
281002040700	LUGOFF FARMS POND	I-20W	0.000	14.500
287005800200	GRANNYS QUARTERS CREEK	S-58	3.000	14.330
287004500300	CR AT HERMITAGE MILL	S-45	0.000	14.000
281002020800	WATEREE RIVER	I-20E	1.000	14.000
284009700200	BEAVER CREEK	SC 97	0.000	13.000
284009700300	WHITE OAK CREEK	SC 97	0.000	13.000
287002000100	LTL LYNCHES RV OVERFLOW	S-20	3.000	13.000
287004700200	HAIGS CREEK	S-47	6.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Kershaw County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
282052100900	GRANNIES QUARTER CREEK	US 521	8.000	13.000
287003700100	SAWNEYS CREEK	S-37	4.000	12.670
287034900100	UNNAMED STREAM	S-349	8.000	12.670
287003600100	25-MILE CREEK	S-36	5.000	12.500
287004500200	LITTLE PINE TREE CREEK	S-45	1.000	12.000
282060100100	SPEARS CREEK	US 601	1.000	12.000
287004700400	MCCASKILL CREEK	S-47	2.000	12.000
287005300200	25-MILE CREEK	S-53	2.000	12.000
287002100100	25-MILE CREEK	S-21	4.000	12.000
287036700100	SPEARS CREEK	S-367	6.000	12.000
287013200100	LITTLE PINE TREE CREEK	S-132	8.000	12.000
282000100500	LITTLE LYNCHES RIVER	US 1	10.000	12.000
287003100200	LYNCHES RIVER	S-31	6.000	11.670
284003400100	TWENTY AND FIVE MILE CR	SC 34	1.000	11.500
281002021000	WATEREE SWP OVERFLOW NO.2	I-20E	0.000	11.000
281002041000	WATEREE SWP OVERFLOW NO.2	I-20W	0.000	11.000
284090300100	BIG LYNCHES RIVER	SC 903	0.000	11.000
282000110200	WATEREE RIVER	US 1N	0.000	11.000
281002020900	WATEREE SWP OVERFLOW NO.1	I-20E	1.000	11.000
281002040900	WATEREE SWP OVERFLOW NO.1	I-20W	2.000	11.000
287005800100	GUM SWAMP	S-58	6.000	11.000
282000130200	WATEREE RIVER	US 1S	1.000	10.670
287001200100	SWIFT CREEK	S-12	2.000	10.500
287001500150	LITTLE PINE TREE CREEK	S-15	1.000	10.000
282052100500	BIG PINE TREE CREEK	US 521	1.000	10.000
284026100100	SWIFT CREEK	SC 261	5.000	10.000
287000500100	SAWNEYS CREEK	S-5	1.000	9.660
282052100100	SWIFT CREEK	US 521	0.000	9.000
281002021100	BIG PINE TREE CREEK	I-20E	6.000	8.000
284009700600	SANDERS CREEK	SC 97	9.000	8.000
284003400300	BIG PINE TREE CREEK	SC 34	14.000	8.000

Lee County

311002040600	LYNCHES RIVER	I-20W	10.000	23.490
317007600100	MERCHANT MILL CREEK	S-76	5.000	21.490
312040100200	BLACK RIVER	US 401	4.000	19.000
317004400200	CANAL DITCH	S-44	0.000	18.000
317031100100	STONEY RUN CREEK	S-311	3.000	17.500
317022100100	BEAVER DAM CREEK	S-221	0.000	16.500
317002900100	SCAPE ORE CREEK	S-29	1.000	15.830
311002020600	LYNCHES RIVER	I-20E	6.000	15.500
317004100100	BOGGY BRANCH	S-41	0.000	15.490
317010800200	SCAPEORE SWAMP NO.2	S-108	3.000	15.170
317010800100	SCAPEORE SWAMP NO.1	S-108	4.000	14.830
312007600100	BLACK RIVER	US 76	0.000	14.500
317003600100	UNNAMED	S-36	4.000	14.500
311002020700	LYNCHES RIVER NO.2	I-20E	0.000	14.000
311002040700	LYNCHES RIVER NO.2	I-20W	0.000	14.000
317003100100	BEAVER DAM CREEK	S-31	0.000	13.500

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Lee County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
317010900100	SCAPE ORE SWAMP	S-109	2.000	13.500
312001500400	SCAPE ORE CREEK	US 15	1.000	13.000
312040100100	SCAPE ORE SWAMP	US 401	2.000	13.000
317003100200	BEAVER DAM CREEK	S-31	0.000	12.500
312001500500	LYNCHES RIVER	US 15	1.000	12.500
317024200100	BEAVER DAM CREEK	S-242	2.000	12.500
311002040900	NEWMAN SWAMP	I-20W	0.000	12.000
317003700100	REMBERT BRANCH	S-37	0.000	12.000
317016200100	BIG BEAVER DAM CR	S-162	0.000	12.000
317003400100	BLACK RIVER	S-34	0.000	12.000
317003900100	LONG BRANCH	S-39	6.000	11.990
317015400100	BLACK RIVER BRANCH	S-154	0.000	11.500
317004400100	STONEY RUN BRANCH	S-44	1.000	11.500
317022100200	BEAVER DAM BRANCH	S-221	2.000	11.500
317031300200	BEAVER DAM CR NO.2	S-313	2.000	11.500
317007100100	TRIB BEAVER DAM CR	S-71	2.000	11.500
311002040100	SCAPE ORE SWAMP	I-20W	2.000	11.000
317022000100	TRIB SCAPE ORE SWAMP	S-220	2.000	11.000
317050000100	MECHANICSVILLE CREEK	S-500	4.000	10.500
317023100100	UNNAMED STREAM	S-231	0.000	10.000
317022200100	SPARROW SWAMP	S-222	0.000	9.500
317007600200	TURKEY CREEK	S-76	0.000	9.500
317005300200	CANAL NO.2	S-53	2.000	8.500
314003400100	SCAPE ORE SWAMP	SC 34	6.000	8.160
311002020900	NEWMAN SWAMP	I-20E	0.000	8.000
317009900200	BACK SWAMP	S-99	0.000	8.000
317007300100	MCGIRTS CREEK	S-73	0.000	8.000
314003400200	CEDAR CREEK	SC 34	0.000	8.000
311002020100	SCAPE ORE SWAMP	I-20E	1.000	7.500
317005300100	CANAL NO.1	S-53	2.000	7.000

Lexington County

327067100200	KINLEY CREEK	S-671	8.000	21.670
327027700100	LITTLE HORSE CREEK	S-277	10.000	19.330
327015800200	HORSE CREEK	S-158	13.000	19.330
327002900100	BEAR CREEK	S-29	3.000	19.170
327131000100	TRIB TO BEAR CREEK	S-1310	9.000	18.000
327023400100	HOLLOW CREEK	S-234	6.000	17.670
327027200100	TRIB TO RAWLS CREEK	S-272	7.000	17.660
327010400200	LICK FORK CREEK	S-104	7.000	17.330
327006600100	CONGAREE CREEK	S-66	4.000	17.170
327041500100	SECOND CREEK	S-415	2.000	16.830
327120700100	TWELVE MILE CREEK	S-1207	5.000	16.500
327007200100	SAVANNA BRANCH	S-72	3.000	16.000
327062400100	SCOUTER CREEK	S-624	0.000	15.990
327002800100	FOURTEEN MILE CREEK	S-28	5.000	15.990
322037800500	TWELVE MILE CREEK	US 378	10.000	15.660
324069200100	THIRD CREEK	SC 692	1.000	15.000
327003600300	KINLEY CREEK	S-36	2.000	15.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Lexington County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
327016800100	CONGAREE CREEK	S-168	2.000	15.000
327117100100	14 MILE CREEK	S-1171	5.000	15.000
327010300300	FIRST CREEK	S-103	11.000	15.000
327142600100	PEN CREEK	S-1426	2.000	14.660
324030200100	CONGAREE CREEK	SC 302	1.000	14.000
327024500100	BLACK CREEK	S-245	2.000	14.000
327004500200	CEDAR CREEK	S-45	2.000	14.000
327015800100	MC/CARTHA SWAMP	S-158	4.000	14.000
327003400400	BLACK CREEK	S-34	4.000	14.000
327010300100	RED BANK CREEK	S-103	9.000	13.660
322037800200	HOLLOW CREEK	US 378	0.000	13.500
327012700100	FOURTEEN MILE CREEK	S-127	0.000	13.000
327002400100	LITTLE HOLLOW CREEK	S-24	1.000	13.000
324000600600	TWELVE MILE CREEK	SC 6	1.000	13.000
321032620500	CONGAREE RIVER	I-326E	2.000	13.000
321032640500	CONGAREE RIVER	I-326W	2.000	13.000
327020400100	TEWLVE MILE CREEK	S-204	2.000	13.000
327040900100	ROCKY CREEK	S-409	2.000	13.000
327128700100	SECOND CREEK	S-1287	5.000	13.000
327027100200	YOST CREEK	S-271	2.000	12.990
327023100100	ADAMS CAMP CREEK	S-231	0.000	12.500
327077400100	LITTLE BLACK CREEK	S-774	0.000	12.500
322002100600	CONGAREE CREEK	US 21	0.000	12.500
322037800300	HORSE CR (LAKE MURRAY)	US 378	0.000	12.500
327004500100	JACKSON BRANCH	S-45	2.000	12.500
327004600100	BIG HOLLOW CREEK	S-46	4.000	12.500
327063800100	14 MILE CREEK	S-638	6.000	12.330
327007300100	CEDAR CREEK	S-73	0.000	12.000
327060400200	UNNAMED STREAM	S-604	0.000	12.000
327048500100	FOURTEEN MILE CREEK	S-485	2.000	12.000
327060200100	HELL HOLE CREEK	S-602	2.000	12.000
327088000100	JUNIPER CREEK	S-880	2.000	12.000
322032100100	BULL SWAMP CREEK	US 321	2.000	12.000
327010700100	RAWLS CREEK	S-107	3.000	12.000
327017500100	RAWLS CREEK	S-175	4.000	12.000
327048600100	ROCK CREEK	S-486	7.000	12.000
327003700100	BLACK CREEK	S-37	2.000	11.660
321002601000	CONGAREE CREEK	I-26	0.000	11.500
327006800100	TWELVE MILE CREEK	S-68	0.000	11.000
327007300200	FIRST CREEK	S-73	0.000	11.000
327007400100	CEDAR CREEK	S-74	0.000	11.000
327010600100	TWELVE MILE CREEK	S-106	1.000	11.000
324001200200	CONGAREE RIVER	SC 12	1.000	11.000
327144800100	TRIB TO 12 MILE CREEK	S-1448	2.000	11.000
327027100100	RAWLS CREEK	S-271	3.000	11.000
327020400300	LONGS POND	S-204	8.000	11.000
321032620200	CONGAREE RV OVERFLOW NO.3	I-326E	11.000	11.000
327010400100	SAVANNA BRANCH	S-104	3.000	10.660
327010300200	CONGAREE CREEK	S-103	2.000	10.500
327004900100	RISTER CREEK	S-49	2.000	10.330
327041300100	ROCKY CREEK	S-413	3.000	10.330

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 1--Continued

Lexington County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
327023900100	RAWLS CREEK	S-239	5.000	10.330
321032640200	CONGAREE RV OVERFLOW NO.3	I-326W	0.000	10.000
327027300100	TRIB TO SALUDA RIVER	S-273	1.000	10.000
327068600100	TRIB TO RED BANK CREEK	S-686	2.000	10.000
324011300100	NORTH EDISTO RIVER	SC 113	3.000	10.000
327009100100	TWELVE MILE CREEK	S-91	4.000	10.000
327026800100	BEAR CREEK	S-268	5.000	10.000
327027800300	BLACK CREEK	S-278	5.000	10.000
327064700100	SECOND CREEK	S-647	0.000	9.000
327146600100	BIG POND BRANCH	S-1466	2.000	9.000
327005100100	BEAR CREEK	S-51	3.000	9.000
327060400100	LONG CREEK	S-604	4.000	9.000
327063100100	SIX MILE CREEK	S-631	5.000	9.000
327007700100	TWELVE MILE CREEK	S-77	0.000	8.000
321032640400	CONGAREE CREEK	I-326W	1.000	8.000
327145900100	CONGAREE CREEK	S-1459	6.000	8.000
321032620300	S-66 AND OVERFLOW NO.2	I-326E	0.000	7.000
321032620400	CONGAREE CREEK	I-326E	0.000	7.000
327076500100	RAWLS CREEK	S-765	0.000	7.000
322017800300	BLACK CREEK	US 178	0.000	7.000
322002100800	CONGAREE RIVER	US 21	1.000	6.660
321002020400	SALUDA RIVER	I-20E	0.000	5.000
321002040400	SALUDA RIVER	I-20W	0.000	5.000
324000600800	SPILLWAY DREHER SHOALS	SC 6	0.000	5.000
321002600400	SALUDA RIVER	I-26	4.000	5.000
321032640300	S-66 AND OVERFLOW NO.2	I-326W	0.000	4.500

Richland County

Structure_no	Stream	Route	Obs_scour	Pot_scour
407012600100	SMITHS BRANCH	S-126	10.000	23.670
401012640100	BROAD RIVER	I-126W	0.000	22.660
404021500200	CRANE CREEK	SC 215	10.000	21.670
407096700100	HORSE CREEK	S-967	20.000	21.660
407031100100	UNNAMED STREAM	S-311	4.000	20.500
402032100500	CEDAR CREEK	US 321	9.000	19.660
401002040100	BROAD RIVER	I-20W	1.000	19.500
407006600200	CEDAR CREEK	S-66	6.000	18.000
407199500100	UNNAMED	S-1995	1.000	17.330
407138800100	HORSE CREEK	S-1388	8.000	17.330
401012620100	BROAD RIVER	I-26E	0.000	17.000
402007600200	GILLS CREEK	US 76	0.000	17.000
404076800300	TRIB TO GILLS CREEK	SC 768	6.000	16.660
407006100200	CRANE CR-NORTH BR NO.2	S-61	7.000	16.000
404004800500	BACK SWAMP	SC 48	1.000	15.830
407143600100	NORTH BRANCH	S-1436	2.000	15.660
407094900100	PEN BRANCH	S-949	2.000	15.660
407049800100	BR OF HOPES CREEK	S-498	3.000	15.660
402000100100	CONGAREE RIVER	US 1	2.000	15.000
402007600191	GILL'S CREEK	US 76	8.000	14.500
407102100100	UNNAMED	S-1021	0.000	14.340

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Richland County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
401007730500	S-1722 AND JACKSON CREEK	I-77S	2.000	14.000
407098500100	UNNAMED STREAM	S-985	1.000	13.660
404004830200	GILLS CREEK	SC 48E	4.000	13.660
407082700100	SPRING LAKE	S-827	1.000	13.500
401012620071	SALUDA RIVER	I-126E	0.000	13.160
401002000800	BIG JACKSON CREEK	I-20	0.000	13.000
407008000200	HOPES CREEK	S-80	0.000	13.000
407006100100	CRANE CR-NORTH BR NO.1	S-61	4.000	13.000
402060100300	CONGAREE SWAMP NO.1	US 601	6.000	13.000
404004800600	CEDAR CREEK	SC 48	12.000	13.000
407012900100	NICHOLAS CREEK	S-129	2.000	12.670
407043400100	EIGHT MILE CREEK	S-434	3.000	12.670
402007620300	MILL CREEK	US 76E	0.000	12.500
407003700100	MYERS CREEK	S-37	0.000	12.000
402002100400	CRANE CREEK	US 21	0.000	12.000
401002040300	CRANE CREEK AND S-43	I-20W	4.000	12.000
404021500600	CEDAR CREEK	SC 215	11.000	12.000
407159700100	UNNAMED STREAM	S-1597	2.000	11.670
401032620300	TRIB TO GILLS CREEK	I-326E	0.000	11.500
401032640300	TRIB TO GILLS CREEK	I-326W	0.000	11.500
407150900100	EIGHT MILE CREEK	S-1509	1.000	11.500
407009500100	GILLS CREEK	S-95	2.000	11.160
401002020300	CRANE CREEK AND S-43	I-20E	4.000	11.000
407168200100	LITTLE CEDAR CREEK	S-1682	6.000	11.000
407168200200	CEDAR CREEK	S-1682	1.000	10.660
402032100200	CRANE CREEK	US 321	12.000	10.660
407005500200	CABIN CREEK	S-55	4.000	10.500
402060100100	CONGAREE SWAMP (NO.3)	US 601	16.000	10.500
401007710500	S-1722 AND JACKSON CREEK	I-77N	1.000	10.000
407135200100	NORTH BRANCH	S-1352	2.000	10.000
407243900100	UNNAMED CREEK	S-2439	5.000	10.000
407004300100	CRANE CREEK	S-43	4.000	9.670
407172700100	UNNAMED STREAM	S-1727	0.000	9.500
401002020100	BROAD RIVER	I-20E	1.000	9.500
401032620200	CONGAREE SWAMP	I-326E	0.000	9.000
401032640200	CONGAREE SWAMP	I-326W	0.000	9.000
404004810200	GILLS CREEK	SC 48W	0.000	9.000
404001200100	GILLS CREEK	SC 12	1.000	9.000
407006600100	CABIN CREEK	S-66	3.000	9.000
407251400100	UNNAMED CREEK	S-2514	4.000	9.000
402060100400	COLONELS CREEK	US 601	4.000	9.000
402017600100	WATEREE CREEK	US 176	7.000	9.000
407022800100	SMITH BRANCH	S-228	0.000	8.660
402060100200	CONGAREE SWAMP NO.2	US 601	6.000	8.500
401007710300	WINDSOR LAKE/JACKSON CR	I-77N	3.000	8.000
404021500800	LITTLE RIVER	SC 215	12.000	8.000
404004800700	DRY BRANCH	SC 48	4.000	7.500
401007730300	WINDSOR LAKE/JACKSON CR	I-77S	0.000	7.000
407020500100	SMITH BRANCH	S 205	0.000	7.000
407158100100	FOREST LAKE	S-1581	0.000	7.000
407119600100	WINDSOR LAKE	S-1196	2.000	7.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Richland County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
404026200200	COLONELS CREEK	SC 262	0.000	6.000
402017600600	BROAD RIVER	US 176	2.000	6.000
404076000100	GILLS CREEK	SC 760	1.000	5.670
402007640300	MILL CREEK	US 76W	0.000	5.500
402032100400	HORSE CREEK	US 321	3.000	5.000
404076800100	GILLS CREEK	SC 768	4.000	5.000

Sumter County

Structure_no	Stream	Route	Obs_scour	Pot_scour
437005900500	PUDDING SWAMP	S-59	4.000	19.830
437026300100	RAFTING CREEK	S-263	2.000	18.500
437020400100	BLUFFHEAD BRANCH	S-204	2.000	18.000
432037820300	BLACK RIVER SWAMP NO.2	US 378E	2.000	18.000
437003500100	TRIB TO BLACK RIVER	S-35	0.000	16.990
437010900100	RAFTING CREEK	S-109	0.000	16.500
437045800100	NASTY BRANCH	S-458	3.000	16.000
432052110500	LITTLE RAFTING CREEK	US 521N	3.000	16.000
432007620100	WATEREE RIVER	US 76E	3.000	16.000
437080700100	ROBERT BRANCH	S-807	8.000	16.000
437002900100	SAMMY SWAMP	S-29	0.000	15.000
434012000400	SECOND MILL POND	SC 120	0.000	15.000
432040100100	ROCK BLUFF CREEK NO.2	US 401	0.000	15.000
432007600800	ROCKY BLUFF SWAMP NO.2	US 76	1.000	15.000
437069200100	LONG BRANCH	S-692	2.000	15.000
437022700100	GREEN SWAMP	S-227	2.000	15.000
432052130500	LITTLE RAFTING CREEK	US 521S	2.000	15.000
437034100200	TEARCOAT BRANCH	S-341	5.000	15.000
432037840300	BLACK RIVER SWAMP NO.2	US 378W	5.000	15.000
432007601200	SCAPE ORE CREEK	US 76	6.000	15.000
437011400100	TURKEY CREEK	S-114	13.000	14.670
432040100300	COWPEN SWAMP	US 401	0.000	14.500
432007600700	ROCKY BLUFF SWAMP NO.1	US 76	2.000	14.500
437015000100	DOUGLAS SWAMP	S-150	2.000	14.330
437025500100	TEARCOAT BRANCH	S-255	3.000	14.160
437003700100	RAFTING CREEK	S-37	0.000	14.000
432040100200	ROCK BLUFF CREEK NO.1	US 401	0.000	14.000
432007640300	WATEREE RIVER SWP NO.2	US 76W	1.000	14.000
432007620300	WATEREE RIVER SWP NO.2	US 76E	4.000	14.000
437010100100	TURKEY CREEK	S-101	7.000	14.000
437052800100	CANE SAVANNAH CREEK	S-528	7.000	13.670
437005700100	BLACK RIVER NO.2	S-57	4.000	13.660
432001500300	WHITES MILL POND	US 15	2.000	13.500
437003300100	GREEN SWAMP	S-33	0.000	13.000
437040100100	POCALLA CREEK	S-401	0.000	13.000
432001530100	POCOTALIGO RIVER	US 15S	0.000	13.000
437029000300	ROCKY BLUFF CREEK	S-290	1.000	13.000
437005900200	BOYKIN BRANCH	S-59	2.000	13.000
432007601300	BLACK RIVER SWAMP	US 76	2.000	13.000
437041200100	DOUGLAS SWAMP	S-412	4.000	13.000
437038000100	GREEN SWAMP BRANCH	S-380	8.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 1--Continued

Sumter County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
437005700200	BLACK RIVER NO.1	S-57	10.000	13.000
437004100100	BLUFF SWAMP NO 4	S-41	2.000	12.500
437008100200	ALLIGATOR BRANCH	S-81	1.000	12.000
437037000100	MUSH BRANCH	S-370	2.000	12.000
437007700100	BUSH BRANCH	S-77	2.000	12.000
437005200100	DUCKFORD BRANCH	S-52	2.000	12.000
437034600100	GUM SWAMP BRANCH	S-346	4.000	12.000
437004600100	WHITES MILL POND	S-46	3.000	11.670
437008200100	TURKEY CREEK	S-82	4.000	11.670
437052800200	TRIB TO NASTY BRANCH	S-528	0.000	11.660
434026100100	SAMMY SWAMP	SC 261	2.000	11.660
437034100100	DAVIS CREEK	S-341	0.000	11.500
437029000400	BR OF ROCKY BLUFF CREEK	S-290	0.000	11.500
437025100100	NASTY BRANCH	S-251	0.000	11.000
432001510100	POCOTALIGO RIVER	US 15N	0.000	11.000
432037820200	BLACK RIVER	US 378E	0.000	11.000
432037820100	BLACK RIVER SWAMP NO.1	US 378E	0.000	11.000
432037840200	BLACK RIVER	US 378W	0.000	11.000
432007620400	WATEREE RIVER SWP NO.3	US 76E	0.000	11.000
432007640200	WATEREE RIVER SWP NO.1	US 76W	1.000	11.000
432037840100	BLACK RIVER SWAMP NO.1	US 378W	2.000	11.000
432007620200	WATEREE RIVER SWP NO.1	US 76E	2.000	11.000
437034600300	BEECH CREEK	S-346	3.000	11.000
437005500100	SHOT POUCH BRANCH	S-55	4.000	10.670
437044000100	BALLARD CREEK	S-440	2.000	10.660
437003200100	POCOTALIGO SWAMP NO.1	S-32	0.000	10.500
437004000200	CANE SAVANNAH CREEK	S-40	0.000	10.500
437004600300	COWPEN SWAMP	S-46	0.000	10.500
432007640400	WATEREE RIVER SWP NO.3	US 76W	0.000	10.500
437002500300	CANE SAVANNAH CREEK	S-25	2.000	10.500
437067300100	GREEN SWAMP	S-673	0.000	10.000
437011900100	SHOT POUCH BRANCH	S-119	0.000	9.500
437005900300	THREE MILE BRANCH	S-59	0.000	9.000
437004400100	ROCKY BLUFF SWAMP	S-44	3.000	9.000
432007640100	WATEREE RIVER	US 76W	5.000	9.000
437046600100	TURKEY CREEK	S-466	0.000	8.660
437008100300	MULBERRY BRANCH	S-81	0.000	8.500
437009200200	LEE SWAMP NO.2	S-92	2.000	8.500
437010500200	ROCKY BLUFF SWAMP	S-105	2.000	8.500
437004000100	MUSH BRANCH	S-40	4.000	8.000
437004300200	BRACEY MILL CREEK	S-43	0.000	7.500
437009200100	LEE SWAMP NO.1	S-92	0.000	7.000
437053200100	NASTY CREEK	S-532	0.000	6.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 2

Abbeville County

Structure_no	Stream	Route	Obs_scour	Pot_scour
017006100500	BRANCH OF LONG CANE CREEK	S-61	12.000	26.670
017003200100	GILL CREEK	S-32	10.000	26.330
017006100100	LITTLE CURLTAIL CREEK	S-61	16.000	24.660
017011100200	TURKEY CREEK	S-111	15.000	24.330
017002400200	LITTLE RIVER	S-24	6.000	23.667
017006100400	BAGG CREEK	S-61	22.000	23.000
014002800500	LITTLE RIVER	SC 28	14.000	22.160
017025400100	TRIB TO MURRAY CREEK	S-254	14.000	21.000
017004400100	PARK CREEK	S-44	2.000	20.660
017011300100	CHICKASAW CREEK	S-113	1.000	20.330
017012600100	PARKERS CREEK	S-126	6.000	19.330
017006100200	JOHNS CREEK	S-61	2.000	19.000
017007500200	LONG CANE CREEK	S-75	11.000	19.000
017011100300	BROAD MOUTH CREEK	S-111	12.000	18.660
017034400100	MORROW CREEK	S-344	6.000	18.000
014018400400	HOGSKIN CREEK	SC 184	4.000	17.660
014002800400	PARK CREEK	SC 28	3.000	17.330
014018400200	JOHNSON CREEK	SC 184	6.000	17.330
014018500200	LONG CANE CREEK	SC 185	6.000	17.330
014007100400	LITTLE RIVER	SC 71	10.000	16.500
017012000100	NORRIS CREEK	S-120	3.000	16.330
017013300300	NORRIS CREEK	S-133	3.000	15.670
014018400100	ROCKY RIVER	SC 184	1.000	15.500
014007100300	PENNY CREEK	SC 71	2.000	15.330
017011100100	GOOSE CREEK	S-111	7.000	15.330
017003300200	DOUBLE BRANCH	S-33	1.000	15.000
017006100300	DRY CREEK	S-61	9.000	15.000
014002800200	CALHOUN CREEK	SC 28	2.000	14.670
014008100200	ROCKY RIVER	SC 81	0.000	14.500
017003200500	PARKERS CREEK	S-32	2.000	14.330
014007100100	GILL CREEK	SC 71	1.000	14.000
017090200100	BR OF HOGSKIN CREEK	S-902	2.000	14.000
014020100300	LITTLE RIVER	SC 201	8.000	13.660
017003300100	BLUE HILL CREEK	S-33	0.000	13.340
017003200400	CALHOUN CREEK	S-32	3.000	12.000
014007200400	CALHOUN CREEK	SC 72	4.000	12.000
017011400100	PARK CREEK	S-114	6.000	12.000
017007200200	ROCKY RIVER	S-72	1.000	11.830
014007200300	LITTLE RIVER	SC 72	10.000	11.830
017003800200	OVERFLOW-LONG CANE CREEK	S-38	0.000	11.500
017003800100	LONG CANE CREEK	S-38	0.000	11.330
014018400500	CHICKASAW CREEK	SC 184	0.000	11.000
017008700100	TURKEY CREEK	S-87	8.000	11.000
017030700100	FLAGREED CREEK	S-307	0.000	10.990
014018400600	GOOSE CREEK	SC 184	0.000	10.670
014007200200	MCKENLEY CREEK	SC 72	4.000	10.670
017090200200	BR OF HOGSKIN CREEK	S-902	3.000	10.000
014020100200	PARK CREEK	SC 201	5.000	10.000
017021200100	LAKE SECESSION	S-212	0.000	9.500
017028400100	HAMMOND BRANCH	S-284	0.000	9.000
014007200800	LONG CANE CREEK	SC 72	0.000	9.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 2--Continued

Abbeville County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
017034400200	GILL CREEK	S-344	4.000	9.000
017010800100	SPILLWAY OF RESERVOIR	S-108	0.000	8.000
017012800100	BLUE HILL CREEK	S-128	0.000	8.000
017032400100	MCCORDS CREEK	S-324	6.000	8.000
017013300100	LONG CANE CREEK	S-133	6.000	8.000
017017900100	CHICKASAW CREEK	S-179	7.000	7.000
014007100500	CALHOUN CREEK	SC 71	2.000	6.500
014018400300	LITTLE RIVER	SC 184	0.000	3.000

Edgefield County

Structure_no	Stream	Route	Obs_scour	Pot_scour
197013300100	CEDAR CREEK	S-133	12.000	23.660
197004000200	LOG CREEK	S-40	3.000	21.990
197003400400	DOUBLE BRANCH	S-34	7.000	20.000
197001000100	BEAVERDAM CREEK	S-10	7.000	19.170
197003500200	BEAVERDAM CREEK	S-35	7.000	19.000
197007600100	HORNE CREEK	S-76	14.000	19.000
197003400300	HORNE CREEK	S-34	6.000	18.670
197006800300	TURKEY CREEK	S-68	6.000	18.500
197007500300	SOUTH EDISTO RIVER	S-75	6.000	17.990
197029600100	DUNN CREEK	S-296	10.000	17.660
194023000400	CHEVES CREEK	SC 230	0.000	16.000
197044400100	ACADEMY CREEK	S-444	2.000	16.000
197004000100	TURKEY CREEK	S-40	4.000	16.000
194023000500	HORNE CREEK	SC 230	10.000	16.000
197003400600	CHEVES CREEK	S-34	2.000	15.990
194043000400	LITTLE STEVENS CREEK	SC 430	2.000	14.660
197034000100	FOX CREEK	S-340	9.000	14.330
197005300101	DEEP STEP BRANCH	S-53	12.000	14.000
197014300100	HORN CREEK	S-143	6.000	13.330
197007500400	SHAWS CREEK	S-75	2.000	12.500
192002500400	TURKEY CREEK	US 25	2.000	12.170
197025700100	BEAVERDAM CREEK	S-257	0.000	12.000
197007500100	BR OF BEECH CREEK	S-75	1.000	12.000
197014300200	LLOYD CREEK	S-143	2.000	12.000
197004100100	SOUTH EDISTO RIVER	S-41	2.000	12.000
197003400500	BURKHALTER CREEK	S-34	3.000	12.000
197003900200	SOUTH BRANCH OF TURKEY CR	S-39	3.000	12.000
197040700100	BETTIS BRANCH	S-407	8.000	12.000
197002100200	LITTLE STEVENS CREEK	S-21	2.000	11.330
197009000100	OUTFALL CREEK	S-90	0.000	11.000
197004000300	BEAVERDAM CREEK	S-40	1.000	11.000
197007500200	BEECH CREEK	S-75	4.000	11.000
192002500300	LOG CREEK	US 25	2.000	10.000
197007600200	TOBLER CREEK	S- 76	3.000	10.000
197023700100	LITTLE TURKEY CREEK	S-237	5.000	10.000
197004100200	BR OF SOUTH EDISTO RIVER	S-41	5.000	10.000
197005300100	STEVENS CREEK	S-53	0.000	9.500
194023000300	ANDERSON BRANCH	SC 230	4.000	9.000
192037800200	MOUNTAIN CREEK	US 378	4.000	9.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 2--Continued

Edgefield County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
197013900100	GUNDY CREEK	S-139	6.000	9.000
194028300100	TURKEY CREEK	SC 283	4.000	8.000
197002400100	SLEEPY CREEK	S-24	0.000	7.000
197003500100	TURKEY CREEK	S-35	0.000	7.000
194043000200	TURKEY CREEK	SC 430	2.000	7.000
192037800400	SLEEPY CREEK	US 378	2.000	6.330

Greenwood County

Structure_no	Stream	Route	Obs_scour	Pot_scour
247003900300	SALUDA RIVER	S-39	6.000	22.500
247004600100	COWHEAD CREEK	S-46	15.000	22.330
242002500200	CUFFEYTOWN CREEK	US 25	18.000	21.670
247039700100	WILSON CREEK	S-397	2.000	21.330
244070200100	HALFWAY SWAMP CREEK	SC 702	5.000	20.330
247005800200	TURNER CREEK	S-58	20.000	20.000
247028500100	ROCKY CREEK	S-285	9.000	19.000
247014800100	ARMSTRONG BRANCH	S-148	3.000	17.990
247013100100	HENLEYS CREEK	S-131	6.000	17.990
242002500600	MULBERRY CREEK	US 25	4.000	17.000
244003400100	WILSON CREEK	SC 34	6.000	17.000
247026800100	ROCKY CREEK	S-268	7.000	16.670
244024800100	BR OF NINETY SIX CR	SC 248	0.000	16.330
247011100100	TURKEY CREEK	S-111	2.000	15.670
237012500100	SALUDA RIVER	S-125	2.000	15.500
247014800200	HARD LABOR CREEK	S-148	3.000	15.000
244070200200	WILSON CREEK	SC 702	9.000	15.000
247003900100	ROCKY CREEK	S-39	8.000	14.660
247043100100	BR OF NINETY SIX CR	S-431	5.000	14.000
242002500700	TURKEY CREEK	US 25	7.000	14.000
247004100100	NINETY-SIX CREEK	S-41	18.000	14.000
242022130500	CORONACA CREEK	US 221S	4.000	13.670
247005000100	HARD LABOR CREEK	S-50	8.000	13.670
247010400100	HORSEPEN CREEK	S-104	9.000	13.500
247009800200	QUARTER CREEK	S-98	3.000	13.000
247022800100	BIG ROCK CREEK	S-228	4.000	13.000
244042000100	TURKEY CREEK	SC 420	4.000	13.000
244024600300	NINETY SIX CREEK	SC 246	6.000	13.000
247018800100	BIG CURL TAIL	S-188	0.000	12.500
244024600200	WILSON CREEK	SC 246	8.000	12.000
242022110500	CORONACA CREEK	US 221N	2.000	11.660
247003800100	TURKEY CREEK	S-38	6.000	11.660
247007300100	SAMPLE BRANCH	S-73	0.000	11.000
247027100100	CORONACA CREEK	S-271	2.000	11.000
247010100100	WILSON CREEK	S-101	11.000	11.000
242022100700	SALUDA RIVER	US 221	0.000	10.500
247009600100	TURKEY CREEK	S-96	4.000	10.000
247003900200	CORONACA CREEK	S-39	3.000	9.500
247010000100	CORONACA CREEK	S-100	0.000	9.000
247042400100	WILSON CREEK	S-424	2.000	9.000
247008100100	QUARTER CREEK	S-81	4.000	9.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 2--Continued

Greenwood County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
244024800300	HENLEYS CRK	SC 248	6.000	9.000
242022100200	HARD LABOR CREEK	US 221	3.000	8.660
247004200100	NINETY-SIX CREEK	S-42	6.000	7.000
247003800200	SALUDA RIVER	S-38	0.000	6.000
244022500200	HARD LABOR CREEK	SC 225	0.000	6.000
247049500100	BIG CURL TAIL CR	S-495	1.000	6.000

Laurens County

Structure_no	Stream	Route	Obs_scour	Pot_scour
304007200900	MILLERS FORK CREEK	SC 72	15.000	26.490
304006600200	INDIAN CREEK	SC 66	14.000	24.000
307004300100	NORTH CREEK	S-43	6.000	21.670
307001900200	CANE CREEK FORK	S-19	10.000	21.670
307004300200	BR TO LITTLE RIVER	S-43	3.000	20.330
302007605200	LITTLE RIVER	US 76	7.000	19.500
304030800100	DUNCAN CREEK	SC 308	0.000	17.670
307030700100	LONG LICK BRANCH	S-307	5.000	17.330
302007600300	NORTH RABON CREEK	US 76	2.000	17.000
302007600100	REEDY RIVER	US 76	2.000	16.840
307009300100	BR OF MOUNTAIN CREEK	S-93	11.000	16.670
307035900100	REEDY FORK CREEK	S-359	3.000	16.660
307008400100	BURNT MILL CREEK	S-84	2.000	16.330
307003100100	DUNCAN CREEK	S-31	0.000	16.170
307056500100	LAKE GREENWOOD	S-565	5.000	15.830
307004100100	BURNT MILL CREEK	S-41	3.000	15.660
304010100200	NORTH RABON CREEK	SC 101	0.000	15.000
307048200100	BR OF SHELL CR	S-482	4.000	14.670
304006600201	BR TO INDIAN CREEK	SC 66	2.000	14.660
307030700200	RABON CREEK	S-307	0.000	14.500
302002503100	SALUDA RIVER	US 25	0.000	14.500
304010100800	ENOREE RIVER	SC 101	3.000	14.500
304010100700	DURBIN CREEK	SC 101	1.000	14.330
307006700100	DURBIN CREEK	S-67	1.000	14.000
304007201000	ALLISONS BRANCH	SC 72	3.000	14.000
307049600100	BR OF LITTLE RIVER	S-496	4.000	14.000
307011300100	LITTLE RIVER	S-113	5.000	14.000
302007600400	LICK CREEK	US 76	5.000	14.000
307065900100	NORTH CAMPBELL CREEK	S-659	6.000	14.000
307003200100	MOUNTAIN CREEK	S-32	4.000	13.660
307002900100	REEDY RIVER	S-29	0.000	13.500
304041800100	BIG DURBIN CREEK	SC 418	2.000	13.500
304005600300	DUNCAN CREEK	SC 56	7.000	13.330
304007200100	CANE CREEK	SC 72	3.000	13.000
304012700200	LITTLE RIVER	SC-127	5.000	13.000
307004100200	TRIB TO BURNT MILL CR	S-41	9.000	13.000
307066000100	WARRIOR CREEK	S-660	9.000	12.660
302002500100	SALUDA RIVER	US 25	1.000	12.500
304010100100	SOUTH RABON CREEK	SC 101	4.000	11.670
307034300100	WARRIOR CREEK	S-343	5.000	11.660

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 2--Continued

Laurens County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
304056000200	LITTLE RIVER	SC 560	20.000	11.660
302007603200	LITTLE RIVER	US 76	0.000	11.000
307074500100	NORTH RABON CR	S-745	5.000	11.000
307065900200	BR OF CAMPBELL CR	S-659	7.000	11.000
307004700100	SALUDA RIVER POWER FLARE	S-47	0.000	10.500
307000600100	REEDY RIVER	S-6	12.000	10.500
304006600100	BUSH RIVER	SC 66	0.000	10.000
307035900200	BR TO LITTLE RIVER	S-359	3.000	10.000
304025200300	REEDY RIVER	SC 252	3.000	10.000
307000600300	RABON CREEK	S-6	4.000	10.000
304025200400	RABON CREEK	SC 252	4.000	10.000
307026300100	ENOREE RIVER	S-263	5.000	9.830
307011200100	ENOREE RIVER	S-112	10.000	9.660
302022100100	BURNT MILL CREEK	US 221	0.000	9.000
304004900300	WARRIOR CREEK	SC 49	1.000	9.000
307002400100	North FORK LITTLE RIVER	S-24	5.000	9.000
304007200500	LITTLE RIVER	SC 72	8.000	9.000
307006300100	SALUDA RIVER	S-63	0.000	8.830
304007201200	DUNCAN CREEK	SC 72	2.000	8.500
304041800200	LITTLE DURBIN CREEK	SC 418	0.000	8.000
302007600200	SOUTH RABON CREEK	US 76	0.000	8.000
301002640200	DUNCAN CREEK	I-26W	1.000	8.000
306300100200	LITTLE RIVER	P-3001	6.000	8.000
302022100200	WARRIOR CREEK	US 221	16.000	8.000
301002640100	ENOREE RIVER	I-26W	2.000	7.830
301002620100	ENOREE RIVER	I-26E	2.000	7.830
304004900400	ENOREE RIVER	SC 49	0.000	7.500
301002620200	DUNCAN CREEK	I-26E	1.000	7.000
302022103100	LITTLE RIVER	US 221	1.000	7.000
304030800200	BR TO DUNCAN CREEK	SC 308	2.000	7.000
304007201100	DUNCAN CREEK	SC 72	2.000	7.000
307020200100	LITTLE RIVER	S-202	0.000	6.000
304041800300	ENOREE RIVER	SC 418	0.000	4.330
302022100300	ENOREE RIVER	US 221	0.000	4.000

McCormick County

Structure_no	Stream	Route	Obs_scour	Pot_scour
337032900100	LITTLE BUFFALO CREEK	S-329	10.000	20.330
334082300100	LOTT CREEK	SC 823	2.000	20.000
337032900200	BAKERS CREEK	S-329	9.000	18.670
337001900100	LITTLE RIVER	S-19	0.000	18.160
337016000100	BAKER CREEK	S-160	9.000	17.000
332037800300	ROCKY CREEK	US 378	1.000	15.660
332037800500	CUFFEYTOWN CREEK	US 378	1.000	15.000
337002100100	BR TO CUFFEYTOWN CR	S-21	2.000	15.000
334006700100	CUFFEYTOWN CREEK	SC 67	5.000	14.500
337017100100	HARD LABOR CREEK	S-171	6.000	14.170
334002800500	LONG CANE CREEK	SC 28	0.000	13.500
334008100100	LITTLE RIVER	SC 81	0.000	13.500
332022100300	ROCKY CREEK	US 221	1.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 2--Continued

McCormick County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
332037800100	LITTLE RIVER	US 378	0.000	12.500
332037800400	HARD LABOR CREEK	US 378	1.000	12.000
334002800100	SAVANNAH RIVER	SC 28	0.000	10.500
334082300200	LITTLE RIVER	SC 823	2.000	9.000
334002300100	STEVENS CREEK	SC 23	2.000	6.500
334028300100	STEVENS CREEK	SC 283	2.000	3.000

Newberry County

Structure_no	Stream	Route	Obs_scour	Pot_scour
367002800100	CRIMS CREEK	S-28	0.000	23.830
367005800200	BUSH RIVER	S-58	8.000	23.670
362017601000	CANNONS CREEK	US 176	8.000	22.170
364005600200	MILLS CREEK	SC 56	8.000	22.000
364003400100	SALUDA RIVER	SC 34	6.000	21.000
364003400300	LITTLE RIVER	SC 34	13.000	19.330
367004800400	MUDLICK CREEK	S-48	4.000	18.670
367003800200	CANNONS CREEK	S-38	9.000	18.330
364003400800	NORTH FORK SCOTTS CREEK	SC 34	2.000	18.170
367005800300	SANDY RUN CREEK	S-58	1.000	17.830
362017600200	DUNCAN CREEK	US176	4.000	17.830
367005800400	GARRISON CREEK	S-58	8.000	17.000
367024400300	BUSH RIVER	S-244	2.000	16.830
364003400700	BUSH RIVER	SC 34	9.000	16.660
367005400100	TYGER RIVER	S-54	4.000	16.500
367004500100	ENOREE RIVER	S-45	6.000	16.500
367017200100	BR OF ROCKY CREEK	S-172	0.000	16.000
364006600100	DUNCAN CREEK	SC 66	2.000	16.000
364003400500	BEAVER DAM CREEK	SC 34	5.000	16.000
364039500200	BUSH RIVER	SC 395	0.000	15.500
367002000100	CAMPING CREEK	S-20	2.000	15.500
367005600300	BR OF BIG BEAVERDAM	S-56	2.000	15.500
364021900300	BRANCH OF CANNON CREEK	SC 219	2.000	15.330
361002620100	INDIAN FIELD CREEK	I-26E	4.000	15.000
367002800200	CANNONS CREEK	S-28	0.000	14.500
367002800300	HELLERS CREEK	S-28	0.000	14.500
367024400200	BRANCH OF BUSH RIVER	S-244	3.000	14.500
367005600200	BIG BEAVER DAM	S-56	6.000	14.500
362017601100	CRIMS CREEK	US 176	1.000	14.330
367041500100	SCOTT CREEK	S-415	0.000	14.000
367004800300	MUDLICK RELIEF BRANCH	S-48	2.000	14.000
364005600400	LITTLE RIVER	SC 56	13.000	14.000
364039500100	SALUDA RIVER	SC 395	2.000	13.500
367004800100	BEAVER DAM CREEK	S-48	0.000	13.000
362017600400	INDIAN CREEK	US176	1.000	13.000
361002640100	INDIAN FIELD CREEK	I-26W	2.000	13.000
364039500300	SCOTTS CREEK	SC 395	4.000	13.000
364003409100	NORTH FORK SCOTTS CREEK	SC 34	5.000	13.000
367004900200	BEAVER DAM CREEK	S-49	7.000	13.000
367068400100	SCOTTS CREEK	S-684	3.000	12.830
367024400100	TIMOTHY CREEK	S-244	3.000	12.670

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 2--Continued

Newberry County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
367008200100	CANNON CREEK	S-82	4.000	12.670
367018700100	BUFFALO CREEK	S-187	5.000	12.670
364012100101	SALUDA RIVER	SC 121	6.000	12.500
367005600100	BUSH RIVER	S-56	1.000	12.000
362017600500	KINGS CREEK	US 176	1.000	12.000
367011900100	SCOTTS CREEK	S-119	2.000	12.000
364003401100	HELLERS CREEK	SC 34	2.000	12.000
362017600100	ENOREE RIVER	US 176	5.000	12.000
367007200100	CAMPING CREEK	S-72	3.000	11.670
367005800100	SCOTTS CREEK	S-58	2.000	11.660
367018700200	BRANCH OF BUFFALO CREEK	S-187	0.000	11.500
367004100100	BUSH RIVER	S-41	0.000	11.500
364039100100	SALUDA RIVER	SC 391	0.000	11.500
367004200300	TIMOTHY CREEK	S-42	2.000	11.000
364021300100	CRIMS CREEK	SC 213	7.000	11.000
367005600400	BR OF BUSH RIVER	S 56	0.000	10.000
367038300100	SCOTTS CREEK	S-383	0.000	10.000
367004200100	KINARDS CREEK	S-42	0.000	10.000
367010600100	TRIB TO SCOTTS CREEK	S-106	1.000	10.000
367004900100	BR OF WELCH CREEK	S-49	6.000	10.000
364005600300	MUDLICK CREEK	SC 56	6.000	10.000
364056000300	BUSH RIVER	SC 560	6.000	10.000
367008100200	ENOREE RIVER	S-81	16.000	9.500
362007603100	NORTH BR SCOTTS CREEK	US 76	0.000	9.000
367002600100	BR OF CAMPING CREEK	S-26	3.000	9.000
369009100100	SCOTTS CREEK	L-91	0.000	8.000
367004200200	BR OF TIMOTHY CREEK	S-42	2.000	8.000
367036100100	BEAVER DAM CREEK	S-361	4.000	7.000
367052300100	SCOTTS CREEK	S-523	0.000	6.990
367006600200	BR OF BUSH RIVER	S-66	0.000	5.330
364021300300	BROAD RIVER	SC 213	2.000	4.000

Saluda County

Structure_no	Stream	Route	Obs_scour	Pot_scour
417005900400	TRIB TO CLOUDS CREEK	S-59	0.000	19.500
417021100100	RICHLAND CREEK	S-211	7.000	19.000
412037800600	CLOUDS CREEK	US 378	3.000	18.660
412037800300	RICHLAND CREEK	US 378	3.000	17.670
414012100100	LITTLE SALUDA RIVER	SC 121	0.000	17.000
417010500100	WEST CREEK	S-105	9.000	16.000
417004400200	LITTLE SALUDA RIVER	S-44	0.000	15.660
412037800500	BEAVER DAM CREEK	US 378	1.000	15.000
417034500100	BR TO ROCKY CREEK	S-345	2.000	15.000
412017800300	CLOUDS CREEK	US 178	2.000	15.000
417005900500	CLOUDS CREEK	S-59	0.000	14.000
412037800100	RED BANK STREAM	US 378	3.000	14.000
414039100100	LITTLE SALUDA RIVER	SC 391	0.000	13.500
417036000100	BURNETTS CREEK	S-360	4.000	13.000
412017800100	LITTLE SALUDA RIVER	US 178	4.000	13.000
417002600100	BR TO LAKE MURRAY	S-26	1.000	12.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 2--Continued

Saluda County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
414070200200	BIG CREEK	SC 702	1.000	12.000
417015000200	WEST CREEK	S-150	2.000	12.000
417002100100	RED BANK CREEK	S-21	3.000	12.000
412017800200	RICHLAND CREEK	US 178	3.000	12.000
417005900100	TRIB TO RICHLAND CREEK	S-59	4.000	12.000
417040000100	BR TO LAKE MURRAY	S-400	0.000	11.000
417005900200	TRIB TO RICHLAND CREEK	S-59	1.000	11.000
417004200200	PENN CREEK	S-42	2.000	11.000
417002500100	TRIB TO CLOUDS CREEK	S-25	4.000	11.000
417002600300	CLOUDS CREEK	S-26	0.000	10.500
417002600200	CLOUDS CREEK OVERFLOW	S-26	2.000	10.500
417002500400	CLOUDS CREEK	S-25	0.000	9.830
417005900300	DAILEY CREEK	S-59	4.000	9.000
412037800200	LITTLE SALUDA RIVER	US 378	7.000	8.660
414012100300	BIG CREEK	SC 121	2.000	8.000
414019400200	BIG CREEK	SC 194	0.000	7.000
417004000100	ROCKY CREEK	S-40	4.000	7.000
414003900400	SALUDA RIVER	SC 39	2.000	6.500
417010500200	LONG BRANCH	S-105	0.000	6.000

SCDOT District 3

Anderson County

Structure_no	Stream	Route	Obs_scour	Pot_scour
044002800200	BEAVER CREEK	SC 28	18.000	26.660
047030000200	LITTLE GARVIN CREEK	S-300	8.000	24.670
042007640500	HURRICANE CREEK	US 76W	9.000	23.330
047020300100	BLUE CREEK	S-203	4.000	22.330
044018500200	HEN COOP CREEK	SC 185	8.000	21.670
047002900400	SHANKLIN CREEK	S-29	4.000	21.660
044008100300	BIG BRUSHY CREEK	SC 81	9.000	21.660
042007620100	EIGHTEEN MILE CREEK	US-76E	14.000	21.660
042007620500	HURRICANE CREEK	US 76E	11.000	21.000
047007600200	BR OF ROCKY RIVER	S-76	5.000	20.660
047006700200	BARKERS CREEK	S-67	9.000	20.000
042002900800	COX CREEK	US 29	9.000	20.000
047015200100	BRANCH OF NESBIT CREEK	S-152	8.000	19.660
047011700200	LITTLE BEAVERDAM CREEK	S-117	6.000	19.000
047048500200	BRANCH OF BRUSHY CREEK	S-485	9.000	18.660
047024600200	CUPBOARD CREEK	S-246	6.000	18.500
044008100100	COX CREEK	SC 81	4.000	18.330
042002900500	RICHLAND CREEK	US 29	2.000	18.000
044024300100	ROCKY CREEK	SC 243	3.000	18.000
042007640100	EIGHTEEN MILE CREEK	US 76W	8.000	18.000
042002900300	DEVIL FORK CREEK	US 29	12.000	18.000
047093300300	MILLWEE CREEK	S-933	0.000	17.670
047005400100	BIG CREEK	S-54	7.000	17.000
047036300100	BRUSHY CREEK	S-363	6.000	16.670
047022900100	EIGHTEEN MILE CREEK	S-229	3.000	16.500
047011500100	BIG GARVIN CREEK	S-115	5.000	16.500
047006700300	TRIB TO LITTLE RIVER	S-67	3.000	16.490

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Anderson County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
047004100200	HEN COOP CREEK	S-41	2.000	16.170
047093300100	SHANKLIN CREEK	S-933	2.000	16.160
044008800300	THREE AND TWENTY CREEK	SC 88	5.000	16.000
047007600300	COXS CREEK	S-76	9.000	16.000
047006000100	HURRICANE CREEK	S-60	1.000	15.990
047009100100	TRIB TO DEVIL FORK CR	S-91	2.000	15.990
044041200200	TRIB TO BIG GENEROSTEE CR	SC 412	2.000	15.990
047005700200	BIG GARVAN CREEK	S-57	4.000	15.990
047007400100	HORNBuckle CREEK	S-74	7.000	15.990
047006300100	WATERMELON CREEK	S-63	3.000	15.670
047014300200	BRUSHY CREEK	S-143	4.000	15.670
047024600300	BROADWAY CREEK	S-246	6.000	15.670
042007601100	BROAD MOUTH CREEK	US 76	6.000	15.670
047010500100	LITTLE GENEROSTEE CREEK	S-105	2.000	15.660
047007600100	BIG BEAVERDAM CREEK	S-76	1.000	15.330
047005800100	MILLWEE CREEK	S-58	4.000	15.330
041008531200	BRUSHY CREEK	I-85S	6.000	15.330
047014800100	BROADWAY CREEK	S-148	9.000	15.330
047055500100	TRIB TO SAVANNAH RIVER	S-555	9.000	15.170
047008300100	EAST WILSON CREEK	S-83	0.000	15.000
044002000300	HEN COOP CREEK	SC 20	2.000	15.000
044041200300	WEEMS CREEK	SC 412	6.000	15.000
047006300300	EAST ROCK CREEK	S-63	3.000	14.670
047031600100	HURRICANE CREEK	S-316	3.000	14.670
044002000100	BARKERS CREEK	SC 20	0.000	14.660
047014000100	18 MILE CREEK	S-140	7.000	14.660
042017800300	SIX AND TWENTY CREEK	US 178	0.000	14.500
042007620600	SIX AND TWENTY CREEK	US 76E	0.000	14.500
049216800100	BIG BRUSHY CREEK	L-2168	1.000	14.500
041008530400	THREE AND TWENTY CREEK	I-85S	8.000	14.500
047009700200	SIX AND TWENTY CREEK	S-97	0.000	14.170
044008600200	SALUDA RIVER	SC 86	0.000	14.170
047015300100	EAST BRANCH OF WILSON CR	S-153	2.000	14.000
042002900600	TRIB TO GENEROSTEE CR	US 29	3.000	14.000
047020300200	BARKERS CREEK	S-203	4.000	13.990
047062700100	NEALS CREEK	S-627	3.000	13.830
047009400100	MIDDLE BRUSHY CREEK	S-94	0.000	13.670
047048500100	PICKENS CREEK	S-485	5.000	13.670
047033100300	COX CREEK	S-331	0.000	13.660
047002200200	FIVE MILE CREEK	S-22	5.000	13.660
047025800200	BIG GENEROSTEE CREEK	S-258	6.000	13.660
047007100300	SIX AND TWENTY CREEK	S-71	0.000	13.500
047007300200	THREE AND TWENTY CR	S-73	0.000	13.500
042007640600	SIX AND TWENTY CREEK	US 76W	0.000	13.500
049006100100	6 AND 20 CREEK	L-61	2.000	13.500
047010400100	BR OF MOUNTAIN CREEK	S-104	2.000	13.500
047007400200	BIG BRUSHY CREEK	S-74	0.000	13.330
047026300100	ROCKY RIVER	S-263	7.000	13.330
047011700100	LITTLE BEAVERDAM CREEK	S-117	0.000	13.000
047032600100	TRIB TO ROCKY RIVER	S-326	2.000	13.000
047004800200	BROADWAY CREEK	S-48	2.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Anderson County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
047004100100	BEAR CREEK	S-41	4.000	13.000
042002900900	ROCKY RIVER	US 29	5.000	12.990
047007100100	THREE AND TWENTY CREEK	S-71	0.000	12.500
044018400100	SAVANNAH RIVER	SC 184	0.000	12.500
044002400400	SIX AND TWENTY CREEK	SC 24	0.000	12.500
047085300100	BIG CREEK	S-853	1.000	12.500
047002300100	ROCKY CREEK	S-23	2.000	12.500
044041300400	ROCKY RIVER	SC 413	2.000	12.500
047003400100	BR OF TOWN CREEK	S-34	0.000	12.330
047003400200	TOWN CREEK	S-34	0.000	12.330
047033100100	LITTLE BEAVERDAM CREEK	S- 331	2.000	12.330
049216200100	LITTLE BRUSHY CREEK	L-2162	0.000	12.000
049090400100	BAILEY CREEK	L-904	0.000	12.000
047026500100	BROAD MOUTH CREEK	S-265	0.000	12.000
047002900201	MILLWEE CREEK	S-29	0.000	12.000
044002400700	WHITNER CREEK	SC 24	0.000	12.000
049014100200	NESBIT CREEK	L-141	1.000	12.000
047026100100	BR OF FIVE MILE CREEK	S-261	1.000	12.000
044002000600	BIG CREEK	SC 20	3.000	12.000
047030000100	BIG GARVIN CREEK	S-300	6.000	12.000
047033100200	BIG BEAVERDAM CREEK	S-331	4.000	11.990
044041300200	JORDAN CREEK	SC 413	2.000	11.670
042007600700	ROCKY RIVER	US 29	6.000	11.660
041008510100	ROCKY CREEK	I-85N	0.000	11.500
041008510300	SENECA RIVER	I-85N	0.000	11.500
041008530300	SENECA RIVER	I-85S	0.000	11.500
047010400200	MOUNTAIN CREEK	S-104	0.000	11.500
044002400300	THREE AND TWENTY CREEK	SC 24	0.000	11.500
044000800300	PICKENS CREEK	SC 8	0.000	11.500
047010800100	BEAVER CREEK	S-108	0.000	11.000
047011600100	BIG CREEK	S-116	0.000	11.000
047057600100	BIG CREEK	S-576	0.000	11.000
047007100500	FIVE MILE CREEK	S-71	0.000	11.000
049002900300	BEAVERDAM CREEK	L-29	1.000	11.000
041008530800	SIX AND TWENTY CREEK	I-85S	2.000	11.000
041008511200	BRUSHY CREEK	I-85N	4.000	11.000
047015200200	BEAVER CREEK	S-152	4.000	11.000
044025200400	BLUE CREEK	SC 252	4.000	11.000
047075100300	BROAD MOUTH CREEK	S-751	0.000	10.670
047018100100	BR BROAD MOUTH CREEK	S-181	1.000	10.670
044018400300	WILSONS CREEK	SC 184	7.000	10.670
047066800100	WILSONS CREEK	S-668	0.000	10.660
047005600100	18 MI. CREEK	S-56	1.000	10.660
041008510800	SIX AND TWENTY CREEK	I-85N	0.000	10.500
044002400200	SENECA RV-HARTWELL LAKE	SC 24	0.000	10.500
044002800100	ROCKY RIVER	SC 28	0.000	10.500
049307200100	HARTWELL RESERVOIR	L-3072	1.000	10.500
047011500200	CUFFIE CRK	S-115	1.000	10.500
047090400100	ROCKY RIVER	S-904	1.000	10.500
047006300200	ROCK CREEK	S-63	2.000	10.500
044018500100	ROCKY RIVER	SC 185	4.000	10.500

**APPENDIX--The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 3--Continued

Anderson County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
044002803100	18-MILE CREEK-PENDLETON	SC 28	1.000	10.330
047093300200	THREE AND TWENTY CREEK	S-933	3.000	10.330
042002900400	BIG GENEROSTEE CREEK	US 29	7.000	10.330
047007100600	BIG GENEROSTEE CR	S-71	0.000	10.000
047025600100	HEMBREE CREEK	S-256	2.000	10.000
047101200100	BROADMOUTH CREEK	S-1012	3.000	10.000
047005700100	LITTLE GARVIN CREEK	S-57	3.000	10.000
047024700100	HEN COOP CREEK	S-247	1.000	9.660
042007600200	THREE AND TWENTY CREEK	US 76	8.000	9.660
041008510400	THREE AND TWENTY CREEK	I-85N	0.000	9.500
042017800100	THREE AND TWENTY CREEK	US 178	2.000	9.500
044024700300	SALUDA RIVER	SC 247	5.000	9.500
041008530100	ROCKY CREEK	I-85S	0.000	9.000
044025200200	HEN COOP CREEK	SC 252	0.000	9.000
044025200100	HEN COOP CREEK OVERFLOW	SC 252	0.000	9.000
047015300200	W. BR OF WILSON CREEK	S-153	1.000	9.000
044008100400	SALUDA RIVER AND S-4-143	SC 81	1.000	9.000
047007500200	BIG BEAVERDAM CREEK	S-75	2.000	9.000
044000800400	SALUDA RIVER	SC 8	7.000	9.000
047006500100	BIG GENEROSTEE CREEK	S-65	0.000	8.990
047001700100	HURRICANE CREEK	S-17	0.000	8.500
047002900100	SIX AND TWENTY MILE CR	S-29	1.000	8.500
042007601200	SALUDA RIVER	US 76	4.000	8.500
047002900300	THREE AND TWENTY CREEK	S-29	0.000	8.000
044041300100	WILSONS CREEK	SC 413	1.000	8.000
049014100300	BEAVER CREEK	L-141	2.000	8.000
047008200100	BROAD MOUTH CREEK	S-82	2.000	8.000
047008000200	HEN COOP CREEK	S-80	2.000	7.500
049024700100	BROADWAY LAKE SPILLWAY	L-247	0.000	7.000
042002900100	SAVANNAH RIVER	US 29	0.000	7.000
044018400200	LITTLE GENEROSTEE CREEK	SC 184	1.000	7.000
047015200300	ROCKY RIVER	S-152	0.000	6.670
049411200100	SALUDA RIVER	L-4112	2.000	6.500
047005300100	HURRICANE CREEK	S-53	2.000	6.000
047052700100	WHITNER CREEK	S-527	0.000	5.330
047057700100	BIG CREEK	S-577	8.000	5.000
047006100100	HEMBREE CREEK	S-61	4.000	4.000

Greenville County

Structure_no	Stream	Route	Obs_scour	Pot_scour
234001400700	MIDDLE TYGER RIVER	SC 14	7.000	25.490
237015900100	GROVE CREEK	S-159	2.000	24.670
237092000200	CLEAR CREEK	S-920	10.000	22.990
237011500300	MIDDLE TYGER RIVER	S-115	15.000	22.000
237010700400	LAURAL CREEK	S-107	6.000	21.990
237056400200	ROCKY CREEK	S-564	3.000	21.670
234029100100	REEDY RIVER	SC 291	3.000	21.670
237016000100	BIG DURBIN CREEK	S-160	9.000	21.670
237034700100	BRUSHY CREEK	S-347	2.000	21.000
237056500200	LITTLE CREEK	S-565	10.000	21.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 3--Continued

Greenville County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
234000800200	GROVE CREEK	SC 8	11.000	21.000
234041700200	HORSE PEN CREEK	SC 417	12.000	21.000
237036500100	TRIB TO BRUSHY CR	S-365	13.000	21.000
237013400300	MIDDLE TYGER RIVER	S-134	8.000	20.990
237073700100	TRIB TO HUFF CREEK	S-737	7.000	20.670
237014900100	REEDY RIVER	S-149	6.000	20.660
237016600100	ENOREE RIVER	S-166	15.000	20.660
237065800100	MAPLE CREEK	S-658	0.000	19.660
234041800100	HUFF CREEK	SC 418	1.000	19.340
237005200100	GROVE CREEK	S-52	6.000	19.330
234018600200	BEAVER DAM CREEK	SC 186	2.000	19.000
237005100100	MOUNTAIN CREEK	S-51	16.000	19.000
237196700100	TRIB TO BEAVER DAM CR	S-1967	2.000	18.670
237031600100	GROVE CREEK	S-316	5.000	18.670
237009400300	TRIB TO ENOREE RIVER	S-94	0.000	18.660
239051200100	ROCKY CREEK	L-512	3.000	18.660
234018300100	SALUDA RIVER	SC 183	0.000	18.500
237009400100	BRUSHY CREEK	S-94	2.000	18.330
236230100100	BRUSHY CREEK	P-2301	5.000	18.330
237033700100	MOUNTAIN CREEK	S-337	5.000	18.330
237034200100	ENOREE RIVER	S-342	2.000	18.000
237016400200	BRUSHY CREEK	S-164	5.000	18.000
237014500200	GRAZE CREEK	S-145	8.000	18.000
237009400200	ENOREE RIVER	S-94	8.000	18.000
237026300100	TRIB TO SALUDA RIVER	S-263	10.000	18.000
237018900100	REEDY RIVER	S-189	11.000	18.000
237054200100	REEDY RIVER	S-542	16.000	18.000
237056000100	TRIB TO MIDDLE TYGER RV	S-560	6.000	17.990
237027000100	TRIB TO SOUTH TYGER	S-270	1.000	17.670
237054000100	TRIB TO ENOREE RIVER	S-540	2.000	17.670
237032500100	GILDER CREEK	S-325	6.000	17.670
237197300100	BRUSHY CREEK	S-1973	8.000	17.670
237013400200	TRIB TO MIDDLE TYGER	S-134	7.000	17.330
237098500100	REEDY RIVER	S-985	10.000	17.160
237027200200	REEDY RIVER	S-272	3.000	17.000
237027200100	HUFF CREEK	S-272	0.000	16.660
232002901000	MOUNTAIN CREEK	US 29	8.000	16.660
237013200100	ARMSTRONG CREEK	S-132	0.000	16.330
237014300100	HORSE PEN CREEK	S-143	5.000	16.330
237056200200	ENOREE RIVER	S-562	6.000	16.330
237031600300	REEDY RIVER	S-316	20.000	16.330
237044700100	BRUSHY CREEK	S-447	1.000	16.000
237022100200	REEDY RIVER	S-221	2.000	16.000
237058000100	ROCKY CREEK	S-580	5.000	16.000
237196700200	BEAVER DAM CREEK	S-1967	9.000	16.000
237092000002	TRIB TO MOUNTAIN CREEK	S-920	10.000	16.000
237052600100	NORTH SALUDA RIVER	S-526	1.000	15.670
237003000100	BRUSHY CREEK	S-30	0.000	15.660
237095800100	ROCKY CREEK	S-958	10.000	15.660
237014700200	REEDY RIVER	S-147	0.000	15.500
237033300300	TRIB TO ROCKY CREEK	S-333	4.000	15.330

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Greenville County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
237013400100	BEAVERDAM CREEK	S-134	0.000	15.000
237092000001	TRIB TO MOUNTAIN CREEK	S-920	5.000	14.670
237011300100	SOUTH TYGER RIVER	S-113	0.000	14.500
232012320100	SALUDA RIVER	US 123E	2.000	14.330
234041400200	SOUTH TYGER RIVER	SC 414	6.000	14.330
237008300100	GROVE CREEK	S-83	8.000	14.330
234002000100	SALUDA RIVER	SC 20	8.000	14.170
234028800100	SOUTH SALUDA RIVER	SC 288	0.000	14.000
234001100100	SOUTH SALUDA RIVER	SC 11	1.000	14.000
237068100100	TRIB TO LANGSTON CREEK	S-681	2.000	14.000
234025300600	BEAVER DAM CREEK	SC 253	2.000	14.000
232027600371	RICHLAND CREEK	US 276	2.000	14.000
237008800200	REEDY RIVER	S-88	3.000	14.000
237098200100	TRIB TO ROCKY CREEK	S-982	4.000	14.000
234041800200	REEDY RIVER	SC 418	2.000	13.990
237015400100	HUFF CREEK	S-154	0.000	13.670
237045300100	ROCK CREEK	S-453	7.000	13.670
237045100100	PAYNE BRANCH	S-451	2.000	13.660
237011400200	BEAVERDAM CREEK	S-114	5.000	13.660
239230300100	RICHLAND CREEK	L-2303	0.000	13.500
237045300200	PAYNE BRANCH	S-453	4.000	13.500
234001100200	NORTH SALUDA RIVER	SC 11	4.000	13.500
232002901100	ENOREE RIVER	US 29	11.000	13.340
237010100100	SOUTH SALUDA RIVER	S-101	2.000	13.330
237019100100	HOWARD BRANCH	S-191	2.000	13.330
237092000100	ENOREE RIVER	S-920	4.000	13.330
237011700100	BURBAN FORK CRK	S-117	0.000	13.000
237014500100	HORSE PEN CREEK	S-145	0.000	13.000
237033100100	HUFF CREEK	S-331	0.000	13.000
237105500100	BRUSHY CREEK	S-1055	0.000	13.000
237001300100	TRIB TO LANGSTON CREEK	S-13	0.000	13.000
237007500100	RICHLAND CREEK	S-75	0.000	13.000
234041800300	PAYNE CREEK	SC 418	0.000	13.000
232012340100	SALUDA RIVER	US 123W	0.000	13.000
237086900100	TRIB ENOREE RIVER	S-869	1.000	13.000
234025300700	ENOREE RIVER	SC 253	1.000	13.000
232027600400	NORTH SALUDA RIVER	US 276	1.000	13.000
237045400100	LITTLE CREEK	S-454	2.000	13.000
237006800100	REEDY RIVER	S-68	4.000	12.830
232027600600	MIDDLE SALUDA RIVER	US 276	4.000	12.670
237003800200	ENOREE RIVER	S-38	5.000	12.660
237029500100	FROHAWK CREEK	S-295	0.000	12.500
231008530100	SALUDA RIVER	I-85S	1.000	12.500
237001300200	LANGSTON CR	S-13	0.000	12.330
237096900200	TERRY CREEK	S-969	0.000	12.330
231008510500	REEDY RIVER AND S-30	I-85N	2.000	12.330
237004400100	TRIB TO MIDDLE TYGER	S-44	0.000	12.000
234008600100	GROVE CREEK	SC 86	0.000	12.000
232027630100	LAUREL CREEK	US 276S	0.000	12.000
239048900100	CANE CREEK	L-489	1.000	12.000
237016600200	TRIB TO ENOREE RIVER	S-166	1.000	12.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Greenville County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
237010200100	ARMSTRONG CREEK	S-102	2.000	12.000
237010700500	REEDY RIVER	S-107	2.000	12.000
237017000200	TRIB TO REEDY RIVER	S-170	2.000	12.000
237017700100	BEAVERDAM CREEK	S-177	2.000	12.000
237054100100	GROVE CREEK	S-541	3.000	12.000
237038400100	BRUSHY CREEK	S-384	6.000	12.000
237054200200	TRIB TO REEDY RIVER	S-542	9.000	12.000
237056500100	TRIB TO REEDY RIVER	S-565	4.000	11.990
231008510100	SALUDA RIVER	I-85N	0.000	11.500
237002700100	GROVE CREEK	S-27	1.000	11.330
237014200100	GILDER CREEK	S-142	2.000	11.330
237050600100	REEDY RIVER	S-506	0.000	11.000
237001400100	REEDY RIVER	S-14	0.000	11.000
237016700100	LITTLE MOUNTAIN CREEK	S-167	0.000	11.000
234018300200	REEDY RIVER	SC 183	0.000	11.000
237011000100	CLEAR CREEK	S-110	2.000	11.000
237027900100	MOUNTAIN CREEK	S-279	2.000	11.000
237196600100	TRIB TO ENOREE RIVER	S-1966	3.000	11.000
237045000100	TRIB TO BAKER CRK	S-450	4.000	11.000
234028800200	MIDDLE SALUDA RIVER	SC 288	4.000	11.000
237044800200	REEDY RIVER	S-448	5.000	11.000
237013300100	REEDY RIVER	S-133	6.000	11.000
237045600100	HORSE CREEK	S-456	4.000	10.990
237017000100	TRIB TO REEDY RIVER	S-170	5.000	10.990
237008000100	REEDY RIVER	S-80	0.000	10.660
237009200100	BEAVERDAM CREEK	S-92	2.000	10.500
237022100100	LAUREL CREEK	S-221	6.000	10.330
237011600100	TRIB TO GREEN CREEK	S-116	0.000	10.000
237015400300	TRIB TO PAYNE BRANCH	S-154	0.000	10.000
232027600300	RICHLAND CREEK-GREENVILL	US 276	0.000	10.000
237031300100	BRUSHY CREEK	S-313	2.000	10.000
237092000004	TRIB TO MOUNTAIN CRK	S-920	4.000	10.000
232002505400	GEORGIA AND NORTHERN RR	US 25	4.000	10.000
237067100100	BAKER CREEK	S-671	6.000	10.000
237060900100	BRUSHY CREEK	S-609	2.000	9.660
237013700100	SOUTH TYGER RIVER	S-137	2.000	9.500
234018600100	SALUDA RIVER	SC 186	2.000	9.500
237014700100	BRUSHY CREEK	S-147	0.000	9.000
237056200100	BUCKHORN CREEK	S-562	0.000	9.000
237099200100	SOUTH TYGER RIVER	S-992	0.000	9.000
232002531200	S-119 AND N. SALUDA RIVER	US 25S	0.000	9.000
232002900300	REEDY RIVER	US 29	0.000	9.000
232007600200	MOUNTAIN CREEK	US 76	0.000	9.000
239088600100	LAUREL CREEK	L-886	1.000	9.000
237034100100	TRIB TO JAMISON CREEK	S-341	2.000	9.000
237067100200	HUFF CREEK	S-671	4.000	9.000
237027300200	BRUSHY CREEK	S-273	5.000	9.000
237015400200	REEDY RIVER	S-154	2.000	8.830
237016400100	ROCKY CREEK	S-164	0.000	8.660
237056900100	SOUTH TYGER RIVER	S-569	0.000	8.660
237046400100	BERRY'S MILL CREEK	S-464	2.000	8.660

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Greenville County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
237007600100	REEDY RIVER	S-76	5.000	8.660
237006700100	SALUDA RIVER	S-67	2.000	8.500
237016400400	ENOREE RIVER	S-164	2.000	8.500
237004700200	REEDY RIVER	S-47	0.000	8.330
237000500100	BRUSHY CREEK	S-5	0.000	8.000
237000500200	BRUSHY CREEK	S-5	0.000	8.000
237050700100	LANGSTON CREEK	S-507	0.000	8.000
231008531300	ENOREE RIVER	I-85S	1.000	8.000
234025300900	MEADOW CREEK	SC 253	2.000	8.000
237009800100	BEAVERDAM CREEK	S-98	1.000	7.670
231038500600	U.S. 276 AND RICHLAND CR	I-385	0.000	7.660
237004100100	MIDDLE SALUDA RIVER	S-41	1.000	7.660
237008500100	SALUDA RIVER	S-85	0.000	7.500
237045500100	REEDY RIVER	S-455	4.000	7.500
239038900100	MIDDLE SALUDA RIVER	L-389	0.000	7.000
237056400100	GILDER CREEK	S-564	0.000	7.000
234010100400	CAMP CREEK	SC 101	0.000	7.000
234001400200	ROCKY CREEK	SC 14	0.000	7.000
234001400400	SOUTH TYGER RIVER	SC 14	0.000	7.000
232002511200	S-119 AND N. SALUDA RIVER	US 25N	0.000	7.000
237010600100	GROVE CREEK	S-106	2.000	7.000
237034000100	JAMISON MILL CREEK	S-340	3.000	7.000
234012400100	SALUDA RIVER	SC 124	6.000	7.000
234010100300	SOUTH TYGER RIVER	SC 101	0.000	6.500
237028000100	TRIB TO REEDY RIVER	S-280	0.000	6.000
237019100200	BIG DURBIN CREEK	S-191	0.000	6.000
231008511300	ENOREE RIVER	I-85N	1.000	6.000
234012400300	REEDY RIVER	SC 124	4.000	6.000
239446100100	REEDY RIVER	L-4461	0.000	5.000
237012400100	SOUTH SALUDA RIVER	S-124	0.000	5.000
237006300100	SALUDA RIVER	S-63	0.000	5.000
232012300400	REEDY RIVER	US 25	0.000	5.000
237096900100	NORTH SALUDA RIVER	S-969	1.000	5.000
237034400100	MOUNTAIN CREEK	S-344	4.000	4.000

Oconee County

Structure_no	Stream	Route	Obs_scour	Pot_scour
377008800100	TOXAWAY CREEK	S-88	9.000	25.000
377005000100	CONEROSS CREEK	S-50	7.000	23.330
377014500100	N. FORK LITTLE RIVER	S-145	13.000	23.330
377013200100	LITTLE CANE CRK	S-132	7.000	22.830
374001101400	N. FORK LITTLE RIVER	SC 11	7.000	22.670
374013000100	STAMP CREEK	SC 130	2.000	22.500
377013300100	CANE CREEK	S-133	4.000	22.000
377028800100	CANE CREEK	S-288	5.000	20.000
377006300200	PERKINS CREEK	S-63	6.000	20.000
374001100600	CONEROSS CREEK	SC 11	14.000	19.333
377013500300	RICHLAND CREEK	S-135	7.000	19.330
377013500100	CONEROSS CREEK	S-135	8.000	19.000
377004900200	CHOESTOE CREEK	S-49	2.000	18.500

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 3--Continued

Oconee County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
374018300200	CONEROSS CREEK	SC 183	4.000	18.333
377006600100	CLEVELAND CREEK	S-66	4.000	18.000
377005700100	TRIB TO LITTLE RIVER	S-57	13.000	18.000
374018300100	COLONELS FORKS CREEK	SC 183	6.000	17.670
377020800100	SNOW CREEK	S-208	0.000	17.660
371008510100	HARTWELL RESERVOIR	I-85N	1.000	17.500
371008530100	HARTWELL RESERVOIR	I-85S	1.000	17.500
372007640500	CONEROSS CREEK	US 76W	4.000	17.500
374018300300	CANE CREEK	SC 183	0.000	17.330
377022300100	CROOKED CREEK	S-223	0.000	17.000
377023600100	FAIR PLAY CREEK	S-236	11.000	17.000
377020400100	TRIB TO CONEROSS CREEK	S-204	12.000	17.000
371008510200	FAIRPLAY CREEK	I-85N	0.000	16.500
371008530200	FAIRPLAY CREEK	I-85S	0.000	16.500
377014800100	CANE CREEK	S-148	6.000	16.000
374001100900	LITTLE CANE CREEK	SC 11	6.000	15.670
374001101500	KEOWEE RIVER	SC 11	2.000	15.500
377048800200	DAVIS MILL CREEK	S-488	6.000	15.500
372007620500	CONEROSS CREEK	US 76E	6.000	15.500
377053100100	PERKINS CREEK	S-531	4.000	15.330
377003600100	CONEROSS CREEK	S-36	5.000	15.330
377013700100	TRIB MARTIN CREEK	S-137	2.000	15.000
377029000100	CHAUGA RIVER	S-290	3.000	15.000
374013000500	NORTH FORK LITTLE RIVER	SC 130	3.000	15.000
377010900100	COLONELS FORK CREEK	S-109	6.000	15.000
377011600100	SNOW CREEK	S-116	10.000	15.000
377021000100	SENECA CREEK	S-210	0.000	14.500
377009000100	LONGNOSE CREEK	S-90	2.000	14.500
377005900100	TRIB TO CANE CREEK	S-59	1.000	14.160
377018100100	CANE CREEK	S-181	0.000	14.000
377005100100	SNOW CREEK	S-51	0.000	14.000
374001100500	COLONELS FORK CREEK	SC 11	1.000	14.000
374001101200	WEST FORK LITTLE RIVER	SC 11	9.000	14.000
374009300100	SENECA RIVER	SC 93	0.000	13.500
372012300100	TUGALOO RIVER	US 123	0.000	13.500
377006700100	BIG CHOESTOE CREEK	S-67	1.000	13.500
377006800300	BARTON CREEK	S-68	3.000	13.500
374018300600	LAKE KEOWEE	SC 183	3.000	13.500
374001100800	CANE CREEK	SC 11	0.000	13.000
377018100300	LITTLE CANE CREEK	S-181	4.000	13.000
377012900100	OCONEE CREEK	S-129	5.000	13.000
377018100200	BEATY CREEK	S-181	4.000	12.830
377032400100	CANE CREEK	S-324	5.000	12.660
377018400100	CONEROSS CREEK	S-184	0.000	12.500
374018300700	NORTH CANAL-LAKE KEOWEE	SC 130	0.000	12.500
374018800200	LAKE KEOWEE (CROOKED CR)	SC 188	0.000	12.500
377005400100	CONEROSS CREEK	S-54	1.000	12.500
377016000200	BARTON CREEK	S-160	1.000	12.500
377009100100	COLONEL FORK CREEK	S-91	3.000	12.500
377003400100	CHAUGA CREEK	S-34	11.000	12.330
374005900500	SNOW CREEK	SC 59	0.000	12.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 3--Continued

Oconee County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
377006500100	MARTIN CREEK	S-65	0.000	11.500
377003700100	SENECA RIVER	S-37	0.000	11.500
374018800100	LAKE KEOWEE (CANE CR)	SC 188	0.000	11.500
372012300200	CHAUGA CREEK	US 123	0.000	11.500
377006300100	CONEROSS CREEK	S-63	1.000	11.500
374001101100	OCONEE CREEK	SC 11	1.000	11.500
377002000100	CHOESTOE CREEK	S-20	0.000	11.000
374013000400	TRIB. TO LITTLE RIVER	SC 130	1.000	11.000
377005200100	BEAVER DAM CREEK	S-52	5.000	11.000
372007600400	RAMSEY CREEK	US 76	4.000	10.833
374018300800	SOUTH CANAL-LAKE KEOWEE	SC 130	0.000	10.500
374005900600	CONEROSS CREEK	SC 59	0.000	10.000
377043500100	TRIB TO CHOESTOE CR	S-435	1.000	10.000
377010700100	BEAR SWAMP CREEK	S-107	2.000	10.000
377016000100	TUGALOO RIVER	S-160	1.000	9.500
377002400100	LITTLE CANE CREEK	S-24	0.000	9.000
377010600100	COLONEL FORK CREEK	S-106	1.000	9.000
377001300100	CONEROSS CREEK	S-13	4.000	8.330
377025800100	TRIB TO VILLAGE CREEK	S-258	2.000	8.000
377013500200	TRIB TO RICHLAND CREEK	S-135	6.000	8.000
377014600100	MULLERS CREEK	S-146	3.000	7.660
372007600300	CHAUGA RIVER	US 76	5.000	6.660
377002400200	LITTLE RIVER	S-24	0.000	6.330
377013300200	LITTLE CANE CREEK	S-133	2.000	6.330
377001300200	RICHLAND CREEK	S-13	0.000	5.000
372007600100	CHATTOOGA RIVER-GA. LINE	US 76	2.000	4.990

Pickens County

392017800500	TOWN CREEK	US 178	15.000	24.667
397014000200	SHOAL CREEK	S-140	12.000	22.830
397017700100	SHOAL CREEK	S-177	8.000	22.000
397035400100	TRIB TO CARPENTER CREEK	S-354	12.000	21.990
397003200100	CEDER CREEK	S-32	12.000	21.660
397015800400	TRIB TO PRATERS CREEK	S-158	4.000	20.670
397003000100	TRIB TO 18 MILE CREEK	S-30	13.000	20.670
397028700100	GREGORY CREEK	S-287	6.000	20.330
397003200200	TWELVE MILE CREEK	S-32	4.000	20.000
397028600100	TRIB TO GEORGES CREEK	S-286	10.000	20.000
394012400100	GEORGES CREEK	SC 124	14.000	19.990
397009000300	WOLF CREEK	S-90	9.000	19.670
397013700400	GOLDEN CREEK	S-137	4.000	19.330
397013700200	TRIB SHOAL CREEK	S-137	3.000	19.000
392012330600	GEORGES CREEK	US 123S	7.000	19.000
392012310600	GEORGES CREEK	US 123N	10.000	19.000
394018300400	TWELVE MILE CREEK	SC 183	13.000	18.660
397002700100	EIGHTEEN MILE CREEK	S-27	0.000	18.490
397003300200	TWELVE MILE CREEK	S-33	0.000	17.990
397013300100	BRUSHY CREEK	S-133	1.000	17.670
397014200100	LITTLE EASTATOE CREEK	S-142	0.000	17.500

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Pickens County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
394018300100	KEOWEE RIVER	SC 183	3.000	17.500
394013700100	12 MILE CREEK	SC 137	3.000	17.330
397013700100	SHOAL CREEK	S-137	3.000	17.000
397004300100	18 MILE CREEK	S-43	3.000	17.000
397009500100	BURDINE CREEK	S-95	9.000	17.000
394013300300	TRIB TO 6 MILE CREEK	SC 133	3.000	16.670
397009000100	RICES CREEK	S-90	5.000	16.660
397004400100	EIGHTEEN MILE CREEK	S-44	7.000	16.660
397028300100	TRIB TO BRUSHY CREEK	S-283	3.000	16.500
392007600100	SENECA RIVER	US 76	3.000	16.500
397027400200	TRIB TO RICES CREEK	S-274	2.000	16.000
397005200100	TRIB TO 12 MILE CREEK	S-52	0.000	15.990
397023000100	BRUSHY CREEK	S-230	1.000	15.660
397039500100	15 MILE CREEK	S-395	4.000	15.660
397035500100	MACHINE CREEK	S-355	3.000	15.000
397002500300	TRIB TO OOLENOY RIVER	S-25	2.000	14.660
397026700100	TWELVE MILE CREEK	S-267	2.000	14.660
394013300500	CROW CREEK	SC 133	4.000	14.500
397004000100	MIDDLE BR OF BIG BUSHY CR	S-40	5.000	14.500
392017800100	EIGHTEEN MILE CREEK	US 178	0.000	14.000
397016000300	TRIB TO KEOWEE RIVER	S-160	1.000	14.000
397002300200	TWELVE MILE CREEK	S-23	1.000	14.000
392017800600	N. FORK 12 MILE CREEK	US 178	3.000	14.000
397003600200	TRIB TO GEORGES CREEK	S-36	2.000	13.990
392017801000	OOLENOY RIVER	US 178	0.000	13.670
397000200100	WOLF CREEK	S-2	1.000	13.670
394000800300	RICES CREEK	SC 8	4.000	13.660
394001100201	TRIB TO OOLENOY RIVER	SC 11	0.000	13.500
397033700100	TWELVE MILE CREEK	S-337	1.000	13.500
394001100100	LITTLE EASTATOE CREEK	SC 11	2.000	13.500
394013300400	BR OF CROW CREEK	SC 133	4.000	13.330
394013300100	TWELVE MILE CREEK	SC 133	0.000	13.000
394013500200	SHOALS CREEK	SC 135	0.000	13.000
397022200100	PRATERS CREEK	S-222	2.000	13.000
397027000100	FIFTEEN MILE CREEK	S-270	6.000	12.660
397011000100	TRIB TO SALUDA RIVER	S-110	0.000	12.000
394013500400	TRIB TO CARPENTER CR NO.1	SC 135	1.000	12.000
394018600100	SHOALS CREEK	SC 186	2.000	12.000
397025000200	TRIB TO MACHINE CREEK	S-250	3.000	12.000
397001500100	HARTWELL LAKE	S-15	3.000	12.000
397016000100	TRIB TO 6 MILE CREEK	S-160	5.000	12.000
397013700300	TWELVE MILE CREEK	S-137	0.000	11.660
394001100200	OOLENOY RIVER	SC 11	3.000	11.330
397016000200	SIX MILE CREEK	S-160	2.000	11.170
394013500500	ADAM CREEK	SC 135	0.000	11.000
394018300300	GREGORY CREEK	SC 183	0.000	11.000
394028800300	TRIB TO OOLENOY RIVER	SC-288	0.000	11.000
394028800200	TRIB TO OOLENOY RIVER	SC-288	1.000	11.000
397002600300	TRIB TO SALUDA RIVER	S-26	2.000	11.000
397001800200	EIGHTEEN MILE CREEK	S-18	3.000	11.000
397013500100	TRIB TO HAMILTON CR	S-135	4.000	11.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Pickens County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
397032500100	GEORGES CREEK	S-325	4.000	11.000
397023500100	GEORGES CREEK	S-235	6.000	11.000
397002800100	GEORGES CREEK	S-28	9.000	11.000
397013400100	BRUSHY CREEK	S-134	1.000	10.670
397035500200	TRIB TO MACHINE CREEK	S-355	8.000	10.660
397012200100	WOLF CREEK	S-122	1.000	10.330
397027400100	RICES CREEK	S-274	1.000	10.330
397005600100	MIDDLE BR OF BUSHY CREEK	S-56	0.000	10.000
397005700100	23 MILE CREEK	S-57	0.000	10.000
394000800400	WOLF CREEK	SC 8	0.000	10.000
397002300100	TOWN CREEK	S-23	1.000	10.000
397015600100	MIDDLE FORK-12 MILE CR	S-156	2.000	10.000
394013300200	SIX MILE CREEK	SC 133	0.000	9.990
397005100100	TEWLVE MILE CREEK	S-51	1.000	9.500
397003300100	TRIB TO TWELVE MILE CR	S-33	0.000	9.000
397029100100	SIX MILE CREEK	S-291	1.000	9.000
394013500300	TRIB TO CARPENTER CR NO.2	SC 135	1.000	9.000
394028800100	OOLENOY RIVER	SC 288	2.000	9.000
397022200600	TRIB TO GOLDEN CREEK	S-222	3.000	9.000
397013900100	SALUDA RIVER	S-139	0.000	8.500
394000800900	OOLENOY RIVER	SC 8	1.000	8.000
397003200300	TOWN CREEK	S-32	4.000	7.660
397025000100	MACHINE CREEK	S-250	5.000	7.000
392017801300	TRIB TO ROCKY BOTTOM CR	US 178	0.000	6.000
397022200500	TRIB TO GOLDEN CREEK	S-222	4.000	6.000

Spartanburg County

427008800200	FAIRFOREST CREEK	S-88	19.000	26.000
427012300100	GRAYS CREEK	S-123	17.000	24.000
427053800100	LAWSON FORK CREEK	S-538	19.000	23.330
422017600300	HOLSTON CREEK	US 176	12.000	23.000
422022100100	BIG FERGERSON CREEK	US 221	13.000	23.000
427060500100	FAIRFOREST CREEK	S-605	11.000	22.990
427004300400	BUCK CREEK	S-43	12.000	22.830
421008530100	SOUTH TYGER RIVER	I-85S	8.000	22.160
427009300100	GLENN CREEK	S-93	10.000	22.000
427011800001	ENOREE RIVER	S-118	9.000	21.330
427008200200	SOUTH TYGER RIVER	S-82	1.000	20.500
427008800100	BEAVERDAM CREEK	S-88	5.000	20.500
427011400100	CEDAR SHOALS CR	S-114	9.000	20.000
427020100100	JIMMIES CREEK	S-201	11.000	19.990
424029500200	FAIRFOREST CREEK	SC 295	10.000	19.670
424005600400	LITTLE CHINQUEPIN CREEK	SC 56	6.000	19.500
427023400100	TRIB TO ENOREE RIVER	S-234	12.000	19.330
427074800100	LAWSON FORK CREEK	S-748	1.000	19.170
421008510100	SOUTH TYGER RIVER	I-85N	0.000	19.000
427011800100	TRIB TO ENOREE RIVER	S-118	3.000	19.000
427013200200	TRIB TO BUCK CREEK	S9132	12.000	19.000
427076900100	JIMMIES CREEK	S-769	11.000	18.990

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Spartanburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
427011300100	JIMMIES CREEK	S-113	7.000	18.660
427021300100	SOUTH PACOLET RIVER	S-213	0.000	18.500
421008531400	LAWSON FORK CREEK	I-85S	3.000	18.340
427012800100	NORTH PACOLET RIVER	S-128	6.000	18.330
427018400200	BELUE CREEK	S-184	3.000	18.160
427003000100	RICHLAND CREEK	S-30	10.000	17.990
429125800100	NORTH PACOLET RIVER	L-1258	1.000	17.670
427010800200	RICHLAND CREEK	S-108	3.000	17.670
427007500200	MIDDLE TYGER RIVER	S-75	3.000	17.670
427006200100	FERGERSON CREEK	S-62	6.000	17.660
427019600100	TIMS CREEK	S-196	2.000	17.500
427090600100	KELSEY CREEK	S-906	5.000	17.000
424001100700	BUCK CREEK	SC 11	5.000	17.000
427013800100	TRIB TO LAWSON FORK CR	S-138	4.000	16.990
427005700300	PETERS CREEK	S-57	5.000	16.990
427019100100	BR OF LAWSON FORK CR	S-191	2.000	16.670
427010500200	ISLAND CREEK	S-105	2.000	16.500
427002000100	TRIB TO PACOLET RIVER	S-20	0.000	16.000
429084900200	TURKEY CREEK	L-849	2.000	16.000
422017600100	SOUTH PACOLET RIVER	US 176	4.000	16.000
427093000100	PAGE CREEK	S-930	7.000	16.000
427049400100	LAWSONS FORK CREEK	S-494	2.000	15.670
427058100100	MEADOW CREEK	S-581	6.000	15.670
424004900300	CEDAR SHOALS	SC 49	1.000	15.660
427022200100	MIDDLE TYGER RIVER	S-222	3.000	15.660
427006300300	ABNERS CREEK	S-63	3.000	15.660
427010800300	LAWSON FORK CREEK	S-108	9.000	15.660
421008511400	LAWSON FORK CREEK	I 85N	2.000	15.340
427004200200	OBED CREEK	S-42	9.000	15.333
424035700400	MIDDLE TYGER RIVER	SC 357	4.000	15.330
427008600300	FERGERSON CREEK	S-86	8.000	15.330
422017620900	LAWSONS FORK CREEK	US 176E	11.000	15.330
422017600200	MOTLOW CREEK	US 176	6.000	15.160
427004000300	BR TO LAWSON FORK CREEK	S-40	0.000	15.000
427022200200	TRIB TO NORTH TYGER RIVER	S-222	2.000	15.000
424005600200	DUTCHMAN CREEK	SC 56	5.000	15.000
424005600300	FAIRFOREST CREEK	SC 56	2.000	14.990
427010500100	BR OF ISLAND CREEK	S-105	4.000	14.990
427019200100	LAWSONS FORK CREEK	S-192	5.000	14.990
424029600400	NORTH TYGER RIVER	SC 296	3.000	14.830
429084900300	BOWEN LAKE NO.1	L-849	0.000	14.500
424015000500	PACOLET RIVER	SC 150	0.000	14.500
427006200400	TRIB TO SOUTH TYGER	S-62	7.000	14.340
427031729100	NORTH TYGER RIVER	S-317E	0.000	14.160
429082600100	LAWSON FORK CREEK	L-826	0.000	14.000
427019700200	FERGERSON CREEK	S-197	0.000	14.000
429158000100	FAIRFOREST CREEK	L-1580	1.000	14.000
427031700100	FREY CREEK	S-317	3.000	14.000
424000900300	LAWSONS FORK CREEK	SC 9	3.000	14.000
422017620800	LAWSONS FORK CREEK	US 176E	5.000	14.000
422002900200	MIDDLE TYGER RIVER	US 29	3.000	13.670

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 3--Continued

Spartanburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
422022101200	LAWSON FORK CREEK	US 221	10.000	13.670
422002900800	LAWSON FORK CREEK	US 29	4.000	13.660
427006300400	SOUTH TYGER RIVER	S-63	6.000	13.660
427155700100	FAIRFOREST CREEK	S-1557	8.000	13.660
427006400200	NORTH TYGER RIVER	S-64	0.000	13.330
427006300100	DILLARDS CREEK	S-63	2.000	13.330
427003100400	LAWSONS FORK CREEK	S-31	0.000	13.000
429069900100	TRIB FAIRFOREST CREEK	L-699	1.000	13.000
427018300100	PACOLET RIVER	S-183	1.000	13.000
427009800100	WARDS CREEK	S-98	2.000	12.990
427013300100	ABNER CREEK	S-133	9.000	12.990
427065100100	BEAVERDAM CREEK	S-651	3.000	12.670
422002930400	NORTH TYGER RIVER	US 29S	4.000	12.670
421008510200	MIDDLE TYGER RIVER	I-85N	2.000	12.660
427008800300	KELSEY CREEK	S-88	4.000	12.660
427081100100	TRIB FAIRFOREST CREEK	S-811	5.000	12.660
427003000500	PACOLET RIVER	S-30	0.000	12.500
424000900400	LAKE BOWEN	SC 9	0.000	12.500
422022101500	PACOLET RV BLALOCK LAKE	US 221	0.000	12.500
429190400100	ISLAND CREEK	L-1904	0.000	12.000
427007900200	TRIB TO LAWSON FORK CREEK	S-79	0.000	12.000
427019700300	BIG FERGERSON CREEK	S-197	0.000	12.000
422022100600	BEAVER DAM CREEK	US 221	0.000	12.000
421008530600	NORTH TYGER RIVER	I-85S	2.000	12.000
427004000100	LAWSONS FORK CREEK	S-40	2.000	12.000
421008500951	FAIR FOREST CREEK	I-85 FR	3.000	12.000
427064400100	MAPLE CREEK	S-644	3.000	12.000
421002621600	NORTH TYGER RIVER	I-26E	6.000	12.000
427024200300	MIDDLE TYGER RIVER	S-242	6.000	12.000
424001100200	SOUTH PACOLET RIVER	SC 11	6.000	12.000
424029600600	FAIRFOREST CREEK	SC 296	8.000	12.000
422002910400	NORTH TYGER RIVER	US 29N	8.000	12.000
421008510600	NORTH TYGER RIVER	I-85N	1.000	11.670
427006200500	SOUTH TYGER RIVER	S-62	5.000	11.670
422022100900	FAIRFOREST CREEK	US 221	0.000	11.660
427007900300	LAWSONS FORK CREEK	S-79	2.000	11.660
427018900100	PACOLET RIVER	S-189	0.000	11.500
427003700100	LAKE BOWEN	S-37	0.000	11.500
427003000300	LAWSON FORK CREEK	S- 30	4.000	11.500
427005600100	MEADOW CREEK	S-56	0.000	11.330
427010700100	TRIB TO PACOLET RIVER	S-107	3.000	11.330
427010300100	LITTLE BUCK CREEK	S-103	5.000	11.330
424012900200	JORDAN CREEK	SC 129	5.000	11.330
427006300200	TRIB TO ABNER CREEK	S-63	0.000	11.000
427024200200	SOUTH TYGER RIVER	S-242	6.000	11.000
427003100200	PETERS CREEK	S-31	16.000	11.000
427022100100	SOUTH TYGER RIVER	S-221	8.000	10.830
424001400100	ENOREE RIVER	SC 14	0.000	10.660
429084900400	BOWEN LAKE NO.2	L-849	2.000	10.500
424015000300	FAIRFOREST CREEK	SC 150	2.000	10.330
427003800100	NORTH TYGER RIVER	S-38	4.000	10.330

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Spartanburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
429072400100	SHOALLY CREEK	L-724	0.000	10.000
427024300100	CHEROKEE CREEK	S-243	0.000	10.000
424029500001	FAIRFOREST CREEK	SC 295	0.000	10.000
422002900600	FAIRFOREST CREEK	US 29	0.000	10.000
427004700100	FOUR MILE CREEK	S-47	1.000	10.000
424035700200	SOUTH TYGER RIVER	SC 357	1.000	10.000
427005000200	SOUTH TYGER RIVER	S-50	2.000	10.000
424015000400	KENNEDY CREEK	SC 150	2.000	10.000
424035700300	BEAVER DAM CREEK	SC 357	2.000	10.000
427101700200	LAWSONS FORK CREEK	S-1017	3.000	10.000
422017640900	LAWSONS FORK CREEK	US 176W	3.000	10.000
427004400200	LAWSONS FORK CREEK	S-44	4.000	10.000
429086800300	HOLSTON CREEK	L-868	6.000	10.000
427005900100	PACOLET RIVER	S-59	0.000	9.830
424029200300	NORTH TYGER RIVER	SC 292	2.000	9.670
427056900100	TRIB TO PACOLET RIVER	S-569	0.000	9.500
424001100600	NORTH PACOLET RIVER	SC 11	0.000	9.500
427004300300	PACOLET RIVER	S-43	1.000	9.500
427019700400	SOUTH TYGER RIVER	S-197	4.000	9.500
424041700200	SOUTH TYGER RIVER	SC 417	4.000	9.500
427003000400	TRIB TO PACOLET RIVER	S-30	5.000	9.500
427006000100	TRIB TO N. TYGER RIVER	S-60	0.000	9.330
427075500200	BR OF FAWN CREEK	S-755	3.000	9.330
422002900100	SOUTH TYGER RIVER	US 29	7.000	9.330
427055400100	TRIB TO ENOREE RIVER	S-554	0.000	9.000
427008200100	TRIB TO S. TYGER RIVER	S-82	2.000	9.000
424029600300	MIDDLE TYGER RIVER	SC 296	2.000	9.000
424005600100	TYGER RIVER	SC 56	2.000	9.000
424000900500	OBED CREEK	SC 9	2.000	9.000
424029000300	SOUTH TYGER RIVER	SC 290	5.000	9.000
421008511500	PACOLET RIVER	I-85N	6.000	9.000
421002641600	NORTH TYGER RIVER	I-26W	11.000	9.000
424029200200	MIDDLE TYGER RIVER	SC 292	0.000	8.660
427006400100	MIDDLE TYGER RIVER	S-64	2.000	8.660
421002620300	BOWEN LAKE	I-26E	0.000	8.500
421002640300	BOWEN LAKE	I-26W	0.000	8.500
427004200100	PACOLET RIVER	S-42	0.000	8.500
424029600200	SOUTH TYGER RIVER	SC 296	2.000	8.170
424012900100	NORTH TYGER RIVER	SC 129	0.000	8.000
421008530200	MIDDLE TYGER RIVER	I-85S	2.000	8.000
421002621700	SOUTH TYGER RIVER	I-26E	2.000	8.000
427006000200	NORTH TYGER RIVER	S-60	2.000	8.000
427007700100	MIDDLE TYGER RIVER	S-77	2.000	8.000
424000900600	NORTH PACOLET RIVER	SC 9	2.000	8.000
424029600100	ENOREE RIVER	SC 296	2.000	8.000
429074500100	MIDDLE TIGER RIVER	L-745	3.000	8.000
424014600100	ENOREE RIVER	SC 146	4.000	8.000
427008500100	ENOREE RIVER	S-85	0.000	7.500
424009200100	TWO MILE CREEK	SC 92	5.000	7.330
427059100100	MIDDLE TYGER RIVER	S-591	7.000	7.330
421002641700	SOUTH TYGER RIVER	I-26W	1.000	7.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 3--Continued

Spartanburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
427082400100	CINDER BRANCH	S-824	1.000	7.000
422022100300	SOUTH TYGER RIVER	US 221	4.000	7.000
422002901100	PACOLET RIVER	US 29	4.000	7.000
422022100400	NORHT TYGER RIVER	US 221	5.000	7.000
427019000100	CASEY CREEK	S-190	0.000	6.500
427089300100	ENOREE RIVER	S-893	4.000	6.500
427005800100	BUCK CREEK	S-58	0.000	6.000
424015000200	GLENN CREEK	SC 150	0.000	6.000
421008531500	PACOLET RIVER	I-85S	1.000	6.000
427003100100	PACOLET RIVER	S-31	1.000	5.660
424041700100	BENS CREEK	SC 417	2.000	5.000
427005500100	PACOLET RIVER	S-55	0.000	4.000
427006300500	MIDDLE TYGER RIVER	S-63	0.000	4.000

SCDOT District 4

Cherokee County

Structure_no	Stream	Route	Obs_scour	Pot_scour
117001700100	ABINGDON CREEK	S-17	11.000	26.830
112002900300	BIG THICKETTY CREEK	US 29	15.000	24.330
117020700100	DOOLITTLE CREEK	S-207	7.000	21.340
117030100100	LIMESTONE CREEK	S-301	6.000	21.000
111008530400	BUFFALO CREEK	I-85S	11.000	21.000
117024600100	BLUE BRANCH	S-246	18.000	21.000
111008510300	BROAD RIVER	I-85N	1.000	19.000
111008510400	BUFFALO CREEK	I-85N	10.000	19.000
111008530300	BROAD RIVER	I-85S	0.000	18.000
117020600100	GILKEY CREEK	S-206	4.000	17.670
117030400100	BLUE BRANCH	S-304	7.000	17.670
114010500300	IRENE CREEK	SC 105	9.000	17.000
117003800200	BR TO LITTLE THICKETTY	S-38	3.000	16.670
117009700100	GOFORTH CREEK	S-97	12.000	16.660
117032000100	DOOLITTLE CREEK	S-320	6.000	16.000
117023800100	GILKEY CREEK	S-238	11.000	16.000
117007700100	UNNAMED STREAM	S-77	4.000	15.660
117003100300	IRENE CREEK	S-31	0.000	15.500
117022300200	KINGS CREEK	S-223	4.000	15.000
117034800100	BUFFALO CREEK	S-348	7.000	15.000
117027600100	BR OF THICKETTY CREEK	S-276	10.000	14.670
112002900200	LITTLE THICKETTY CREEK	US 29	2.000	14.660
112002900600	CHEROKEE CREEK	US 29	12.000	14.660
114019800400	BUFFALO CREEK - N.C. LINE	SC 198	0.000	14.500
114032900100	FURNACE CREEK	SC 329	2.000	14.000
117003100100	THICKETTY CREEK	S-31	5.000	14.000
114015000200	GOUCHER CREEK	SC 150	5.000	13.670
114001800100	THICKETTY CREEK	SC 18	5.000	13.660
111008530100	THICKETTY CREEK	I-85S	0.000	13.000
114015000800	SARRATT CREEK	SC 150	0.000	13.000
111008510200	CHEROKEE CREEK	I-85N	2.000	13.000
114015000400	LIMESTONE CREEK	SC 150	2.000	13.000
114001800300	CHEROKEE CREEK	SC 18	2.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

Cherokee County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
114015000100	GUM ROOT CREEK	SC 150	4.000	13.000
117009000100	PEOPLES CREEK	S-90	7.000	13.000
117004100200	PEOPLES CREEK	S-41	0.000	12.500
117013300100	IRENE RESERVOIR	S-133	3.000	12.500
114011000100	EVANS CREEK	SC 110	0.000	12.000
117024500100	BR OF DOOLITTLE CREEK	S-245	1.000	12.000
117030700100	IRENE CREEK	S-307	2.000	12.000
117001500100	THICKETTY CREEK	S-15	8.000	12.000
117004000100	LITTLE THICKETTY CREEK	S-40	8.000	12.000
117013800100	GOUCHER CREEK	S-138	10.000	12.000
117003800100	LITTLE THICKETTY CREEK	S-38	1.000	11.660
117008900100	IRENE CREEK	S-89	2.000	11.660
117016300100	CHEROKEE CREEK	S-163	2.000	11.660
117003000100	DOOLITTLE CREEK	S-30	4.000	11.500
114015000300	THICKETTY CREEK	SC 150	9.000	11.330
111008530200	CHEROKEE CREEK	I-85S	4.000	11.000
117003400400	STREAM	S-34	6.000	11.000
114000500200	BUFFALO CREEK	SC 5	18.000	10.670
117003400300	GOFORTH CREEK	S-34	0.000	10.000
111008500299	CHEROKEE CREEK	I-85	2.000	10.000
114000500400	KINGS CREEK	SC 5	9.000	10.000
117005400100	THICKETTY CREEK	S-54	17.000	10.000
111008510100	THICKETTY CREEK	I-85N	0.000	9.000
117004100100	FURNACE CREEK	S-41	0.000	9.000
114015000700	GOFORTH CREEK	SC 150	0.000	9.000
117003400100	CHEROKEE CREEK	S-34	1.000	9.000
117006900100	ABINGDON CREEK	S-69	4.000	8.500
114010500100	THICKETTY CREEK	SC 105	2.000	8.000
114001800500	BROAD RIVER	SC 18	2.000	7.500
117002900100	CHEROKEE CREEK	S-29	3.000	6.000
112002900700	BROAD RIVER	US 29	1.000	5.670
117020900100	KINGS CREEK	S-209	2.000	5.330
117004300100	DOLITTLE CREEK	S-43	0.000	5.000
114032900200	CHEROKEE CREEK	SC 329	0.000	3.000

Chester County

Structure_no	Stream	Route	Obs_scour	Pot_scour
127060900100	BROWNS BRANCH	S-609	15.000	26.670
124009700200	SUSYBOLE CREEK	SC 97	18.000	24.660
124000900500	SEELEY CREEK	SC 9	4.000	22.000
127003000200	BEAR OWENS BRANCH	S-30	1.000	21.990
127007000200	HICKLIN BRANCH	S-70	13.000	21.990
127019500100	FISHING CREEK	S-195	6.000	21.660
127007000100	SMALL CREEK	S-70	8.000	21.330
124000900200	TURKEY CREEK	SC 9	7.000	21.000
124009700400	SEELEY CREEK	SC 97	9.000	21.000
127001600200	LITTLE SANDY RIVER	S-16	7.000	20.670
127060900200	CLINTON BRANCH	S-609	18.000	20.000
124007200700	ROCKY CREEK	SC 72	7.000	19.000
124000900800	ROCKY CREEK	SC 9	8.000	19.000
121007710100	LITTLE ROCKY CREEK	I-77N	2.000	18.670

**APPENDIX--The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 4--Continued

Chester County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
124021500200	SANDY RIVER	SC 215	6.000	18.660
127020100100	LITTLE SANDY RIVER	S-201	1.000	18.330
124007200300	BEAR CREEK	SC 72	2.000	18.000
124090100100	LITTLE ROCKY CREEK	SC 901	5.000	17.660
124007200400	CANEY FORK CREEK	SC 72	0.000	17.000
122032105400	SANDY RIVER	US 321	4.000	17.000
127003000100	LUCAS BRANCH	S-30	8.000	17.000
121007730100	LITTLE ROCKY CREEK	I-77S	3.000	16.670
121007730700	FISHING CREEK	I-77S	0.000	16.660
127007700100	FISHING CREEK	S-77	5.000	16.330
121007710700	FISHING CREEK	I-77N	6.000	16.330
124090100300	FISHING CREEK	SC 901	8.000	16.000
121007730200	ROCKY CREEK	I-77S	6.000	15.990
121007710500	SOUTH FORK FISHING CREEK	I-77N	6.000	15.670
124000900600	SANDY RIVER	SC 9	3.000	15.000
127014400200	LITTLE ROCKY CREEK	S-144	12.000	15.000
127035400100	HODGES BRANCH	S-354	6.000	14.670
124022300100	FISHING CREEK	SC 223	1.000	14.160
127040400100	TRIB TO FISHING CREEK	S-404	9.000	13.330
127014100100	ROCKY CREEK	S-141	4.000	13.000
124009700800	ROCKY CREEK	SC 97	5.000	13.000
124007200200	SANDY RIVER	SC 72	6.000	12.670
127033500100	TRIB OF GRASSY RUN BR	S-335	3.000	12.660
127052500100	WHITESIDES BRANCH	S-525	5.000	12.660
124000900100	BROAD RIVER	SC 9	0.000	12.500
127013800100	BIG ROCKY CR	S-138	14.000	12.330
124007200800	SOUTH FORK CREEK	SC 72	5.000	12.000
127005300200	LITTLE ROCKY CR	S-53	12.000	12.000
121007730500	SOUTH FORK FISHING CREEK	I-77S	2.000	11.990
127007000300	TINKERS CREEK	S-70	6.000	11.660
124000901100	FISHING CREEK	SC 9	11.000	11.660
127032600100	HICKLIN BRANCH	S-326	5.000	11.340
124090100200	ROCKY CREEK	SC 901	2.000	11.330
127005600200	MC/MILLAN CREEK	S-56	0.000	11.000
122002100100	ROCKY CREEK	US 21	3.000	11.000
122032100200	SANDY RIVER	US 321	7.000	10.990
124022300200	TINKERS CREEK	SC 223	2.000	10.660
122002100300	FISHING CREEK	US 21	3.000	10.500
121007710200	ROCKY CREEK	I-77N	6.000	10.000
127001600100	MOBLEY CREEK	S-16	0.000	9.000
127007500200	TRIB TO ROCKY CREEK	S-75	2.000	8.000
127005600100	HOOPER CREEK	S-56	4.000	7.000
127055700100	ROCKY CREEK	S-557	6.000	7.000
124009700100	TURKEY CREEK	SC 97	14.000	7.000
124007200100	BROAD RIVER	SC 72	1.000	6.000

Chesterfield County

Structure_no	Stream	Route	Obs_scour	Pot_scour
132000100400	BLACK CREEK	US 1	5.000	27.160
137006700100	LYNCHES RIVER	S-67	14.000	21.990

APPENDIX--The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

Chesterfield County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
137017100200	STONE HILL CREEK	S-171	8.000	20.500
137014800100	THOMPSON CREEK	S-148	1.000	19.500
137013400100	HILL CREEK	S-134	9.000	19.330
137015700200	THOMPSON CREEK	S-157	15.000	19.000
137004300100	FORK SWAMP CREEK	S-43	3.000	18.667
137002200300	THOMPSON CREEK	S-22	7.000	18.660
132000100800	THOMPSON CREEK	US 1	1.000	18.500
137010400200	BUFFALO CREEK	S-104	10.000	17.670
137017100100	LITTLE CEDAR CREEK	S-171	8.000	17.490
134000900400	THOMPSON CREEK	SC 9	5.000	17.000
137010700100	HILLS CREEK	S-107	8.000	17.000
137002000300	BEAVER CREEK	S-20	0.000	16.990
137029600300	UNNAMED	S-296	10.000	16.500
137049100100	LITTLE BEAVER DAM CREEK	S-491	8.000	16.330
137006200200	WESTFIELD CREEK	S-62	0.000	16.000
137014700100	WILSON BRANCH	S-147	9.000	16.000
134015100700	FORK CREEK	SC 151	11.000	16.000
137002000100	JUNIPER CREEK	S-20	12.000	16.000
137002300100	ABRAMS CREEK	S-23	5.000	15.490
137005400200	CAT TAIL BRANCH	S-54	2.000	15.000
137013800100	LITTLE BLACK CREEK	S-138	7.000	15.000
134026500200	LITTLE FORK CREEK	SC 265	2.000	14.330
137013600300	BRANCH OF DEEP CREEK	S-136	6.000	14.000
137075700100	ADAMS CREEK	S-757	8.000	13.990
137002000400	UNNAMED STREAM	S-20	0.000	13.500
137010500300	DEAD PINE CREEK	S-105	1.000	13.500
137002300250	LITTLE WESTFIELD CREEK	S-23	1.000	13.500
137007900100	NORTH PRONG CREEK	S-79	2.000	13.500
134014500600	THOMPSON CREEK	SC 145	9.000	13.330
137003300100	BLACK CREEK	S-33	0.000	13.000
137003300300	INDIAN CREEK	S-33	0.000	13.000
137003900100	LITTLE FORK CREEK	S-39	1.000	13.000
132005200300	HUCKLEBERRY BRANCH	US 52	3.000	13.000
137005900100	DEEP CREEK	S-59	8.000	13.000
134000900100	LYNCHES RIVER	SC 9	8.000	13.000
137008000100	HARRIS CREEK	S-80	12.000	13.000
137002000500	BEAR CREEK	S-20	0.000	12.500
137016600100	BEAR CREEK	S-166	0.000	12.500
137014400100	BEAR CREEK	S-144	4.000	12.500
134015100600	ROCKY CREEK	SC 151	6.000	12.330
137004600100	BEAVER DAM CREEK	S-46	0.000	12.000
137005200100	INDIAN CREEK	S-52	0.000	12.000
137010500200	HILLS CREEK	S-105	0.000	12.000
137024300200	ADAMS CREEK	S-243	0.000	12.000
137004000200	PHYLISS BRANCH	S-40	0.000	12.000
134015100400	BIG SANDY CREEK	SC 151	0.000	12.000
134000900200	DEEP CREEK	SC 9	0.000	12.000
137004000100	BR OF LITTLE FORK CREEK	S-40	1.000	12.000
137003400200	DEEP CREEK	S-34	2.000	12.000
137004500200	ROCKY CREEK	S-45	2.000	12.000
137051300100	BIG BLACK CREEK	S-513	5.000	12.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 4--Continued

Chesterfield County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
137034800100	LITTLE WESTFIELD	S-348	6.000	12.000
132005200500	WESTFIELD CREEK	US 52	6.000	12.000
137004600200	LITTLE BEAVERDAM BRANCH	S-46	8.000	12.000
137014900100	LITTLE CEDAR CREEK	S-149	9.000	12.000
137007700100	NORTH PRONG CREEK	S-77	7.000	11.670
137034600100	LAKE ROBINSON	S-346	0.000	11.500
137007900200	LONG BRANCH	S-79	2.000	11.500
137022400100	INDIAN CREEK	S-224	6.000	11.500
137006000100	ADAMS CREEK	S-60	8.000	11.330
137002300300	BIG WESTFIELD CREEK	S-23	0.000	11.000
134026500100	LYNCHES RIVER	SC 265	0.000	11.000
137011100100	BIG SANDY CREEK	S-111	1.000	11.000
134026500300	FORK CREEK	SC 265	3.000	11.000
137072400100	BR OF INDIAN CREEK	S-724	4.000	11.000
132005200200	JUNIPER CREEK	US 52	6.000	11.000
137003400100	DEEP CREEK	S-34	6.000	10.670
137024700100	JUNIPER CREEK	S-247	0.000	10.500
137004300200	BIG BLACK RIVER	S-43	0.000	10.500
134010200500	WALLACE PRONG CREEK	SC 102	2.000	10.500
134014500200	BIG BLACK CREEK	SC 145	6.000	10.500
137004500300	ROCK CREEK	S-45	0.000	10.000
137005400100	BR OF BIG BLACK CREEK	S-54	3.000	10.000
137004200100	LYNCHES RIVER	S-42	2.000	9.660
137029600100	BLACKWELL BRANCH	S-296	1.000	9.500
137003300200	NORTH PRONG CREEK	S-33	0.000	9.000
137024300100	THOMPSON CREEK	S-243	2.000	9.000
134026500400	BIG BLACK CREEK	SC 265	2.000	9.000
137003500100	LYNCHES RIVER	S-35	13.000	8.660
137029600200	CEDAR CREEK	S-296	0.000	8.000
137003500200	BUFFALO CREEK	S-35	0.000	7.500
137004900100	BROCKS MILL STREAM	S-49	6.000	7.000
137011500100	SPOT CREEK	S-115	7.000	7.000
134010200600	NORTH PRONG CREEK	SC 102	3.000	5.000
134010900100	THOMPSON CREEK	SC 109	4.000	5.000
137055500100	FORK CREEK	S-555	1.000	4.000

Fairfield County

Structure_no	Stream	Route	Obs_scour	Pot_scour
207002100200	LITTLE DUTCHMAN CREEK	S-21	30.000	28.990
207001600100	MAYO CREEK	S-16	0.000	22.330
204020000500	WATEREE CREEK	SC 200	5.000	21.660
207004100200	HORSE BRANCH	S-41	8.000	21.000
207006000200	LITTLE RIVER	S-60	7.000	19.990
207022200100	BR OF BEAVER DAM CR	S-222	6.000	19.330
201007730700	BIG WATEREE CR	I-77S	10.000	19.000
207002200100	EAST FORK CREEK	S-22	23.000	18.990
207010100300	JUNE CREEK	S-101	13.000	17.500
204020000300	BEAVER DAM CREEK	SC 200	10.000	17.330
202002100200	DUTCHMANS CREEK	US 21	9.000	16.990
207009900300	ROCKY CREEK	S-99	8.000	16.330

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

Fairfield County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
204020000200	REEDY CREEK	SC 200	6.000	16.000
207011500100	CEDAR CREEK	S-115	7.000	15.670
207006100200	WINNSBORO BRANCH	S-61	12.000	15.670
204003400200	LITTLE RIVER	SC 34	9.000	15.330
202002100300	LITTLE WATEREE CREEK	US 21	16.000	15.330
207010100500	ROCHELLE CREEK	S-101	5.000	15.160
201007710700	BIG WATEREE CREEK	I-77N	7.000	15.000
207009900400	BEAVER CREEK	S-99	2.000	13.660
207008200100	ALLENS BRANCH	S-82	11.000	12.660
207010100700	TAYLOR CREEK	S-101	1.000	12.500
204003400100	BROAD RIVER	SC 34	6.000	12.000
207020500100	LITTLE RIVER	S-205	9.000	11.670
207010100600	DUTCHMANS CREEK	S-101	0.000	11.500
207006200200	LITTLE CEDAR CREEK	S-62	4.000	11.000
207015100200	THORNTREE CREEK	S-151	5.000	11.000
202002100400	BIG WATEREE CREEK	US 21	8.000	10.660
207010100400	BR OF JUNE CREEK	S-101	6.000	10.500
207004100100	LITTLE WATEREE CREEK	S-41	1.000	10.490
207006100100	JACKSON CREEK	S-61	3.000	9.670
204021300200	LITTLE RIVER	SC 213	8.000	9.490
207015100300	BR OF THORNTREE CREEK	S-151	0.000	9.000
207004300100	SAWNEYS CREEK	S-43	0.000	7.670
204021300100	BROAD RIVER	SC 213	0.000	6.000
201007730600	LTL WATEREE CREEK	I-77S	3.000	5.000
201007710600	LTL WATEREE CREEK	I-77N	4.000	4.000

Lancaster County

Structure_no	Stream	Route	Obs_scour	Pot_scour
297076400100	HANGING ROCK CREEK	S-764	22.000	29.000
297027400100	GILLS CREEK	S-274	21.000	28.330
297029200100	BEAR CREEK	S-292	9.000	27.830
297051100100	LITTLE CREEK	S-511	18.000	25.330
294000900400	BEAR CREEK	SC 9	21.000	24.660
294020000400	CAMP CREEK	SC 200	10.000	24.000
297052100100	BR OF TURKEY CREEK	S-521	17.000	24.000
297001200200	BEAR CREEK	S-12	14.000	23.000
297037600100	HANNAH'S CREEK	S-376	19.000	23.000
297047100200	GILLS CREEK	S-471	16.000	22.670
297036200100	BEAR CREEK	S-362	18.000	22.660
294000900200	CANE CREEK	SC 9	11.000	21.670
297006700100	GILLS CREEK	S-67	12.000	21.330
297002600300	LITTLE LYNCHES CREEK	S-26	11.000	20.500
297028500100	CANE CREEK	S-285	5.000	20.490
297047100100	BR OF GILLS CR	S-471	15.000	20.330
294016000100	BIG SUGAR CREEK	SC160	8.000	19.670
297007600100	BEAR CREEK	S-76	6.000	19.000
294020000200	BEAR CREEK	SC 200	17.000	19.000
297005600100	CANE CREEK	S-56	3.000	18.990
297001600100	BEAR CREEK	S-16	6.000	18.660
294009700500	CEDAR CREEK	SC 97	7.000	18.330

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

Lancaster County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
297001900300	CAMP CREEK	S-19	9.000	17.670
297015400100	LYNCHES CREEK	S-154	7.000	17.660
294020000500	CANE CREEK	SC 200	8.000	17.660
297012500100	MILL STONE BRANCH	S-125	11.000	17.500
297040700100	TURKEY QUARTER CREEK	S-407	8.000	17.340
297036200200	BEAR CREEK	S-362	14.000	17.330
297024600100	CAMP CREEK	S-246	8.000	17.170
297005400100	SIX MILE CREEK	S-54	4.000	16.500
297006400200	McALPINE CREEK	S-64	4.000	16.500
294000500100	CATAWBA RV AND RR	SC 5	5.000	16.330
294009700400	ROCKY CREEK	SC 97	0.000	16.000
294000945300	CANE CREEK	SC 9S	0.000	15.660
292052111100	TWELVE MILE CREEK	US 521N	2.000	15.333
297012600100	SIX MILE CREEK	S-126	4.000	15.330
292060100200	FLAT CREEK	US 601	3.000	15.000
297002000100	CAMP CREEK	S-20	7.000	15.000
297028500200	BR OF CANE CREEK	S-285	7.000	15.000
297018500200	CANE CREEK	S-185	2.000	14.500
297016300100	RUM CREEK	S-163	4.000	14.330
294009700200	CAMP CREEK	SC 97	0.000	14.000
297003800200	TURKEY QUARTERS	S-38	3.000	14.000
294007500100	DELANEY CREEK	SC 75	5.000	14.000
297002900100	TRIB WAXHAW CREEK	S-29	9.000	14.000
297001500100	HANGING ROCK CREEK	S-15	2.000	13.990
297007000100	HANNAHS CREEK	S-70	2.000	13.990
297004100100	SUGAR CREEK	S-41	6.000	13.833
297002900200	TRIB TO WAXHAW CREEK	S-29	2.000	13.500
297003600300	CAMP CREEK	S-36	6.000	13.500
292052131100	TWELVE MILE CREEK	US 521S	2.000	13.330
297021600100	CAMP CREEK	S-216	6.000	13.330
294000925300	CANE CREEK	SC 9N	0.000	13.000
297010000100	GILLS CREEK	S-100	1.000	13.000
297028900100	BUFFALO CREEK	S-289	8.000	13.000
297024500100	CAMP CREEK	S-245	10.000	13.000
297005000100	CANE CREEK	S-50	0.000	12.500
297018700100	RUM CREEK	S-187	2.000	12.330
297004200100	CLEMS BRANCH	S-42	4.000	12.330
292052130700	WAXHAW CREEK	US 521S	4.000	12.330
292052100300	GILLS CREEK	US 521	0.000	12.000
292052100100	BEAR CREEK	US 521	5.000	12.000
292052110700	WAXHAW CREEK	US 521N	8.000	12.000
297005700100	BEAR CREEK	S-57	4.000	11.990
292052130600	CANE CREEK	US 521S	4.000	11.667
294020000100	RUM CREEK	SC 200	6.000	11.660
292060100100	LYNCHES CREEK	US 601	3.000	11.500
294000900700	GILLS CREEK	SC 9	4.000	11.330
297001900200	WHITE OAK CREEK	S-19	0.000	11.000
297008200100	STREAM	S-82	0.000	11.000
297006400100	UNNAMED	S-64	1.000	11.000
292052100050	HANGING ROCK CREEK	US 521	2.000	11.000
292060100300	LYNCHES RIVER	US 601	4.000	11.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

Lancaster County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
297017200100	BEAR CREEK	S-172	6.000	11.000
294000900800	STREAM	SC 9	0.000	10.990
297005100300	CAMP CREEK	S-51	3.000	10.500
297002800100	UNNAMED	S-28	0.000	10.000
294000920100	CATAWBA RIVER	SC 9N	0.000	10.000
292052110600	CANE CREEK	US 521N	7.000	10.000
297005100200	GILLS CREEK	S-51	0.000	9.990
297001900100	BEAR CREEK	S-19	1.000	9.670
297007100100	TURKEY QUARTER CREEK	S-71	5.000	9.660
297005500100	TWELVE MILE CREEK	S-55	2.000	9.500
297005100400	UPPER CAMP CREEK	S-51	1.000	9.340
294000940100	CATAWBA RIVER	SC 9S	0.000	9.000
294000945400	GILLS CREEK	US 521S	2.000	9.000
297005100100	BELT LINE HANNAH CREEK	S-51	3.000	9.000
294026500200	DRY CREEK	SC 265	4.000	9.000
297015700100	BR OF SUGAR CREEK	S-157	6.000	9.000
297015600200	LOCAL BR OF BEAR CREEK	S-156	0.000	8.660
294000905600	BEAR CREEK	US 521	1.000	8.500
294026500100	BUFFALO CREEK	SC 265	0.000	8.000
294000925400	GILLS CREEK	US 521N	1.000	8.000
297007100300	BEAR CREEK	S-71	2.000	7.330
297003600200	GILLS CREEK	S-36	2.000	7.000
297007100200	TRIB TO BEAR CREEK	S-71	0.000	6.000
297003900200	NORTH BRANCH OF WILDCAT	S-39	0.000	5.000
294009700100	CATAWBA RIVER	SC 97	0.000	5.000
297017800100	N BR OF WILDCAT CREEK	S-178	1.000	5.000
294000900900	WILDCAT CREEK	SC 9	3.000	5.000
297007100400	BEAR CREEK	S-71	0.000	4.000
297005600200	CAMP CREEK	S-56	1.000	3.000

Union County

444004900500	MENG CREEK	SC 49	9.000	23.670
447013100200	FANNING CREEK	S-131	10.000	22.000
444007200200	CANE CREEK	SC 72	11.000	21.330
447013400100	BUFFALO CREEK	S-134	13.000	21.330
447003000100	BROWNS CREEK	S-30	6.000	21.000
447000400100	BIG BROWNS CREEK	S-4	12.000	21.000
442017600200	PADGETTS CREEK	US 176	5.000	19.000
447006800100	DUTCHMANS CREEK	S-68	4.000	18.330
442017600300	TYGER RIVER	US 176	0.000	17.000
444004900100	TYGER RIVER	SC 49	1.000	16.670
444007200100	TYGER RIVER	SC 72	2.000	16.660
447002400100	TINKER CREEK BRANCH	S-24	2.000	16.000
447038300100	MENG CREEK	S-383	4.000	16.000
447014600100	LITTLE BROWNS CREEK	S-146	12.000	15.330
444004900600	BIG BROWNS CREEK	SC 49	8.000	14.670
447001200200	FAIRFOREST CREEK	S-12	6.000	14.500
444010500100	FANNING CREEK	SC 105	3.000	14.330
447005700200	LITTLE BROWNS CREEK	S-57	0.000	14.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

Union County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
447007300100	MILL CREEK	S-73	7.000	14.000
444004900200	FAIRFOREST CREEK	SC 49	3.000	13.500
444021500300	FAIRFOREST CREEK	SC 215	1.000	13.000
444001800200	PACOLET RIVER	SC 18	2.000	12.670
447001900100	UNNAMED CREEK	S-19	0.000	12.000
447003900100	MILL POND CREEK	S-39	1.000	12.000
447002500100	SUGAR CREEK	S-25	2.000	12.000
444011400100	SANDY RUN CREEK	SC 114	5.000	11.000
447002300100	FAIRFOREST CREEK	S-23	10.000	10.500
447003000200	BILL GILLIAM CREEK	S-30	0.000	10.000
447001900200	BUFFALO CREEK	S-19	1.000	10.000
444000900400	BROAD RIVER CANAL	SC 9	0.000	9.500
447003000300	BIG BROWNS CREEK	S-30	0.000	9.000
447002400400	SWIFT RUN CREEK	S-24	0.000	9.000
447005200100	SUGAR CREEK	S-52	2.000	9.000
447005700100	BIG BROWNS CREEK	S-57	2.000	8.000
447007100100	BROWN CREEK	S-71	3.000	8.000
444010500300	PACOLET RIVER	SC 105	0.000	7.500
444004900700	LITTLE BROWNS CREEK	SC 49	0.000	6.000
444005600100	ENOREE RIVER	SC 56	1.000	6.000

York County

462032100200	ALLISON CREEK	US 321	13.000	26.170
464032200300	FISHING CREEK	SC 322	14.000	24.670
464000500900	TOOLS FORK CREEK	SC 5	9.000	24.330
467004100100	TURKEY CREEK	S-41	17.000	24.000
467009800100	STEEL CREEK	S-98	9.000	23.670
467018800100	BR TO CATAWBA RIVER	S-188	16.000	23.670
467041400100	CALABASH BRANCH	S-414	8.000	23.160
467096200100	BIG DUTCHMAN CREEK	S-962	12.000	23.000
467091900100	BR OF CLARKS CREEK	S-919	14.000	23.000
467065800100	BIG DUTCHMANS CREEK	S-658	19.000	22.990
467005000200	MANCHESTER CREEK	S-50	6.000	22.670
464055700200	CROWDERS CREEK	SC 557	8.000	22.160
467001100100	CLARKS CREEK	S-11	17.000	21.990
467034700200	FISHING CREEK	S-347	10.000	21.330
462002103300	STEEL CREEK-FT.MILL	US 21	9.000	20.000
467042200100	BEAVERDAM CREEK	S-422	6.000	19.990
467108600100	BEAVERDAM CREEK	S-1086	16.000	19.990
467010100500	WILDCAT CREEK	S-101	3.000	19.670
467010100400	FISHING CREEK	S-101	11.000	19.670
467023500100	FORK BIG ALLISON CREEK	S-235	15.000	19.670
467065700100	DUTCHMANS CREEK	S-657	11.000	19.500
467006400100	FISHING BRANCH	S-64	3.000	19.330
467027000100	JACKSON BRANCH	S-270	9.000	19.330
467018800200	BR TO CATAWBA RIVER	S-188	11.000	19.330
467069100100	TRIB CATAWBA RIVER	S-691	14.000	18.990
462002100800	STEEL CREEK	US 21	0.000	18.670
467073200100	CALABASH BRANCH	S-732	12.000	18.670

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

York County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
467088500100	BIGGERS BRANCH	S-885	12.000	18.340
467003000100	BIG DUTCHMAN CREEK	S-30	5.000	18.000
467073400100	BR TO CATAWBA RIVER	S-734	20.000	18.000
464090100100	TAYLORS CREEK	SC 901	3.000	17.990
464004900800	CROWDERS CREEK	SC 49	6.000	17.500
467025100100	BR TO CATAWBA RIVER	S-251	3.000	17.330
467016300200	FISHING CREEK	S-163	5.000	17.330
464007200100	STONY FORK CREEK	SC 72	0.000	17.000
467003500100	TURKEY CREEK	S-35	6.000	17.000
467006400200	ALLISON CREEK	S-64	8.000	17.000
467099700100	NEELYS CREEK	S-997	15.000	17.000
467083200100	STREAM	S-832	19.000	17.000
464009700300	BULLOCKS BRANCH	SC 97	6.000	16.670
464027400200	BIG ALLISON CREEK	SC 274	2.000	16.500
467007900100	CROWDERS CREEK	S-79	10.000	16.500
464016100100	FISHING CREEK	SC 161	11.000	16.330
467011400100	ALLISON CREEK	S-114	12.000	16.330
467099800100	WILDCAT CREEK	S-998	15.000	16.330
467005400400	BIG ALLISON CREEK	S-54	0.000	16.000
467034700100	STONY FORK CREEK	S-347	6.000	16.000
467023800100	BIG ALLISON CREEK	S-238	2.000	15.670
467053600100	FISHING CREEK	S-536	3.000	15.670
467071100100	STREAM	S-711	7.000	15.670
464000500100	CLARKS CREEK	SC 5	10.000	15.670
464000500500	TURKEY CREEK	SC 5	0.000	15.660
467053800100	BR WILDCAT CR	S-538	3.000	15.660
467025300100	BR TO SUGAR CREEK	S-253	14.000	15.660
464032200100	TURKEY CREEK	SC 322	9.000	15.500
464005500100	CLARKS CREEK	SC 55	2.000	15.330
467065400100	BURGIS CREEK	S-654	7.000	15.330
467005400300	BR OF BIG ALLISON CREEK	S-54	4.000	15.160
467005700100	BURGIS CREEK	S-57	4.000	15.000
467018100200	BR TO BIG ALLISON CREEK	S-181	13.000	15.000
467065500100	FISHING CREEK	S-655	4.000	14.670
464027400100	LITTLE ALLISON CREEK	SC 274	4.000	14.670
464032200200	STONY FORK CREEK	SC 322	6.000	14.670
464000500800	FISHING CREEK	SC 5	6.000	14.670
464027400300	MILL CREEK	SC 274	0.000	14.500
467019500200	BIG DUTCHMAN CREEK	S-195	4.000	14.330
467003000200	LITTLE DUTCHMAN CREEK	S-30	0.000	14.000
464007200200	FISHING CREEK	SC 72	0.000	14.000
467005400100	LITTLE ALLISON CREEK	S-54	1.000	14.000
467016500100	LOVE CREEK	S-165	2.000	14.000
467016200100	BR TO NEELYS CREEK	S-162	3.000	14.000
467117200100	FISHING CREEK	S-1172	7.000	14.000
467032300100	ROSS BRANCH	S-323	12.000	14.000
467065000100	TOOLS FORK CREEK	S-650	14.000	14.000
467010300100	FISHING CREEK	S-103	6.000	13.670
464004900600	FISHING CREEK	SC 49	0.000	13.000
467060800100	LAKESIDE COUNTRY CLUB	S-608	2.000	13.000
464055700100	BEAVER DAM CREEK	SC 557	3.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 4--Continued

York County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
467091800100	MILL CREEK	S-918	10.000	12.670
464004900900	CATAWBA RIVER	SC 49	0.000	12.500
464005500200	BRANCH OF CROWDERS CREEK	SC 55	0.000	12.340
467024400100	TAYLORS CREEK	S-244	0.000	12.000
464021100200	BULLOCKS CREEK	SC 211	0.000	12.000
464000501100	CATAWBA RIVER RELIEF	SC 5	0.000	12.000
464000500600	ONE MILE BRANCH	SC 5	0.000	12.000
467056000100	BRANCH OF STONEY FORK CR	S-560	2.000	12.000
467010000100	DRY BRANCH	S-100	2.000	12.000
467072800100	WILDCAT CREEK	S-728	4.000	12.000
467019500100	TOOLS FORK CREEK	S-195	5.000	12.000
467010100300	STONY FORK CREEK	S-101	6.000	12.000
467096100100	BR OF DUTCHMAN CREEK	S-961	9.000	12.000
467065000200	WILDCAT CREEK	S-650	12.000	12.000
467072100100	TAYLORS CREEK	S-721	12.000	12.000
467083900100	BURGIS CREEK	S-839	13.000	12.000
467078000100	CLARKS CREEK	S-780	7.000	11.670
467007200100	BEAVERDAM CREEK	S-72	3.000	11.660
467072400100	BR TO TAYLORS CREEK	S-724	0.000	11.500
462002100600	CATAWBA RIVER	US 21	8.000	11.330
464032200600	WILDCAT CREEK	SC 322	0.000	11.000
467134700100	BR MANCHESTER CREEK	S-1347	2.000	11.000
467008100100	TOOLS FORK CREEK	S-81	2.000	11.000
467016000200	BR TO CATAWBA RIVER	S-160	4.000	11.000
467015000100	BIG ALLISON CREEK	S-150	5.000	11.000
467011400200	BEAVERDAM CREEK	S-114	6.000	11.000
467088400100	BR TO FISHING CREEK	S-884	6.000	11.000
467019600100	BIG DUTCHMAN CREEK	S-196	0.000	10.000
467022800100	BEAVER DAM CREEK	S-228	1.000	10.000
467005400200	BIG BRANCH	S-54	1.000	10.000
464021100100	BROAD RIVER	SC 211	2.000	9.500
467002200100	JACKSON BRANCH	S-22	2.000	9.000
464032200500	TOOLS FORK CREEK	SC 322	6.000	9.000
464004900700	ALLISON CREEK	SC 49	0.000	8.000
467016300100	STONY FORK CREEK	S-163	1.000	8.000
467117200200	BRANCH OF FISHING CREEK	S-1172	2.000	8.000
461007711000	CATAWBA RIVER	I-77N	1.000	7.330
467015200100	BEAVERDAM CREEK	S-152	0.000	7.000
461007731000	CATAWBA RIVER	I-77S	6.000	5.000

SCDOT District 5

Darlington County

Structure_no	Stream	Route	Obs_scour	Pot_scour
164003400400	BLACK CREEK	SC 34	13.000	27.170
167002300600	BOGGY BRANCH	S-23	4.000	20.990
164034000100	LAKE SWAMP	SC 340	1.000	18.500
167002800100	BOGGY GULLY CREEK	S-28	1.000	18.490
167003500200	BLACK CREEK	S-35	1.000	17.830
167017900200	HIGH HILL CREEK	S-179	6.000	17.330
167035400100	INDIAN CREEK	S-354	0.000	17.160

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Darlington County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
167026900100	SNAKE BRANCH	S-269	2.000	17.000
167002700100	MILL BRANCH	S-27	0.000	16.500
164015100100	BEAVER DAM CREEK	SC 151	0.000	16.500
161009530100	BLACK CREEK	I-95S	0.000	16.330
167017700100	BELLYACHE BRANCH	S-177	0.000	16.330
161009510100	BLACK CREEK	I-95N	2.000	16.000
167001800100	BLACK CREEK	S-18	4.000	16.000
167003600100	EVERLASTING BRANCH	S-36	3.000	15.990
167032600200	HIGH HILL CREEK	S-326	7.000	15.990
162005200300	BLACK CREEK	US 52	1.000	15.500
167001400200	SWIFT CREEK NO.2	S-14	0.000	15.000
162040100500	JEFFRIES CREEK	US 401	0.000	15.000
162005215300	BYERLY MILL POND	US 52N	0.000	15.000
162005235300	BYERLY MILL POND	US 52S	0.000	15.000
162001500100	SPARROW SWAMP	US 15	2.000	15.000
167002300200	LYNCHES RIVER APPROACH	S-23	4.000	15.000
161002040100	SPARROW SWAMP	I-20W	7.000	15.000
167002300300	LYNCHES RIVER APPROACH	S-23	8.000	15.000
167006800200	BELLYACHE BRANCH	S-68	4.000	14.670
167044900100	NEWMAN SWAMP	S-449	0.000	14.500
162001503100	PRESTWOOD LAKE	US 15	2.000	14.500
167015400100	DEEP HOLE SWAMP	S-154	0.000	14.000
162040100600	HIGH HILL CREEK	US 401	0.000	14.000
162040100400	LAKE SWAMP	US 401	0.000	14.000
161002020200	LAKE SWAMP	I-20E	2.000	14.000
167004100400	SEED BRANCH	S-41	2.000	14.000
167001400100	SWIFT CREEK NO.1	S-14	3.000	14.000
162040100300	SPARROW SWAMP	US 401	7.000	14.000
161002040200	LAKE SWAMP	I-20W	1.000	13.660
167004900200	HIGH HILL CREEK	S-49	0.000	13.500
167002800200	JEFFERIES CREEK	S-28	0.000	13.500
162005200600	CEDAR CREEK	US 52	0.000	13.500
167058000100	BELLYACHE CREEK	S-580	2.000	13.500
167001300100	JEFFERIES CREEK	S-13	4.000	13.500
167003600300	SEED BRANCH	S-36	7.000	13.330
167018500100	SWIFT CREEK	S-185	0.000	13.000
167004100500	TRIB OF BLACK CREEK	S-41	0.000	13.000
167006300100	TRIB TO BLACK CREEK	S-63	1.000	13.000
161002020100	SPARROW SWAMP	I-20E	3.000	13.000
167004200100	SWIFT CREEK	S-42	3.000	13.000
162040100200	NEWMAN SWAMP	US 401	5.000	13.000
164003400600	PEE DEE RIVER SWAMP	SC 34	9.000	13.000
162001505200	BLACK CREEK	US 15	0.000	12.830
164034000200	JEFFERIES CREEK	SC 340	1.000	12.500
161002020400	JEFFERIES CREEK	I-20E	0.000	12.000
167013300300	BUCKHOLTZ CREEK	S-133	0.000	12.000
167036600100	LEVENWORTH BRANCH	S-366	1.000	12.000
167006800100	SWIFT CREEK	S-68	1.000	12.000
164003400500	PEE DEE RIVER SWAMP	SC 34	4.000	12.000
167004900100	STAR FORK BRANCH	S-49	0.000	11.500
167058000200	SWIFT CREEK	S-580	0.000	11.500

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 5--Continued

Darlington County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
167003000100	MIDDLE SWAMP	S-30	2.000	11.500
167004500100	SPARROW SWAMP	S-45	2.000	11.500
167003600200	BLACK CREEK	S-36	4.000	11.500
167002300400	BEAVERDAM CREEK	S-23	1.000	11.000
162001500300	MCINTOSH MILL STREAM	US 15	2.000	11.000
164003400700	PEE DEE RIVER SWAMP	SC 34	3.000	11.000
167003900100	BLACK CREEK	S-39	2.000	10.500
161002040400	JEFFERIES CREEK	I-20W	1.000	10.000
167005100100	TRIB TO BLACK CREEK	S-51	1.000	10.000
162005203100	SWIFT CREEK	US 52	1.000	10.000
167032600100	INDIAN CREEK	S-326	2.000	10.000
167002300500	BLACK CREEK	S-23	3.000	10.000
164003400300	SWIFT CREEK	SC 34	1.000	9.500
167003500100	HIGH HILL CREEK	S-35	2.000	9.500
162040100100	LYNCHES RIVER	US 401	5.000	9.500
167002300401	BR BEAVERDAM CREEK	S-23	0.000	9.000
167013300100	BLACK CREEK	S-133	8.000	9.000
167033200100	INDIAN CREEK	S-332	0.000	8.500
167001800200	KAY BRANCH	S-18	4.000	6.000

Dillon County

Structure_no	Stream	Route	Obs_scour	Pot_scour
174000900300	LITTLE PEE DEE RIVER	SC 9	4.000	19.500
177004500300	LTL PEE DEE RIVER	S-45	0.000	18.500
171009530200	BROWNVILLE CREEK	I-95S	3.000	17.000
174005700500	LITTLE PEE DEE RIVER	SC 57	0.000	16.500
177003300100	BUCK SWAMP	S-33	1.000	16.160
177002300100	LITTLE PEE DEE RIVER	S-23	2.000	16.000
174005700100	MAPLE CREEK	SC 57	2.000	16.000
177004600100	BUCK SWAMP	S-46	1.000	15.160
177003000300	BEAR SWAMP BRANCH	S-30	0.000	14.500
177004500100	LITTLE PEE DEE SWAMP	S-45	0.000	14.500
172030100200	BUCK SWAMP	US 301	0.000	14.500
171009510600	BIG REEDY CREEK	I-95N	0.000	14.000
171009530600	BIG REEDY CREEK	I-95S	2.000	14.000
177004500200	LITTLE PEE DEE SWAMP	S-45	2.000	13.500
177003800100	REEDY CREEK CANAL	S-38	2.000	13.500
171009510300	POCCOSIN SWAMP	I-95N	0.000	13.000
171009530100	GREAT PEE DEE SWAMP	I-95S	0.000	13.000
171009530300	POCCOSIN SWAMP	I-95S	0.000	13.000
171009510399	POCOSSIN SWAMP	I-95	0.000	13.000
174000900100	ROPER'S MILL BRANCH	SC 9	0.000	13.000
171009510100	GREAT PEE DEE SWAMP	I-95N	2.000	13.000
177002500100	MAPLE CREEK	S-25	3.000	12.500
174000900200	LITTLE PEE DEE RIVER	SC 9	0.000	11.500
174004100100	BUCK SWAMP	SC 41	15.000	11.500
171009510200	BROWNSVILLE CREEK	I-95N	0.000	11.000
171009530900	LITTLE PEE DEE RIVER	I-95S	7.000	11.000
174004100300	BEAR SWAMP	SC 41	0.000	10.500
174004107100	BUCK SWAMP	SC 41	6.000	10.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Dillon County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
174004100200	LITTLE PEE DEE RIVER	SC 41	0.000	9.500
174004100400	SPIVEY POND	SC 41	0.000	9.500
174003400200	REEDY CREEK	SC 34	0.000	9.490
177017500100	MAPLE SWAMP BRANCH	S-175	0.000	9.000
174004107200	BUCK SWAMP	SC 41	6.000	9.000
171009510900	LITTLE PEE DEE RIVER	I-95N	0.000	8.000
172030100400	LITTLE PEEDEE RIVER	US 301	0.000	7.000

Florence County

Structure_no	Stream	Route	Obs_scour	Pot_scour
212030100300	LYNCHES RIVER	US 301	1.000	27.500
214032700200	JEFFRIES CREEK	SC 327	0.000	21.000
214034100500	LYNCHES LAKE NO.2	SC 341	6.000	20.500
217057500100	WILLOW CREEK	S-575	5.000	20.160
214004100200	LYNCHES RIVER	SC 41	0.000	19.500
217083600100	JEFFRIES CREEK	S-836	4.000	18.500
212037800900	LYNCHES RIVER	US 378	10.000	18.000
217005600100	CAMP BRANCH	S-56	0.000	17.830
217007200200	TRIB TO LYNCHES RIVER	S-72	4.000	17.830
217004600400	TRIB TO LYNCHES RIVER	S-46	2.000	17.670
214040300200	LYNCHES RIVER	SC 403	1.000	17.000
217001300500	LONG BRANCH	S-13	2.000	16.670
217005700100	WILLOW CREEK	S-57	2.000	16.500
212037800800	LYNCHES RIVER SWAMP	US 378	2.000	15.670
217007200100	TRIB TO LYNCHES RIVER	S-72	2.000	15.500
217013200200	BUCK CREEK BRANCH	S-132	3.000	15.500
217014900100	WILLOW CREEK	S-149	1.000	15.160
217001300300	POLK SWAMP	S-13	0.000	15.000
217006600100	BIG SWAMP	S-66	0.000	15.000
214032700100	WILLOW CREEK	SC 327	0.000	15.000
217011200300	JEFFRIES CREEK	S-112	2.000	15.000
217013200100	GUM BRANCH	S-132	4.000	15.000
212007600500	LAKE SWAMP	US 76	4.000	15.000
211009510200	SPARROW SWAMP	I-95N	6.000	15.000
211009530200	SPARROW SWAMP	I-95S	6.000	15.000
212005200700	JEFFRIES CREEK	US 52	9.000	15.000
212007600100	LYNCHES RIVER	US 76	10.000	15.000
217003800300	LAKE SWAMP	S-38	2.000	14.840
217007600100	JEFFRIES CREEK	S-76	2.000	14.670
217005500300	LYNCHES RIVER	S-55	7.000	14.670
217001200100	JEFFRIES CREEK	S-12	3.000	14.660
217005800200	BROWNS SWAMP APPROACH	S-58	0.000	14.500
217005800100	BROWNS SWAMP APPROACH	S-58	0.000	14.500
217010700100	ALLIGATOR BRANCH	S-107	1.000	14.500
217010500200	BIG SWAMP	S-105	2.000	14.500
217008600100	BIG SWAMP	S-86	3.000	14.500
212037801000	BIG SWAMP	US 378	0.000	14.000
212007600200	DEEP HOLE SWAMP	US 76	0.000	14.000
217011200400	JEFFRIES CREEK	S-112	1.000	14.000
217013200300	BUCK BRANCH	S-132	1.000	14.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Florence County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
217010500100	BUCK BRANCH	S-105	2.000	14.000
217001300400	MIDDLE BRANCH	S-13	2.000	14.000
217016400100	CYPRESS SWAMP	S-164	5.000	14.000
217092500100	ADAMS BRANCH	S-925	2.000	13.660
211009531500	GREAT PEE DEE SWAMP	I-95S	0.000	13.500
217059600100	BRANCH OF BIG SWAMP	S-596	0.000	13.500
217011100100	DARNEX BRANCH	S-111	1.000	13.500
212007600400	SPARROW SWAMP	US 76	1.000	13.500
214040300500	DEEP HOLE SWAMP	SC 403	2.000	13.500
217008600200	BR OF BIG SWAMP	S-86	3.000	13.500
217014700100	LYNCHES RIVER	S-147	0.000	13.000
212007600300	BAY BRANCH	US 76	0.000	13.000
212007600700	JEFFERIES CREEK	US 76	0.000	13.000
212005210300	LYNCHES RIVER SWAMP	US 52E	1.000	13.000
212005230300	LYNCHES RIVER SWAMP	US 52W	1.000	13.000
217005700200	BARFIELD MILL CR	S-57	3.000	13.000
217002900100	JEFFERIES CREEK	S-29	3.000	13.000
211009511500	GREAT PEE DEE SWAMP	I-95N	6.000	13.000
214034100600	LYNCHES LAKE NO.3	SC 341	9.000	13.000
217005600200	TWO MILE BRANCH	S-56	3.000	12.990
212005210400	LYNCHES RIVER	US 52E	7.000	12.830
217002600100	BLACK CREEK	S-26	4.000	12.670
214032730400	BLACK CREEK	SC 327S	0.000	12.660
217079400100	LANE BRANCH	S-794	2.000	12.660
211009530700	JEFFRIES CREEK	I-95S	0.000	12.500
217003500100	LAKE SWAMP	S-35	0.000	12.500
217003500200	LAKE SWAMP	S-35	0.000	12.500
212037803300	LYNCHES LAKE	US 378	0.000	12.500
212007600600	MIDDLE SWAMP	US 76	0.000	12.500
212005200100	LYNCHES LAKE	US 52	1.000	12.500
217014500100	LAKE SWAMP	S-145	2.000	12.500
217027800100	LYNCHES LAKE	S-278	2.000	12.500
214034100100	LYNCHES LAKE NO.1	SC 341	2.000	12.500
217004600300	TRIB TO LYNCHES RIVER	S-46	1.000	12.490
212030100100	DOUGLAS SWAMP	US 301	1.000	12.490
217007200300	HIGH HILL BRANCH	S-72	5.000	12.170
211009530300	SPARROW SWAMP	I-95S	0.000	12.000
217010300100	MIDDLE SWAMP	S-103	0.000	12.000
214004100300	LYNCHES RIVER SWAMP	SC 41	0.000	12.000
214004100500	LYNCHES RIVER SWAMP	SC 41	0.000	12.000
214005100500	JEFFRIES CREEK	SC 51	0.000	12.000
212005210200	LYNCHES RIVER SWAMP	US 52E	0.000	12.000
212007621100	GREAT PEE DEE RV SWAMP	US 76E	0.000	12.000
214004100400	LYNCHES RIVER SWAMP	SC 41	1.000	12.000
212005230200	LYNCHES RIVER SWAMP	US 52W	1.000	12.000
211009510300	SPARROW SWAMP	I-95N	2.000	12.000
217013600100	ALLIGATOR BRANCH	S-136	2.000	12.000
212030100400	SPARROW SWAMP	US 301	3.000	12.000
211009531600	GREAT PEE DEE RIVER	I-95S	5.000	11.830
217002400100	JEFFERIES CREEK	S-24	4.000	11.670
217091800100	POLK SWAMP	S-918	1.000	11.660

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Florence County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
211009511200	HIGH HILL CREEK	I-95N	0.000	11.500
217004900200	LYNCHES RIVER BRANCH	S-49	0.000	11.500
211009511600	GREAT PEE DEE RIVER	I-95N	7.000	11.160
211009531400	GREAT PEE DEE SWAMP	I-95S	0.000	11.000
211009511400	GREAT PEE DEE SWAMP	I-95N	11.000	11.000
211009510700	JEFFRIES CREEK	I-95N	0.000	10.500
212007641100	GREAT PEE DEE RV SWAMP	US 76W	0.000	10.500
214005100200	BIG SWAMP	SC 51	4.000	10.500
214005100400	MIDDLE SWAMP	SC 51	4.000	10.500
217050100100	BR-LAKE SWAMP	S-501	0.000	10.000
211009510400	LAKE SWAMP	I-95N	2.000	10.000
214032710400	BLACK CREEK	SC 327N	2.000	10.000
211009531200	HIGH HILL CREEK	I-95S	0.000	9.500
217003400100	SINGLETRARY BRANCH	S-34	0.000	9.500
212005230400	LYNCHES RIVER	US 52W	1.000	9.500
211009510100	LYNCHES RIVER	I-95N	2.000	9.500
217004600200	LYNCHES RIVER	S-46	7.000	9.500
211009530100	LYNCHES RIVER	I-95S	12.000	9.500
217004600100	SPRING BRANCH CREEK	S-46	2.000	9.000
217004900300	LYNCHES RIVER	S-49	1.000	8.500
217008500100	THOMASON BRANCH	S-85	2.000	8.500
211009530400	LAKE SWAMP	I-95S	0.000	8.000
217061100100	JEFFRIES CREEK	S-611	4.000	8.000
217005700300	BULLOCKS BRANCH	S-57	2.000	7.500

Georgetown County

Structure_no	Stream	Route	Obs_scour	Pot_scour
224005100300	BLACK RIVER	SC 51	3.000	19.500
222001707300	SAMPIT RIVER	US 17	4.000	19.000
222001730300	SAMPIT RIVER	US 17S	0.000	18.500
227000400200	PETERS CREEK	S-4	3.000	18.000
222070100400	YAUHANNAH LAKE	US 701	4.000	18.000
227002400200	BONNY CLABBER	S-24	0.000	17.500
227051400100	KENSINGTON	S-514	3.000	17.330
227000400100	BR-BLACK RIVER	S-4	0.000	17.000
222070100500	PEE DEE RIVER	US 701	4.000	16.500
222001707200	SUMMONS SWAMP	US 17	3.000	15.000
227017900100	BLACK RIVER	S-179	0.000	14.500
227002000100	INDIAN HUT SWAMP	S-20	0.000	14.500
227003600100	BELLS SWAMP	S-36	2.000	14.500
227004200200	PENNY ROYAL	S-42	2.000	14.500
227030200100	TRI TO-MIDWAY INLET	S-302	0.000	14.000
227003600200	TYLER CREEK	S-36	1.000	14.000
227003100100	LANE CREEK	S-31	0.000	13.500
227029600200	BR OF BOND SWAMP	S-296	0.000	13.500
227035200100	CEDAR SWAMP	S-352	0.000	13.500
227026600200	SOUTH CROSSWAY NO.2	S-266	0.000	13.000
224026100400	YAUHANNAH CREEK	SC 261	0.000	13.000
222001730200	NORTH SANTEE RIVER	US 17S	0.000	13.000
227004600100	PAWLEYS CREEK	S-46	2.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Georgetown County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
222001700500	PEE DEE RIVER	US 17	7.000	13.000
227029600100	BR-BOND SWAMP	S-296	0.000	12.500
227003800100	BIG DAM CREEK	S-38	4.000	12.500
227003100200	BONNY CLABBER CREEK	S-31	3.000	12.160
224005100200	LANES CREEK	SC 51	0.000	12.000
224005100400	MCGINNEY HILL SWAMP	SC 51	0.000	12.000
227002400100	POLE SWAMP	S-24	2.000	12.000
227026600100	S CAUSEWAY TO PAWLEYS	S-266	4.000	12.000
227003600300	GRAVEL GULLEY	S-36	5.000	12.000
227031800200	MARKET CREEK	S-318	0.000	11.500
227031800100	SIX MILE CREEK	S-318	0.000	11.500
227008600100	CEDAR BRANCH	S-86	2.000	11.500
222070100200	BLACK RIVER	US 701	2.000	11.000
222001710200	NORTH SANTEE RIVER	US 17N	5.000	11.000
227004200100	TURKEY CREEK	S-42	6.000	10.000
222001710300	SAMPIT RIVER	US 17N	0.000	9.500
227000400300	CHOPPEE CREEK	S-4	1.000	9.500
222070100100	SIX MILE CREEK	US 701	2.000	9.500
222001710100	SOUTH SANTEE RIVER	US 17N	1.000	9.000
224005100100	SIX MILE CREEK	SC 51	2.000	9.000
222001700600	WACCAMAW RIVER	US 17	0.000	8.500
227004200300	GRAVEL GULLY	S-42	3.000	8.500
222001730100	SOUTH SANTEE RIVER	US 17S	0.000	6.000
222070100300	YAUHANNAH CREEK	US 701	3.000	6.000

Horry County

262050110100	LITTLE PEE DEE RIVER	US 501N	2.000	26.500
262050130100	LITTLE PEE DEE RIVER	US 501S	1.000	25.500
262037800100	LITTLE PEE DEE RIVER	US 378	1.000	23.000
262007600100	LUMBER RIVER	US 76	6.000	19.000
264054400400	ROBERTS BRANCH	SC 544	1.000	18.670
267004400100	CEDAR BRANCH CREEK	S-44	0.000	18.170
264031900600	UNNAMED STREAM NO. 6	SC 319	0.000	17.990
267003100700	TODD SWAMP	S-31	3.000	17.490
267065300200	BRUNSON SWAMP	S-653	6.000	17.160
267013000100	TREDWELL SWAMP	S-130	3.000	17.000
267004500100	MEADOW SWAMP	S-45	2.000	16.990
264041000400	HUGGINS SWAMP	SC 410	2.000	16.840
267002300500	LOUSING SWAMP	S-23	3.000	16.340
267001500100	WITHERS SWASH	S-15	9.000	16.330
267054800100	MCLEAN SWAMP	S-548	0.000	16.000
267035100100	MYRTLE SWASH	S-351	3.000	16.000
262070100900	BUG SWAMP	US 701	5.000	16.000
264007300200	WITHERS SWASH	SC 73	8.000	16.000
264017900100	MULLET CREEK	SC 179	1.000	15.330
267002300401	BR OF JOINER CREEK	S-23	0.000	15.000
267009900600	DAWSEY SWAMP	S-99	0.000	15.000
264000920401	BUCK SWAMP BRANCH	SC 9E	0.000	15.000
264031900300	CHINNERS MILL BR NO.3	SC 319	2.000	15.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Horry County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
262007600300	BOGGY BRANCH	US 76	4.000	15.000
267001900500	PLAY CARD SWAMP	S-19	1.000	14.500
267009700300	WHITE OAK SWAMP	S-97	1.000	14.500
267001900100	KINGSTON LAKE	S-19	2.000	14.500
267001900200	KINGSTON LAKE	S-19	2.000	14.500
267001900300	KINGSTON LAKE	S-19	2.000	14.500
267009700100	WHITE OAK SWAMP	S-97	2.000	14.500
267009700400	WHITE OAK SWAMP	S-97	2.000	14.500
267010600200	GRIER SWAMP	S-106	2.000	14.490
267007800100	BROWN SWAMP	S-78	2.000	14.160
267005100100	MURRELS INLET CREEK	S-51	0.000	14.000
264054400300	GRAVLEY GULLY	SC 544	0.000	14.000
264009000400	JONES BIG SWAMP	SC 90	1.000	14.000
267059100001	BRUNSON SWAMP	S-591	3.000	14.000
262070101000	WHITE OAK SWAMP	US 701	6.000	14.000
264031900500	MILL BRANCH NO.5	SC 319	2.000	13.990
267013100100	CHINNERS SWAMP	S-131	0.000	13.500
267054800300	BROWN (MCLEAN) SWAMP	S-548	0.000	13.500
267054800200	BROWN SWAMP	S-548	0.000	13.500
264091700100	LITTLE PEE DEE RIVER	SC 917	0.000	13.500
262050103100	WACCAMAW RIV AND RR	US 501	0.000	13.500
267065300100	SPRING SWAMP	S-653	1.000	13.500
267009700200	WHITE OAK SWAMP	S-97	2.000	13.500
262070111100	BR OF HUGGINS SWAMP	US 701N	4.000	13.500
264000900400	MITCHELL SWAMP	SC 9	6.000	13.500
267003100900	SIMPSON SWAMP	S-31	1.000	13.330
267006500200	GREER SWAMP	S-65	0.000	13.000
264031900400	MILL BRANCH NO.4	SC 319	0.000	13.000
267001900600	LAKE SWAMP	S-19	1.000	13.000
267015400100	SWASH	S-154	2.000	13.000
264090500100	KINGSTON LAKE	SC 905	2.000	13.000
262007600200	LUMBER RIVER SWAMP	US 76	2.000	13.000
267009700501	MAPLE SWAMP	S-97	4.000	13.000
267002300200	CEDAR CREEK	S-23	0.000	12.500
264000945200	MITCHELL SWAMP	SC 9W	0.000	12.500
264000920500	WACCAMAW RIVER	SC 9E	1.000	12.500
264000925200	MITCHELL SWAMP	SC 9E	2.000	12.500
267006200200	SPRING SWAMP	S-62	3.000	12.500
267059100100	MELTON SWAMP	S-591	3.000	12.330
264070700300	NIGGERFIELD SWAMP	SC 707	0.000	12.000
264000940401	BUCK SWAMP BRANCH	SC 9W	0.000	12.000
262070100200	COWFORD SWAMP	US 701	1.000	12.000
264054400200	INTERCOASTAL WATERWAY	SC 544	5.000	12.000
262037800200	LITTLE PEE DEE SWAMP	US 378	23.000	12.000
267011000100	BEAR SWAMP	S-110	2.000	11.500
262070100100	GREAT PEE DEE OVERFLOW	US 701	1.000	11.000
267059100200	BROWN SWAMP	S-591	2.000	11.000
264031900200	MILL BRANCH	SC 319	2.000	11.000
267022700100	WHITE POINT SWASH	S-227	3.000	11.000
264009000300	TILLY SWAMP	SC 90	6.000	11.000
267002000100	INTERCOASTAL WATERWAY	S-20	0.000	10.500

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Horry County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
267002300300	LAKE SWAMP	S-23	0.000	10.500
264041000300	PLEASANT MEADOW SWAMP	SC 410	0.000	10.500
264000920600	WACCAMAW RIVER SWAMP	SC 9E	0.000	10.500
264000940600	WACCAMAW RIVER SWAMP	SC 9W	0.000	10.500
267002300400	LAKE SWAMP	S-23	1.000	10.500
264000940500	WACCAMAW RIVER	SC 9W	1.000	10.500
267034700100	COWPEN SWAMP	S-347	4.000	10.500
267006200100	BRUNSON SWAMP	S-62	6.000	10.500
267016500100	CRAB TREE SWAMP	S-165	2.000	10.000
267004500200	MEADOW SWAMP	S-45	2.000	10.000
264009000200	STERITT SWAMP	SC 90	2.000	10.000
264091700200	LTL PEE DEE RIVER SWAMP	SC 917	12.000	10.000
262050100900	INTERCOASTAL WATERWAY	US 501	0.000	9.500
267009700600	PALMETTO SWAMP	S-97	1.000	9.000
267003100800	BR OF SIMPSON CREEK	S-31	1.000	9.000
267002300100	BOGGY BRANCH	S-23	2.000	9.000
262050103200	WACCAMAW BACKWATER	US 501	2.000	9.000
264090500300	SIMPSON CREEK	SC 905	2.000	9.000
267006600100	SIMPSON CREEK	S-66	2.000	8.990
262070131100	BR OF HUGGINS SWAMP	US 701S	0.000	8.500
267010600100	CRAB TREE SWAMP	S-106	1.000	8.500
267005500100	BUCK CREEK	S-55	2.000	8.500
262001700300	LITTLE RIVER	US 17	0.000	8.000
262050105200	WACCAMAW RIVER	US 501	0.000	8.000
264031900100	MILL BRANCH	SC 319	2.000	8.000
264054400100	LAKEWOOD SWAMP	SC 544	2.000	8.000
262050103300	WACCAMAW BACKWATER NO.2	US 501	2.000	8.000
264090500400	BUCK CREEK	SC 905	4.000	6.000

Marion County

Structure_no	Stream	Route	Obs_scour	Pot_scour
342007600400	CATFISH BRANCH	US 76	15.000	21.990
342030110300	TOBYS MILL CREEK	US 301N	0.000	18.490
347003200200	REEDY CREEK	S-32	6.000	18.490
347006000100	LITTLE PEE DEE RIVER	S-60	10.000	17.330
344004100600	REEDY CREEK	SC 41	8.000	16.000
342037800100	GREAT PEE DEE RIVER	US 378	1.000	15.830
347054300100	BROWNS CANAL	S-543	2.000	15.670
347001900100	SMITH SWAMP	S-19	0.000	15.660
344004100200	MAPLE SWAMP NO.2	SC 41	1.000	15.000
347003100200	OAK SWAMP	S-31	2.000	15.000
344004100100	MAPLE SWAMP NO.1	SC 41	5.000	15.000
342007600700	LITTLE PEE DEE RIVER	US 76	9.000	15.000
342050110600	BACK SWAMP	US 501N	0.000	14.990
347008700100	SMITH SWAMP	S-87	0.000	14.500
347030900100	MILL CREEK	S-309	1.000	14.500
342037800300	MAPLE SWAMP	US 378	0.000	14.000
347004100200	SMITH SWAMP	S-41	1.000	14.000
344004100300	MARSH CREEK	SC 41	1.000	14.000
342037800400	LITTLE PEE DEE SWAMP NO.1	US 378	1.000	14.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Marion County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
347050600100	PITCH POT SWAMP	S-506	0.000	13.500
347003200100	LITTLE REEDY CREEK	S-32	2.000	13.500
347003100100	OAK SWAMP	S-31	3.000	13.330
342037800500	LITTLE PEE DEE SWP NO.2	US 378	0.000	13.000
342037800700	LITTLE PEE DEE SWP NO.4	US 378	0.000	13.000
342037800600	LITTLE PEE DEE SWP NO.3	US 378	0.000	13.000
342050130600	BACK SWAMP	US 501S	0.000	13.000
342050130700	LITTLE PEE DEE SWP NO.1	US 501S	0.000	13.000
342007620200	TOBY'S CREEK	US 76E	0.000	13.000
342050130900	LITTLE PEE DEE SWP NO.3	US 501S	2.000	13.000
347003900200	LITTLE REEDY CREEK	S-39	2.000	12.830
342007640200	TOBYS CREEK	US 76W	1.000	12.500
342030130300	TOBYS MILL CREEK	US 301S	2.000	12.500
342050131000	LITTLE PEE DEE SWP NO.4	US501S	0.000	12.330
342050100300	SMITH SWAMP	US 501	0.000	12.170
344004100800	MAIDEN DOWN SWAMP	SC 41	0.000	12.000
347004100100	MAIDEN DOWN SWAMP	S-41	2.000	12.000
342050110800	LITTLE PEE DEE SWP NO.2	US 501N	2.000	12.000
342050111000	LITTLE PEE DEE SWP NO.4	US 501N	2.000	12.000
342050130800	LITTLE PEE DEE SWP NO.2	US 501S	2.000	12.000
342050101100	LITTLE PEE DEE SWP NO.5	US 501N	4.000	12.000
342050110700	LITTLE PEE DEE SWP NO.1	US 501N	6.000	12.000
342050131100	LITTLE PEE DEE SWP NO.5	US 501S	6.000	12.000
342037800800	LITTLE PEE DEE SWP NO.5	US 378	2.000	11.500
344091700100	LITTLE PEE DEE SWP NO.1	SC 917	0.000	11.000
344004100701	CEDAR BRANCH	SC 41	2.000	11.000
344091700200	LITTLE PEE DEE SWP NO.2	SC 917	12.000	11.000
342050110900	LITTLE PEE DEE SWP NO.3	US 501N	14.000	11.000
342007620100	GREAT PEE DEE RIVER	US 76E	0.000	10.830
347003800100	CATFISH CANAL	S-38	3.000	10.330
342007640100	GREAT PEE DEE RIVER	US 76W	0.000	9.830
344057620200	SMITH SWAMP	SC 576E	0.000	9.500
344057640200	SMITH SWAMP	SC 576W	0.000	9.500

Marlboro County

357002700200	GUNN SWAMP CREEK	S-27	0.000	21.500
352000130100	GREAT PEE DEE RIVER	US 1S	5.000	19.500
354091200100	CROOKED CREEK	SC 912	0.000	18.500
352000110100	GREAT PEE DEE RIVER	US 1N	0.000	17.500
354003800100	THREE CREEKS	SC 38	0.000	15.000
357004700100	CROOKED CREEK	S-47	0.000	14.500
357016500100	WOLF CREEK	S-165	0.000	14.500
357005400100	WOLF CREEK	S-54	0.000	14.500
354038100100	THREE CREEKS	SC 381	1.000	14.500
354000920300	NAKED CREEK	SC 9E	0.000	14.000
354000940300	NAKED CREEK	SC 9W	0.000	14.000
357002300100	HAGINS CREEK	S-23	0.000	13.500
357003400001	LITTLE PEE DEE OVERFLOW	S-34	0.000	13.500
354038100400	BEAVER DAM CREEK NO.1	SC 381	0.000	13.500

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 5--Continued

Marlboro County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
357003400100	LITTLE PEE DEE OVERFLOW	S-34	2.000	13.500
354000905100	MC/CALL MILL CR	SC 9	4.000	13.000
352000110300	PEE DEE OVERFLOW NO.2	US 1N	1.000	12.660
357003400200	LITTLE PEE DEE	S-34	0.000	12.500
357001700100	MC/NAIRS MILL POND	S-17	0.000	12.500
352001500100	GREAT PEE DEE RIVER	US 15	2.000	12.500
352001500200	GREAT PEE DEE SWP NO.1	US 15	0.000	12.000
352000110200	PEE DEE OVERFLOW NO.1	US 1N	0.000	12.000
352000130200	PEE DEE OVERFLOW NO.1	US 1S	0.000	12.000
352000130300	PEE DEE OVERFLOW NO.2	US 1S	0.000	12.000
352001500600	GREAT PEE DEE SWP NO.5	US 15	4.000	12.000
357005500100	NAKED CREEK	S-55	0.000	11.500
357005400200	NAKED CREEK	S-54	2.000	11.500
354008300100	LITTLE PEE DEE RIVER	SC 83	2.000	11.500
354000900400	CROOKED CREEK	SC 9	1.000	11.330
352000100500	WHITES CREEK	US 1	2.000	11.000
357002600100	CROOKED CREEK CANAL	S-26	0.000	10.000
354091200200	NAKED (PLEDGER) CREEK	SC 912	2.000	10.000
352001500400	GREAT PEE DEE SWP NO.3	US 15	2.000	10.000
352001500500	GREAT PEE DEE SWP NO.4	US 15	2.000	10.000
352001500300	GREAT PEE DEE SWP NO.2	US 15	2.000	8.000
354000900500	COTTINGHAM CREEK	SC 9	0.000	5.500

Williamsburg County

Structure_no	Stream	Route	Obs_scour	Pot_scour
457002800300	KINGSTREE SWAMP CANAL	S-28	3.000	21.330
454052700300	BROAD SWAMP	SC 527	14.000	18.990
452005200700	BLACK RIVER	US 52	5.000	18.000
457001600300	BR OF OX SWAMP	S-16	2.000	15.000
457003500300	BR OF BLACK RIVER	S-35	0.000	14.500
457003500200	MILLS BRANCH	S-35	0.000	14.500
457003500400	BR OF BLACK RIVER	S-35	2.000	14.500
457003500500	BR OF BLACK RIVER	S-35	2.000	14.500
457005200100	LAKE SWAMP	S-52	2.000	14.500
457005100100	BLACK MINGO CREEK	S-51	2.000	14.160
457004400200	CLAPP SWAMP TRIB	S-44	0.000	14.000
457018600100	BR OF KINGSTREE SWP CANAL	S-186	1.000	14.000
457003500700	BR OF BLACK RIVER	S-35	1.000	14.000
457003500600	BR OF BLACK RIVER	S-35	2.000	14.000
452005200400	BLACK RIVER SWAMP	US 52	21.000	14.000
457003000100	BLACK RIVER	S-30	0.000	13.830
457002800200	CLAPP SWAMP CANAL	S-28	0.000	13.500
457003300100	SMITH SWAMP	S-33	0.000	13.500
457045400100	SMITHS SWAMP	S-454	2.000	13.500
457012100100	MINGO CREEK	S-121	0.000	13.000
457012100200	MINGO CREEK	S-121	0.000	13.000
452005200500	BLACK RIVER SWAMP	US 52	16.000	13.000
454004100500	BLACK MINGO CREEK	SC 41	0.000	12.500
457022000100	MC/GIRTS SWAMP	S-220	1.000	12.500
457008500200	INDIAN TOWN SWAMP	S-85	1.000	12.500

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 5--Continued

Williamsburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
457019400100	INDIAN TOWN SWAMP	S-194	1.000	12.500
457052500100	JOHNSON SWAMP CREEK	S-525	1.000	12.500
457008500100	BOGGY SWAMP	S-85	1.000	12.500
457022300100	JOHNSON SWAMP	S-223	2.000	12.500
457004500100	WEE TEE BRANCH	S-45	4.000	12.500
457022000200	DICKIE SWAMP	S-220	0.000	12.000
457022000300	DICKIE SWAMP	S-220	0.000	12.000
457003300200	KINGSTREE SWAMP	S-33	0.000	12.000
457046900100	POPLAR HILL BRANCH	S-469	1.000	12.000
457002400500	BURNETTS SWAMP	S-24	2.000	12.000
457002400300	HEADLESS SWAMP	S-24	2.000	12.000
452005200600	BLACK RIVER	US 52	3.000	12.000
457003500800	BR OF BLACK RIVER	S-35	4.000	12.000
457004400100	KINGSTREE SWAMP CANAL	S-44	0.000	11.500
457004000200	MUDDY CREEK	S-40	1.000	11.500
457008400100	INDIAN TOWN SWAMP	S-84	1.000	11.500
457003501000	HOLLIMANS SWAMP	S-35	2.000	11.500
457004700300	SANDY BAY BRANCH	S-47	3.000	11.500
454026100400	BOGGY SWAMP	SC 261	4.000	11.500
454026100500	INDIANTOWN SWAMP	SC 261	4.000	11.500
457003300400	MILL BRANCH	S-33	0.000	11.000
452005200010	SANTEE RIVER SWAMP	US 52	12.000	11.000
457003300300	KINGSTREE SWAMP CANAL	S-33	0.000	10.500
452052100300	OX SWAMP	US 521	0.000	10.500
454052700100	PUDDING SWAMP	SC 527	6.000	10.500
454026100100	MILL BRANCH	SC 261	0.000	10.000
457001600100	JOHNSONS CREEK	S-16	6.000	10.000
457004700100	CLAPP SWAMP	S-47	0.000	9.500
457003500100	BLACK RIVER	S-35	2.000	9.500
457004800100	MT HOPE SWAMP	S-48	2.000	9.500
454026100300	PAISLEY SWAMP	SC 261	4.000	9.500
454004100100	HORSEPEN CREEK	SC 41	4.000	9.500
452052100100	JOHNSONS SWAMP	US 521	6.000	9.500
454004100200	BLACK RIVER	SC 41	7.000	9.500
457038500100	BR OF THORNTREE SWAMP	S-385	2.000	9.000
452005200200	DICKIE SWAMP	US 52	3.000	9.000
457003500900	BENNETT SWAMP	S-35	0.000	8.500
454037700100	BLACK RIVER	SC 377	6.000	7.830
457002400400	CAMPBELLS SWAMP	S-24	1.000	7.500
457022100100	BRANCH OF OX SWAMP	S-221	1.000	7.500
457004000300	MILL CREEK	S-40	2.000	7.500
457004400300	KINGSTREE SWAMP CANAL	S-44	13.000	7.500
457009000100	BR OF THORNTREE SWAMP	S-90	0.000	7.000
454052700200	CLAPP SWAMP	SC 527	4.000	6.830

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 6

Beaufort County

Structure_no	Stream	Route	Obs_scour	Pot_scour
074080200100	LUCY POINT CREEK	SC 802	7.000	33.500
074004600100	NEW RIVER	SC 46	6.000	27.500
072002100600	ALBERGOTTI CREEK	US 21	0.000	19.500
074080200300	BATTERY CREEK OVERFLOW	SC 802	4.000	17.330
077004000100	HABERSHAM CREEK	S-40	7.000	16.500
074004600400	ROSE DHU CREEK	SC 46	3.000	16.000
077007700100	CLUB BRIDGE CREEK	S-77	4.000	16.000
074017000100	CHECHESEE RIVER	SC 170	0.000	15.500
077016900100	TIDAL STREAM	S-169	0.000	15.000
077004500100	TIDAL STREAM	S-45	1.000	15.000
077020000100	SALTWATER CREEK	S-200	4.000	15.000
077003300200	TIDAL CREEK	S-33	0.000	14.500
077005900100	OLD FIELD CREEK	S-59	1.000	14.000
077007200100	DUTCHMAN CREEK	S-72	1.000	14.000
077007900100	JARVIS CREEK	S-79	1.000	14.000
074004600300	STONEY CREEK	SC 46	2.000	14.000
072027820100	OKATIE RIVER	US 278E	5.000	14.000
072027820300	MACKAY CREEK	US 278E	0.000	13.500
077007700300	STATION CREEK NO.	S-77	0.000	12.660
072002130700	WHALE BRANCH	US 21S	0.000	12.500
077003300100	SUGAR HILL CREEK	S-33	1.000	12.500
072001700200	COMBAHEE RIVER	US 17	1.000	12.500
077007700200	STATION CREEK NO.1	S-77	0.000	12.000
072027840100	OKATIE RIVER	US 278W	7.000	12.000
077026500100	SALT CREEK	S-265	3.000	11.660
072027820500	PALMETTO DUNES	US 278E	2.000	11.000
072002100400	COWAN CREEK	US 21	1.000	10.500
072002100100	JOHNSON CREEK	US 21	1.000	10.500
074080200400	BATTERY CREEK	SC 802	2.000	10.500
072027840500	TIDAL LAGOON	US 278W	0.000	10.000
077003100100	CANAL	S-31	6.000	10.000
072002110700	WHALE BRANCH	US 21N	0.000	9.500
072027840300	MACKAY CREEK	US 278W	0.000	9.500
077004300100	TRUE BLUE CREEK	S-43	2.000	9.000
074080200200	BEAUFORT RIVER	SC 802	0.000	8.500
072002100200	HARBOR RIVER	US 21	1.000	8.500
072027820400	SKULL CREEK ELBOW	US 278E	23.000	8.000
072027840400	SKULL CREEK	US 278W	23.000	8.000
079089600100	UNNAMED TIDAL CREEK	L-896	3.000	7.000
077001300100	TIDAL STREAM	S-13	9.000	7.000
072002100500	BEAUFORT RIVER	US 21	0.000	6.500
074017000200	BROAD RIVER DRAW BRIDGE	SC 170	0.000	6.000

Berkeley County

Structure_no	Stream	Route	Obs_scour	Pot_scour
087001600400	SANDY RUN CREEK	S-16	0.000	24.490
087003200100	CYPRESS SWAMP	S-32	0.000	23.000
087006200100	ANCRUM SWAMP	S-62	0.000	22.670
087013600100	GOOSE CREEK	S-136	7.000	20.500
087009700500	BULLHEAD CREEK	S-97	4.000	19.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Berkeley County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
087009700400	MILL CREEK	S-97	6.000	19.000
081002600499	SAW MILL BRANCH	I-26	1.000	18.500
087078800100	TRIB TO CYPRESS SWP	S-788	1.000	17.670
084002700300	MERKEL BRANCH	SC 27	4.000	17.670
087037600100	ALLIGATOR CREEK	S-376	6.000	17.500
082005201100	SANTEE RIVER	US 52	0.000	17.000
087055400200	UNNAMED STREAM	S-554	2.000	16.990
087006400100	UNNAMED STREAM	S-64	3.000	16.990
084004100300	QUENBY CREEK	SC 41	4.000	16.500
087020400100	CRAWL CREEK	S-204	2.000	16.340
087041300200	CANAL	S-413	2.000	16.000
087013300200	QUENBY CREEK	S-133	3.000	16.000
087004400100	STREAM	S-44	4.000	16.000
087075700100	UNNAMED STREAM	S-757	2.000	15.500
084004500105	RE-DIVERSION CANAL	SC 45	2.000	15.500
087069600100	UNNAMED STREAM	S-696	1.000	15.330
087002200100	CALIFORNIA BRANCH	S-22	0.000	15.000
087002400100	LOCAL STREAM	S-24	0.000	15.000
087004700200	CYPRESS SWAMP NO.2	S-47	0.000	15.000
084004100400	TURKEY CREEK	SC 41	1.000	15.000
084040200100	WADBOO SWAMP	SC 402	2.000	15.000
087004800100	WHISKENBOO BRANCH	S-48	3.000	15.000
087053500200	ANCRUN SWAMP	S-535	3.000	15.000
087055400300	UNNAMED STREAM	S-554	3.000	15.000
087060500100	UNNAMED STREAM	S-605	4.000	15.000
082017600100	DEAN SWAMP	US 176	5.000	15.000
087040800100	UNNAMED STREAM	S-408	6.000	14.990
087008800100	TIDAL CREEK	S-88	7.000	14.660
081002640300	CYPRESS SWAMP	I-26W	0.000	14.500
087002900100	GOOSE CREEK	S-29	0.000	14.500
082001707800	WADBOO SWAMP	US 17	2.000	14.330
087012700100	TRIB TO GRAVEL HILL SWAMP	S-127	0.000	14.000
087004600200	UNNAMED STREAM NO.2	S-46	0.000	14.000
087013500100	UNNAMED BRANCH	S-135	1.000	14.000
087044700300	WADBOO SWAMP	S-447	2.000	14.000
087000900300	CANTERHILL SWAMP	S-9	2.000	14.000
082005200700	WALKER SWAMP	US 52	2.000	14.000
087044900100	POPLAR BRANCH	S-449	3.000	14.000
087009900100	BR OF FRENCH QUARTER CR	S-99	3.000	14.000
087057000100	SAWMILL BRANCH	S-570	5.000	14.000
087027500100	CYPRESS SWAMP	S-275	2.000	13.990
082005210100	LAUREL CREEK	US 52N	2.000	13.660
082005230100	LAUREL CREEK	US 52S	5.000	13.660
087001600200	CYPRESS SWAMP	S-16	4.000	13.330
087109200100	UNNAMED STREAM	S-1092	0.000	13.000
082005230200	LAUREL CREEK SWAMP	US 52S	0.000	13.000
082005200800	SANTEE RIVER SWP NO.1	US 52	1.000	13.000
087004500100	UNNAMED STREAM	S-45	2.000	13.000
087004600100	UNNAMED STREAM-1	S-46	2.000	13.000
082017600200	WASSAMASAW SWAMP	US 176	2.000	13.000
087072400100	UNNAMED STREAM	S-724	3.000	13.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Berkeley County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
087079100200	PROVIDENCE CREEK	S-791	3.000	13.000
084004500100	DIVERSION CANAL	SC 45	3.000	13.000
087009700100	STREAM	S-97	2.000	12.670
087004400200	COOPER RIVER BACKWATER	S-44	2.000	12.500
087012600100	GRAVEL HILL SWAMP	S-126	3.000	12.500
087003500100	TRIB TO CRAWL CREEK	S-35	0.000	12.000
087079100400	WAPPOOLA SWAMP	S-791	1.000	12.000
084002700200	SANTEE BRANCH	SC 27	1.000	12.000
087055400100	FAIRLAWN CREEK	S-554	2.000	12.000
087003300300	UNNAMED STREAM	S-33	2.000	12.000
082005200900	SANTEE RV SWAMP NO.2	US 52	2.000	12.000
087003300200	MARTINS CREEK	S-33	3.000	12.000
082005210200	LAUREL CREEK SWAMP	US 52N	4.000	12.000
087009800300	SANDERS CREEK	S-98	1.000	11.670
081002620300	CYPRESS SWAMP	I-26E	2.000	11.500
084004500300	ECHAW CREEK	SC 45	4.000	11.500
087001600300	TRIB TO CYPRESS SWAMP	S-16	0.000	11.000
087035100100	WALKER SWAMP	S-351	0.000	11.000
082005200701	REDIVERSION CANAL	US 52	0.000	11.000
087003500200	REDIVERSION CANAL	S-35	0.000	11.000
087041300100	UNNAMED STREAM	S-413	1.000	11.000
087001600500	UNNAMED STREAM	S-16	3.000	11.000
087009800200	FRENCH QUARTER Creek	S-98	4.000	11.000
087009700300	WHISKENBOO CREEK	S-97	5.000	11.000
087009800100	QUENBY CREEK	S-98	6.000	11.000
087009700200	WHISKENBOO CREEK	S-97	7.000	11.000
087036000100	BROAD AXE CREEK	S-360	0.000	10.500
087004700100	CYPRESS SWAMP NO.1	S-47	0.000	10.000
084000600100	SOIL CONSERVATION CANAL	SC 6	0.000	10.000
087013400100	UNNAMED STREAM	S-134	1.000	10.000
082001707600	SANTEE TAIL RACE CANAL	US 17	1.000	10.000
087036100100	CANADY BRANCH	S-361	2.000	10.000
087047800100	UNNAMED STREAM	S-478	2.000	10.000
087079100300	SKILBERT SWAMP	S-791	3.000	10.000
084004100100	WANDO RIVER	SC 41	0.000	9.500
087080900100	TRIB TO GOOSE CREEK	S-809	1.000	9.500
082001708000	SANTEE RIVER	US 17	1.000	9.500
084040200300	COOPER RIVER TRIB	SC 402	8.000	9.500
082005201000	SANTEE RV SWAMP NO.3	US 52	0.000	9.000
087013500200	UNNAMED BRANCH	S-135	1.000	9.000
087079100500	NORTH MULBERRY CREEK	S-791	1.000	9.000
087038800100	UNNAMED STREAM	S-388	2.000	9.000
087090200100	FAIRLAWN CREEK	S-902	2.000	9.000
087003300100	UNNAMED STREAM	S-33	4.000	9.000
087013300100	TRIB TO QUENBY CREEK	S-133	1.000	8.000
087044700100	UNNAMED STREAM	S-447	1.000	8.000
087070700100	UNNAMED STREAM	S-707	1.000	8.000
087000600100	CRAWL CREEK	S-6	4.000	8.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Charleston County

Structure_no	Stream	Route	Obs_scour	Pot_scour
104017400400	DAWHOO RIVER	SC 174	0.000	25.500
107003200100	NOISETTE CREEK	S-32	5.000	22.670
104017100300	SOL LEGARE CREEK	SC 171	0.000	22.000
107037900100	NOISETTE CREEK	S-379	7.000	21.330
107002600100	BR OF WAPPOO CREEK	S-26	1.000	21.000
107006000100	NOISETTE CREEK	S-60	2.000	20.500
102005210200	FILBIN CREEK	US 52	5.000	20.500
107002000200	TIDAL STREAM	S-20	2.000	20.490
102001710400	RANTOWLES CREEK	US 17N	0.000	20.000
107006800100	TIDAL STREAM	S-68	1.000	20.000
104017400200	RUSSELL CREEK	SC 174	0.000	19.000
102001730300	WALLACE RIVER	US 17S	2.000	19.000
107144000100	BR OF SIMONS CREEK	S-1440	4.000	19.000
104017100200	OAK ISLAND CREEK	SC 171	0.000	18.000
102001731100	AWENDAW CREEK	US 17S	2.000	18.000
102001710300	WALLACE RIVER	US 17N	6.000	18.000
107089400300	BRICKYARD CREEK	S-894	0.000	17.000
104004500200	MECHAW CREEK	SC 45	2.000	16.670
107144200100	UNNAMED STREAM	S-1442	4.000	16.500
107043200100	ALLIGATOR BRANCH	S-432	0.000	16.000
107005400200	SIMMONS CREEK	S-54	1.000	16.000
107005400100	BURDEN'S CREEK	S-54	1.000	15.660
104017100500	WAPPOO CREEK	SC 171	5.000	15.500
104017400300	SAND CREEK	SC 174	0.000	15.000
104016500300	CAW CAW SWAMP NO.1	SC 165	0.000	14.990
107037900200	BR OF NOISETTE CREEK	S-379	2.000	14.660
102001711100	AWENDAW CREEK	US 17N	0.000	14.500
104017400100	STORE CREEK	SC 174	3.000	14.500
107009800100	WANDO RIVER	S-98	2.000	14.330
107031700100	UNNAMED STREAM	S-317	0.000	14.000
107005300100	JAMES ISLAND CREEK	S-53	0.000	14.000
107005400101	UNNAMED STREAM	S-54	0.000	14.000
104016500500	CAW CAW SWAMP NO.3	SC 165	0.000	14.000
102001730400	RANTOWLES CREEK	US 17S	0.000	14.000
107116000100	SWINTON CREEK	S-1160	1.000	14.000
107005400300	TIDAL STREAM	S-54	2.000	14.000
107009700100	TIDAL STREAM	S-97	2.000	14.000
107131000100	MIDDLE BRANCH	S-1310	4.000	14.000
107039000200	TOOGODOO CREEK	S-390	4.000	13.990
107115600100	UNNAMED STREAM	S-1156	0.000	13.660
107184500100	UNNAMED STREAM	S-1845	4.000	13.660
107144200200	SIMMONS CREEK	S-1442	0.000	13.000
104016500400	CAW CAW SWAMP NO.2	SC 165	0.000	13.000
102001700100	EDISTO RIVER SWAMP	US 17	2.000	13.000
104006100200	CHURCH CREEK	SC 61	1.000	12.990
104070000200	PENNYS CREEK	SC 700	1.000	12.500
107102800100	JAMES ISLAND CREEK	S-1028	3.000	12.500
104016500600	UNNAMED STREAM	SC 165	0.000	12.000
107002000201	TRIB TO BOHICKET CREEK	S-20	1.000	12.000
102001703100	SHEM CREEK	US 17	2.000	12.000
107089400100	NOISETTE CREEK	S-894	0.000	11.670

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Charleston County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
104070300100	INTRACOASTAL WATERWAY	SC 703	0.000	11.500
102001710600	ASHLEY RIVER	US 17N	0.000	11.500
104017400500	TOOGOODOO CREEK	SC 174	2.000	11.500
107127100100	STREAM	S-1271	0.000	11.000
107005300200	UNNAMED STREAM	S-53	0.000	11.000
104004500100	WAMBAW CREEK	SC 45	0.000	11.000
102001730200	MIDDLE BRANCH	US 17S	0.000	11.000
107009100100	UNNAMED STREAM	S-91	1.000	11.000
107005400500	TIDAL STREAM	S-54	2.000	11.000
107009200100	MELICHAMP CREEK	S-92	2.000	11.000
107085700300	NORTH COLLINS CREEK	S-857	5.000	10.990
102001730600	ASHLEY RIVER	US 17S	0.000	10.500
107163200100	SIMONS CREEK	S-1632	0.000	10.000
102001710900	COOPER RIVER	US 17N	0.000	10.000
107103200100	STREAM	S-1032	1.000	10.000
107133200100	UNNAMED STREAM	S-1332	2.000	10.000
107039000100	SWINTON CREEK	S-390	2.000	10.000
107132100100	LOCAL STREAM	S-1321	4.000	10.000
107184600100	TIDAL STREAM	S-1846	3.000	9.670
104003111300	ASHLEY RIVER	I-526E	0.000	9.500
104070000100	CHURCH CREEK	SC 700	0.000	9.500
102005240400	GOOSE CREEK	US 52 W	0.000	9.500
102005220400	GOOSE CREEK	US 52E	0.000	9.500
107096700100	ABBAPOOLA CREEK	S-967	2.000	9.500
104016500101	TIDAL CREEK	SC 165	0.000	9.000
102001710200	TEA FARM BRANCH	US 17N	0.000	9.000
102001730900	COOPER RIVER	US 17S	0.000	9.000
104016500100	MEGGETT CREEK	SC 165	2.000	9.000
104003131300	ASHLEY RIVER	I-526W	0.000	8.500
107005700200	LOCAL-UNNAMED	S-57	0.000	8.000
107005700100	LOCAL-UNNAMED	S-57	0.000	8.000
107002000100	BOHICKETT CREEK	S-20	2.000	8.000
104070300200	BREACH INLET	SC 703	2.000	8.000
107010200100	FILBIN CREEK	S-102	3.000	8.000
107133600100	UNNAMED STREAM	S-1336	3.000	8.000
107002000300	STONO RIVER	S-20	0.000	7.500
104070000299	TIDAL CREEK	SC 700	0.000	7.500
104016500200	MELICHAMP BRANCH	SC 165	1.000	7.500
109443800100	TIDAL CREEK	L-4438	2.000	7.500
107088100100	UNNAMED STREAM	S-881	1.000	7.000
104070000300	STONO RIVER	SC 700	2.000	7.000
107005400400	TIDAL STREAM	S-54	4.000	7.000
104017100100	FOLLY RIVER	SC 171	0.000	6.500
107103200200	LAKE AWENDAW	S-1032	0.000	6.000
107085700200	MONTGOMERY CREEK	S-857	8.000	6.000

Colleton County

Structure_no	Stream	Route	Obs_scour	Pot_scour
157006600700	CALFPEN SWAMP	S-66	1.000	21.000
157023300300	REMICH SWAMP	S-233	3.000	20.660

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Colleton County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
157002600100	ASHEPOO RIVER	S-26	2.000	20.500
157011600100	IRELAND CREEK	S-116	8.000	20.330
152001700400	EDISTO RIVER	US 17	5.000	20.000
157012800100	IRELAND CREEK	S-128	5.000	19.660
152002100800	BUCKHEAD CREEK NO.1	US 21	0.000	19.500
152002100700	BUCKHEAD CREEK NO.2	US 21	0.000	19.000
157003400300	ALLEN CREEK	S-34	3.000	19.000
157008900100	JONES SWAMP	S-89	4.000	18.500
157004500300	CHESSEY CREEK	S-45	1.000	18.000
157004400100	UNNAMED STREAM	S-44	0.000	17.670
157053500100	UNNAMED STREAM	S-535	0.000	17.000
157006400200	INDIAN CREEK	S-64	5.000	17.000
157011400300	SANDY RUN	S-114	2.000	16.000
157012600100	TRIB TO DOCTOR CREEK	S-126	5.000	16.000
156150100100	IRELAND CREEK	P-1501	9.000	16.000
157004100300	IVANHOE CREEK	S-41	7.000	15.990
157032900100	RICE PATCH CREEK	S-329	0.000	15.500
157029500100	UNNAMED STREAM	S-295	1.000	15.340
157004100100	CALFPEN SWAMP	S-41	0.000	15.000
157004100200	CALFPEN SWAMP	S-41	0.000	15.000
157043600100	UNNAMED	S-436	1.000	15.000
152002100200	BLACK CREEK	US 21	2.000	15.000
157004900200	JONES SWAMP	S-49	3.000	15.000
151009530100	COMBAHEE RIVER	I-95S	4.000	15.000
154006300300	DEEP CREEK	SC 63	6.000	15.000
154006400400	BUCKHEAD CREEK	SC 64	12.000	15.000
154006400500	TRIB TO BUCKHEAD CREEK	SC 64	12.000	15.000
157009100100	UNNAMED	S-91	1.000	14.990
157003500200	SANDY RUN CREEK	S-35	2.000	14.670
157004200100	WILLOW SWAMP	S-42	0.000	14.500
157006700100	BUCKHEAD CREEK	S-67	0.000	14.000
157032900200	RICE PATCH CREEK	S-329	0.000	14.000
152001708000	EDISTO RIVER SWAMP NO.1	US 17	0.000	14.000
157007400300	HOG BRANCH	S-74	1.000	14.000
157002800200	BLACK CREEK	S-28	1.000	14.000
157033500100	UNNAMED STREAM	S-335	1.000	14.000
154006300400	LTL SALKEHATCHIE RIV NO.1	SC 63	1.000	14.000
152001708100	EDISTO RIVER SWP NO.2	US 17	2.000	14.000
154006400900	CHESSEY CREEK	SC 64	6.000	14.000
154006300600	LTL SALKEHATCHIE RV NO.3	SC 63	7.000	14.000
157004000400	CHESSEY CREEK	S-40	0.000	13.500
157004500100	BAPTIST CHURCH CREEK	S-45	0.000	13.500
154021700200	BUCKHEAD CREEK	SC 217	0.000	13.500
152001707400	GREAT SWAMP NO.1	US 17	0.000	13.500
152001707600	GREAT SWAMP NO.2	US 17	1.000	13.500
154006400300	LTL SALKEHATCHIE RIVER	SC 64	3.000	13.500
152060100100	SALKEHATCHIE RIVER	US 601	6.000	13.500
157006600500	TRIB TO COMBAHEE RIVER	S-66	2.000	13.330
154006400700	JONES SWAMP	SC 64	4.000	13.330
151009510200	COMBAHEE SWAMP	I-95N	0.000	13.000
151009510300	GREAT SWAMP	I-95N	0.000	13.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 6--Continued

Colleton County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
151009530200	COMBAHEE SWAMP	I-95S	0.000	13.000
157004600200	SANDY RUN CREEK	S-46	0.000	13.000
157005100200	TRIB TO DOCTORS CREEK	S-51	0.000	13.000
157006500200	SHEREAU BRANCH	S-65	0.000	13.000
151009530300	GREAT SWAMP	I-95S	2.000	13.000
157008500100	UNNAMED STREAM	S-85	2.000	13.000
157016600100	TRIB TO INDIAN CREEK	S-166	2.000	13.000
154065100200	HORSE PEN BRANCH	SC 651	3.000	13.000
157011400100	BLACK CREEK	S-114	6.000	13.000
154006300700	LTL SALKEHATCHIE RIVER	SC 63	16.000	13.000
157004500400	LITTLE CHESSEY CREEK	S-45	2.000	12.660
157004000300	BAPTIST CREEK	S-40	3.000	12.660
157004500500	FULLER SWAMP	S-45	0.000	12.500
157002700100	WILLOW SWAMP	S-27	0.000	12.500
154006401000	HORSE SHOE CREEK	SC 64	0.000	12.500
152001707100	COMBAHEE RIVER	US 17	1.000	12.500
154064100200	WILLOW SWAMP	SC 641	7.000	12.500
152001708200	EDISTO RIVER SWAMP NO.3	US 17	0.000	12.000
157002100100	TRIB EDISTO RIVER	S-21	1.000	12.000
157019300200	TRIB TO BLACK CREEK	S-193	1.000	12.000
157003400100	TRIB TO ALLEN CREEK	S-34	1.000	12.000
157045300200	SOIL CONSERVATION CANAL	S-453	1.000	12.000
157004000200	CHURCH CREEK	S-40	2.000	12.000
157004900100	JONES SWAMP	S-49	4.000	12.000
152001707500	IRELAND CREEK	US 17	10.000	12.000
157003500100	DEED CREEK	S-35	4.000	11.670
154006100500	EDISTO RIVER SWAMP	SC 61	0.000	11.500
157003300100	INDIAN CREEK	S-33	1.000	11.500
154006300200	RICE PATCH CREEK	SC 63	5.000	11.500
154006300500	LTL SLAKEHATCHIE RV NO.2	SC 63	12.000	11.500
157006500100	FULLER SWAMP	S-65	0.000	11.160
157019300100	TRIB TO BLACK CREEK	S-193	0.000	11.000
157006300200	BUCKHEAD CREEK	S-63	0.000	11.000
154021200100	BUCKHEAD CREEK NO.1	SC 212	0.000	11.000
154021200200	BUCKHEAD CREEK NO.2	SC 212	0.000	11.000
154006100600	EDISTO RIVER SWAMP	SC 61	0.000	11.000
157042900100	UNNAMED	S-429	1.000	11.000
157004100400	JOHNO CREEK	S-41	2.000	11.000
157004400200	DOCTORS CREEK	S-44	2.000	11.000
157002400200	BEAR CREEK	S-24	3.000	11.000
157013200100	UNNAMED STREAM	S-132	4.000	11.000
152001500100	IRELAND CREEK	US 15	8.000	11.000
157004500200	TRIB TO BAPTIST CHURCH CR	S-45	7.000	10.660
157008800100	ASHEPOO RIVER	S-88	0.000	10.500
152001700100	ASHEPOO RIVER	US 17	0.000	10.500
157011400200	TRIB TO BLACK CREEK	S-114	0.000	10.000
157014600100	UNNAMED STREAM	S-146	1.000	10.000
157045300100	UNNAMED STREAM	S-453	1.000	10.000
157071200100	UNNAMED STREAM	S-712	1.000	10.000
157008900200	TRIB TO JONES SWAMP	S-89	1.000	10.000
157006400100	INDIAN CREEK	S-64	2.000	10.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Colleton County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
157012400100	UNNAMED STREAM	S-124	3.000	10.000
157012600200	TRIB TO DOCTOR CREEK	S-126	4.000	10.000
154006400800	CHESSEY CREEK	SC 64	4.000	10.000
157012900100	WOLF CREEK	S-129	5.000	10.000
157023500100	STREAM	S-235	5.000	10.000
154006300100	BIG SALKEHATCHIE RIVER	SC 63	6.000	10.000
157004000100	TUPELO SWAMP	S-40	2.000	9.660
154030300100	ASHEPOO RIVER	SC 303	0.000	9.500
157006800100	IRELAND CREEK	S-68	7.000	9.330
157006300100	BUCKHEAD CREEK	S-63	8.000	9.330
157002800100	BULL CREEK	S-28	0.000	9.000
157004200300	UNNAMED	S-42	0.000	9.000
152002100300	SANDY RUN CREEK	US 21	2.000	9.000
157045900100	IRELAND CREEK	S-459	8.000	9.000
154021700100	LITTLE SWAMP	SC 217	0.000	8.500
157025600100	UNNAMED STREAM	S-256	2.000	8.500
151009510100	COMBAHEE RIVER	I-95N	0.000	8.000
157037100100	UNNAMED STREAM	S-371	2.000	8.000
157004800200	BUCKHEAD CREEK	S-48	2.000	7.000
157003400200	TRIB TO ALLEN CREEK	S-34	3.000	7.000

Dorchester County

Structure_no	stream	Route	Obs_scour	Pot_scour
187019500200	UNNAMED STREAM	S-195	8.000	22.660
187001900300	POLK SWAMP	S-19	2.000	22.330
187005600200	FOUR HOLE SWAMP	S-56	0.000	22.000
184016500600	ASHLEY RIVER OVERFLOW	SC 165	7.000	20.330
184016500800	DORCHESTER CREEK	SC 165	5.000	19.000
187020700100	SAW MILL BRANCH CANAL	S-207	0.000	18.000
182001707100	EDISTO RIVER	US 17A	5.000	18.000
182001500100	EDISTO RIVER	US 15	6.000	18.000
187037700100	UNNAMED	S-377	9.000	18.000
187004900400	POLK SWAMP	S-49	6.000	17.670
187002900100	EDISTO RIVER	S-29	0.000	17.500
187001900700	FOUR HOLE SWAMP	S-19	2.000	17.500
184016500700	ASHLEY RIVER	SC 165	2.000	17.160
187013900100	LITTLE WALNUT BRANCH	S-139	2.000	17.000
187005500100	LITTLE WALNUT BRANCH	S-55	3.000	17.000
187001800100	MILL BRANCH	S-18	7.000	17.000
187001900100	BOX BRANCH	S-19	10.000	17.000
187008400100	FISHBURNE CREEK	S-84	0.000	16.990
187020800100	UNNAMED	S-208	4.000	16.330
187002200300	GREAT CYPRESS SWAMP	S-22	0.000	16.000
187029900100	UNNAMED STREAM	S-299	2.000	16.000
187038000100	STREAM	S-380	4.000	16.000
187002500100	HALFWAY GUT CREEK	S-25	10.000	16.000
187002600100	POLK SWAMP	S-26	0.000	15.830
187001600200	POLK SWAMP	S-16	8.000	15.670

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Dorchester County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
187001900500	INDIAN FIELDS SWAMP	S-19	2.000	15.500
187001900400	POLK SWAMP	S-19	2.000	15.500
187002200200	TRIB TO RUMPS HILL CREEK	S-22	6.000	15.330
182001500700	BRANCH TO EDISTO RIVER	US 15	0.000	15.000
182001501500	FOUR HOLE SWAMP	US 15	0.000	15.000
187002800300	WALNUT BRANCH	S-28	4.000	15.000
187001900600	POORLY BRANCH	S-19	6.000	15.000
187002900200	EDISTO RIVER RELIEF	S-29	1.000	14.670
187005600100	FOUR HOLE SWAMP	S-56	1.000	14.660
187005800200	CYPRESS SWAMP	S-58	2.000	14.660
182001501100	INDIAN FIELD SWAMP	US 15	0.000	14.500
182007800300	INDIAN FIELD SWAMP	US 78	1.000	14.500
187005300100	BEAR BRANCH	S-53	0.000	14.000
187016200101	UNNAMED STREAM	S-162	0.000	14.000
187004900300	POLK SWAMP	S-49	0.000	14.000
187005600300	FOUR HOLE SWAMP	S-56	0.000	14.000
184016500400	FISHBOURNE CREEK	SC 165	0.000	14.000
184016500500	RANTOWLES CREEK	SC 165	0.000	14.000
184016500300	FISHBOURNE CREEK	SC 165	1.000	14.000
187016200200	UNNAMED STREAM	S-162	2.000	14.000
187007100200	UNNAMED STREAM	S-71	4.000	14.000
187002900300	EDISTO RIVER RELIEF	S-29	9.000	14.000
187022400100	SAWMILL BRANCH	S-224	0.000	13.660
182007800500	FOUR HOLE SWAMP	US 78	3.000	13.500
182001707400	SCOTTS CREEK	US 17	13.000	13.340
181002620300	FOUR HOLE SWAMP	I-26E	0.000	13.000
187056400100	UNNAMED STREAM	S-564	0.000	13.000
187037800100	BIG BRANCH	S-378	1.000	13.000
182007800600	FOUR HOLE SWAMP	US 78	1.000	13.000
187002200202	GREEN BAY BRANCH	S-22	2.000	13.000
182001501400	FOUR HOLE SWAMP	US 15	2.000	13.000
187012200100	UNNAMED	S-122	3.000	13.000
187005400300	TRIB TO INDIAN FIELD SWP	S-54	3.000	13.000
187023000100	EAGLE CREEK	S-230	2.000	12.670
187005800101	GREEN BAY BRANCH	S-58	2.000	12.660
187070600100	SAWMILL BRANCH	S-706	8.000	12.660
187004900100	COW TAIL CREEK	S-49	0.000	12.500
182001707500	ASHELY RIVER	US 17	0.000	12.500
187061000100	GUM BRANCH	S-610	3.000	12.500
187001800200	CATTLE CREEK	S-18	4.000	12.500
184045300200	FOUR HOLE SWAMP	SC 453	6.000	12.500
187057800100	UNNAMED STREAM	S-578	4.000	12.330
181009530200	TRIB TO CROOKED CREEK	I-95S	0.000	12.000
187005600400	UNNAMED STREAM	S-56	0.000	12.000
187005600500	UNNAMED STREAM	S-56	0.000	12.000
187005800100	TRIB TO RUMPHS MILL CREEK	S-58	0.000	12.000
187008400200	BR OF DRAYTON SWAMP	S-84	0.000	12.000
182007800100	CATTLE CREEK	US 78	0.000	12.000
187004900200	COW TAIL CREEK	S-49	1.000	12.000
187002200201	PLATT BRANCH	S-22	2.000	12.000
187006500100	SAW MILL BRANCH	S-65	2.000	12.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 6--Continued

Dorchester County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
187037800200	UNNAMED	S-378	5.000	12.000
181009510200	TRIB TO CROOKED CREEK	I-95N	7.000	12.000
181009510300	TRIB TO CROOKED CREEK	I-95N	9.000	12.000
181009531000	INDIAN FIELD SWAMP	I-95S	2.000	11.990
187026300100	SAW MILL CANAL	S-263	0.000	11.660
181009510100	EDISTO RIVER	I-95N	0.000	11.500
181009530300	TRIB TO CROOKED CREEK	I-95S	0.000	11.000
182001500600	BRANCH TO EDISTO RIVER	US 15	0.000	11.000
187024400100	UNNAMED STREAM	S-244	1.000	11.000
182001707200	DRAYTON SWAMP	US 17	3.000	11.000
187002200100	RUMPHS HILL CREEK	S-22	4.000	11.000
187002900500	EDISTO RIVER RELIEF	S-29	4.000	11.000
187005400100	SPRING BRANCH	S-54	4.000	11.000
182007800200	POLK SWAMP	US 78	4.000	11.000
184006100100	EDISTO RIVER	SC 61	0.000	10.990
181009530100	EDISTO RIVER	I-95S	0.000	10.500
187001600400	COW TAIL CREEK	S-16	4.000	10.340
184016500200	FISHBOURNE CREEK	SC 165	4.000	10.330
181009530400	CROOKED CREEK	I-95S	0.000	10.000
187013600100	BRANCH TO CAPTAINS CREEK	S-136	0.000	10.000
182001500400	EDISTO RIVER RELIEF	US 15	0.000	10.000
187002000100	TRIB TO INDIAN FIELD SWP	S-20	1.000	10.000
187066800100	TRIB TO INDIAN FIELD SWP	S-668	2.000	10.000
187008300200	UNNAMED STREAM	S-83	2.000	10.000
187017400100	CAPTAINS CREEK	S-174	3.000	10.000
187001600300	POLK SWAMP	S-16	6.000	10.000
181002640300	FOUR HOLE SWAMP	I-26W	10.000	9.333
187008600200	TRIB TO INDIAN FIELD SWP	S-86	0.000	9.000
187016200102	FISHBOURNE CREEK	S-162	0.000	9.000
187016200300	UNNAMED STREAM	S-162	0.000	9.000
182001500500	CROOKED CREEK	US 15	0.000	9.000
182001500300	EDISTO RIVER RELEIF NO.1	US 15	0.000	9.000
182001500200	EDISTO RIVER RELIEF NO.2	US 15	0.000	9.000
187029800100	TRIB TO CYPRESS SWAMP	S-298	1.000	9.000
187037700200	UNNAMED	S-377	2.000	9.000
187019900100	BR OF DORCHESTER CREEK	S-199	3.000	9.000
187008300100	POLK SWAMP	S-83	3.000	9.000
187007100100	COW TAIL CREEK	S-71	7.000	9.000
187001600100	INDIAN FIELD SWAMP	S-16	3.000	8.500
181009510400	CROOKED CREEK	I-95N	0.000	8.000
187011900100	UNKNOWN STREAM	S-119	0.000	8.000
187017400200	TRIB TO CAPTAINS CREEK	S-174	0.000	8.000
187005000200	UNNAMED	S-50	1.000	8.000
181009511000	INDIAN FIELD SWAMP	I-95N	6.000	8.000
187005400200	INDIAN FIELD SWAMP	S-54	2.000	7.500
184016500100	TRIB TO RANTOWLES CREEK	SC 165	0.000	7.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 6--Continued

Jasper County

Structure_no	Stream	Route	Obs_scour	Pot_scour
277003300100	UNNAMED	S-33	6.000	21.000
272032100700	CYPRESS SWAMP	US 321	5.000	19.000
277003400300	UNNAMED STREAM	S-34	0.000	17.000
272001700700	BAHAMA CREEK	US 17	0.000	16.670
277003400102	TRIB TO UNION CR.	S-34	5.000	16.490
274017007200	TRIB TO NEW RIVER	SC 170	0.000	16.000
277002900100	GREAT SWAMP	S-29	0.000	15.330
272001701200	TULLIFINNY RIVER NO. 1	I-95S	0.000	15.170
277011900200	CYPRESS BRANCH	S-119	0.000	15.000
277001400200	GREAT SWAMP	S-14	0.000	15.000
277016900100	GREAT SWAMP	S-169	0.000	15.000
272001700900	GREAT SWAMP	US 17	4.000	15.000
274046200300	BEES CREEK	SC 462	0.000	14.660
277011900100	COLEMAN LAKE BRANCH	S-119	0.000	14.500
272027800100	CYPRESS CREEK	US 278	13.000	14.500
277024300100	BROADWATER CREEK	S-243	0.000	14.330
277001600100	BEAVERDAM CREEK	S-16	1.000	14.330
277001400100	GREAT SWAMP	S-14	0.000	14.000
277027700100	UNNAMED STREAM	S-277	0.000	14.000
277003900100	LITTLE BEES CREEK	S-39	0.000	14.000
274011900200	SAVANNAH RIVER SWAMP	SC 119	0.000	14.000
274046200400	TRIB TO CHELSEA CREEK	SC 462	0.000	14.000
272001700800	BAGSHAW CREEK	US 17	2.000	14.000
271009501299	TULLIFINNY RIVER	I-95	0.000	13.500
271009511100	COOSAWHATCHIE RIVER	I-95N	0.000	13.500
271009531200	TULLIFINNY RIVER	I-95S	0.000	13.500
277014100100	NEW RIVER	S-141	0.000	13.500
277017000100	SAVANNAH RIVER OVERFLOW	S-170	1.000	13.500
272001700400	BEACH HILL CANAL	US 17	0.000	13.000
272001700500	SAVANNAH RIVER SWAMP	US 17	0.000	13.000
272001700200	LAURA HILL SWAMP	US 17	1.000	13.000
277003400200	MILLSTONE CREEK	S-34	2.000	13.000
271009511200	TULLIFINNY RIVER	I-95N	0.000	12.500
272001701300	TULLIFINNY RIVER NO.2	I-95S	0.000	12.500
271009531100	COOSAWHATCHIE RIVER	I-95S	2.000	12.500
277017500100	STREAM	S-175	0.000	12.330
271009510700	BAHAMA SWAMP	I-95N	0.000	12.000
274017007100	MONKEY JOHN SWAMP	SC 170	0.000	12.000
272001700300	SAVANNAH R. OVERFLOW	US 17	0.000	12.000
271009530700	BAHAMA SWAMP	I-95S	1.000	12.000
272032100800	BLACK SWAMP LONG BRANCH	US 321	2.000	12.000
271009510900	GREAT SWAMP	I-95N	0.000	11.500
271009530900	GREAT SWAMP	I-95S	0.000	11.500
277003400100	MONGON SWAMP	S-34	0.000	11.500
271009510800	BAGSHAW SWAMP	I-95N	0.000	11.000
271009530300	SAND ISLAND SWAMP	I-95S	0.000	11.000
274011900400	BLACK SWAMP NO.2	SC 119	0.000	11.000
277008800200	BRICKYARD SWAMP	S-88	1.000	11.000
274046200500	EUHAW CREEK	SC 462	0.000	10.500
272001700100	LITTLE BACK RIV-GA. LINE	US 17	0.000	10.500
272001701100	COOSAWHATCHIE RIVER	I-95	2.000	10.500

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 6--Continued

Jasper County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
271009530800	BAGSHAW SWAMP	I-95S	0.000	10.000
271009510300	SAND ISLAND SWAMP	I-95N	0.000	10.000
274046200200	BAY SWAMP	SC 462	0.000	10.000
272027800600	EUHAW CREEK	US 278	3.000	10.000
277003900200	BEES CREEK	S-39	4.000	10.000
274011900300	BLACK SWAMP NO.1	SC 119	0.000	9.000
274033600100	GREAT SWAMP	SC 336	0.000	9.000
271009530200	SAVANNAH OVERFLOW	I-95S	4.000	9.000
271009510200	SAVANNAH OVERFLOW	I-95N	10.000	9.000
277003900300	GREAT SWAMP	S-39	0.000	8.500
274011900100	SAVANNAH RIVER	SC 119	6.000	8.500
274000300200	CYPRESS CREEK	SC 3	0.000	7.500

SCDOT District 7

Allendale County

032032100101	JACKSON CREEK	US 321	4.000	24.000
037010200100	BRIER CREEK	S-102	0.000	21.330
032030100600	SALKEHATCHIE RIVER SWAMP	US 301	2.000	19.000
037002300100	BEACH BRANCH	S-23	0.000	17.000
034000300300	LITTLE BRIER CREEK	SC 3	0.000	16.500
037001900100	COOSAWHATCHIE RIVER	S-19	6.000	15.670
032030100700	SALKEHATCHIE RIVER SWAMP	US 301	0.000	14.000
034000300400	MILLER CREEK	SC 3	3.000	14.000
034000300100	KING CREEK	SC 3	0.000	13.000
034000300200	WATCHCAW CREEK	SC 3	1.000	13.000
037002100100	COOSAWATCHIE RIVER	S-21	2.000	13.000
032032100200	MILLER CREEK	US 321	5.000	13.000
032030100300	SAVANNAH RIVER SWAMP	US 301	8.000	13.000
032030100400	LITTLE BRIER CREEK	US 301	10.000	13.000
034064100300	SALKEHATCHIE RIVER	SC 641	1.000	12.500
037003900100	JACKSON BRANCH	S-39	0.000	12.000
034012500200	LOWER THREE RUNS CREEK	SC 125	3.000	12.000
032030100200	SAVANNAH RIVER SWAMP	US 301	14.000	12.000
037004700200	COOSAWHATCHIE RIVER	S-47	4.000	11.000
037034500100	WELLS BRANCH	S-345	1.000	10.670
037004800100	PRETTY CREEK	S-48	0.000	10.000
034064100100	JACKSON CREEK	SC 641	0.000	10.000
032032100100	JACKSON CREEK	US 321	0.000	10.000
032030100100	SAVANNAH RIVER	US 301	0.000	9.000
037028900100	LOG BRANCH	S-289	1.000	8.000
032030100800	SALKEHATCHIE RIVER	US 301	8.000	7.830

Bamberg County

052002100100	EDISTO RIVER	US 21	3.000	19.500
052030130400	SOUTH EDISTO RIVER	US 301S	5.000	17.500
057002100200	LITTLE SALKEHATCHIE RIVER	S-21	2.000	16.000

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 7--Continued

Bamberg County--Continued'

Structure_no	Stream	Route	Obs_scour	Pot_scour
057003200200	LITTLE SALKEHATCHIE RIVER	S-32	2.000	15.670
057004100100	LITTLE SALKEHATCHIE RIVER	S-41	0.000	15.330
057002000300	SOUTH EDISTO RIVER SWAMP	S-20	0.000	15.000
057002000500	SOUTH EDISTO RIVER SWAMP	S-20	0.000	15.000
057004200100	BRIER BRANCH	S-42	0.000	15.000
054064100200	SALKEHATCHIE RIVER SWAMP	SC 641	0.000	15.000
052060100100	LITTLE SALKEHATCHIE	US 601	0.000	15.000
052032100200	LITTLE SALKEHATCHIE	US 321	0.000	14.500
057002000400	SOUTH EDISTO RIVER SWAMP	S-20	0.000	14.000
057004200200	BRIER BRANCH	S-42	0.000	14.000
054021700200	LITTLE SALKEHATCHIE	SC 217	0.000	14.000
057002100100	LITTLE SALKEHATCHIE RIVER	S-21	0.000	13.660
054021700100	TRIB TO LTL SALKEHATCHIE	SC 217	0.000	13.000
052007800200	BRIAR BRANCH	US 78	0.000	13.000
057003100100	KIRKLAND CREEK	S-31	4.000	13.000
057002000600	SOUTH EDISTO RIVER	S-20	0.000	12.500
057003200100	LITTLE SALKEHATCHIE RIVER	S-32	4.000	12.000
054064100100	SALKEHATCHIE RIVER	SC 641	2.000	11.500
052007800400	EDISTO RIVER OVERFLOW	US 78	2.000	11.500
057002000100	BRIER BRANCH	S-20	0.000	11.000
052030130200	LEMON SWAMP	US 301S	1.000	11.000
052032100400	SOUTH EDISTO RIVER SWAMP	US 321	4.000	11.000
052030110200	LEMON SWAMP	US 301N	6.000	11.000
057002000200	BRIER BRANCH	S-20	0.000	10.000
052030110300	SOUTH EDISTO RIVER SWAMP	US 301N	0.000	10.000
052030130100	LITTLE SALKEHATCHIE RIVER	US 301S	0.000	10.000
052032100300	SOUTH EDISTO RIVER SWAMP	US 321	0.000	10.000
054007000100	LITTLE SALKEHATCHIE RIVER	SC 70	3.000	10.000
052030110400	SOUTH EDISTO RIVER	US 301N	0.000	9.500
052032100500	S. EDISTO RIVER	US 321	0.000	9.500
057001200100	GRAPEVINE SWAMP	S-12	0.000	9.000
057002600100	GALL BRANCH	S-26	0.000	9.000
052030110100	LITTLE SALKEHATCHIE RIVER	US 301N	0.000	9.000
052030130300	SOUTH EDISTO RIVER SWAMP	US 301S	0.000	9.000
052060100200	LEMON CREEK	US 601	0.000	9.000
052007800300	BRIAR BRANCH	US 78	0.000	8.000
057002600200	LITTLE SALKEHATCHIE RIVER	S-26	0.000	7.000
057002600300	LITTLE SALKEHATCHIE SWAMP	S-26	0.000	7.000

Barnwell County

Structure_no	Stream	Route	Obs_scour	Pot_scour
067008300100	TURKEY CREEK	S-83	3.000	23.000
067005700200	SALKEHATCHIE RIVER	S-57	0.000	20.500
067002000200	THREE RUNS CREEK	S-20	4.000	19.160
067022400100	TURKEY CREEK	S-224	0.000	18.660
067002000100	SALKEHATCHIE RIVER	S-20	2.000	17.500
067005800100	HERCULES CREEK	S-58	4.000	16.000
067003200200	SPUR BRANCH	S-32	0.000	15.500
067008700100	WHINDY HILL CREEK	S-87	2.000	15.500
067003800200	SHEEPFORD BRANCH	S-38	0.000	15.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 7--Continued

Barnwell County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
062027800400	TURKEY CREEK	US 278	1.000	15.000
064000300300	SOUTH EDISTO RIVER SWAMP	SC 3	8.000	15.000
064012500200	PEN BRANCH	SC 125	0.000	14.660
067016800100	TURKEY CREEK	S- 168	0.000	14.000
067003200100	WHALEY BRANCH	S-32	0.000	14.000
064000300400	SOUTH EDISTO RIVER SWAMP	SC 3	0.000	14.000
067001400100	HERCULES CREEK	S-14	1.000	14.000
067008400100	LITTLE SALKEHATCHIE CR	S-84	3.000	14.000
064003900200	SOUTH EDISTO RIVER	SC 39	4.000	14.000
067015900100	TURKEY CREEK POND	S-159	0.000	13.500
067005700100	SALKEHATCHIE RIVER SWAMP	S-57	1.000	13.500
067007000100	SALKEHATCHIE RIVER	S-70	4.000	13.500
062027800500	SALKEHATCHIE RIVER	US 278	4.000	13.500
067001300100	TINKER CREEK	S-13	0.000	13.000
067016900200	TURKEY CREEK	S-169	0.000	13.000
067003800100	WHALEY BRANCH	S-38	0.000	13.000
067008000200	GANT MILL CREEK	S-80	0.000	13.000
067002000300	BIG BRANCH	S-20	1.000	13.000
067008000100	HAYES MILL CREEK	S-80	1.000	13.000
067009000100	TRIB TO LAKE BROWN	S-90	3.000	12.990
067006200100	STRINGFELLOW CREEK	S-62	0.000	12.500
067015000100	TOBY CREEK	S-150	0.000	12.000
067018900100	WHALEY BRANCH	S-189	0.000	12.000
067002100200	ROSEMARY CREEK	S-21	0.000	12.000
067003900100	BENTLEYS BRANCH	S-39	0.000	12.000
064012500400	STEEL CREEK	SC 125	0.000	12.000
064006440100	SALKEHATCHIE RIVER	SC 64W	6.000	11.660
067012100100	TRIB TO LOWER THREE RUNS	S-121	1.000	11.000
064006420100	SALKEHATCHIE RIVER	SC64E	2.000	11.000
067002100100	ROSEMARY CREEK	S-21	0.000	10.000
064000300500	S. EDISTO RIVER	SC 3	10.000	10.000
064012500100	FOUR MILE CREEK	SC 125	2.000	9.500
064000300200	S.EDISTO RIVER SWAMP	SC 3	4.000	7.000

Calhoun County

Structure_no	Stream	Route	Obs_scour	Pot_scour
094026700200	HALFWAY SWAMP CREEK	SC 267	1.000	14.500
094026700100	HALFWAY SWAMP CREEK	SC 267	2.000	14.500
092060100300	CONGAREE RIVER	US 601	0.000	14.000
092017600200	BIG BEAVER CREEK	US 176	0.000	13.000
092017600400	FLEA BITE CREEK	US 176	2.000	13.000
097005800100	UNNAMED STREAM	S-58	5.000	10.000
097002000100	LYONS CREEK	S-20	2.000	9.500
094017200100	CAW CAW SWAMP	SC 172	0.000	9.000
092017600100	SANDY RUN CREEK	US 176	0.000	8.330

**APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for
sites in each South Carolina Department of Transportation District, 1990-92--Continued**

SCDOT District 7--Continued

Clarendon County

Structure_no	Stream	Route	Obs_scour	Pot_scour
147006200200	DAVIS BRANCH	S-62	2.000	20.000
142030101300	BLACK RIVER NO.3	US 301	5.000	18.670
147006200100	DAVIS BRANCH	S-62	0.000	17.660
144026100500	DEEP CREEK	SC 261	2.000	17.660
142030101100	BLACK SWAMP NO.1	US 301	25.000	17.500
147005600100	TAWCAW CREEK	S-56	2.000	16.830
147003600100	NEWMAN BRANCH	S-36	0.000	16.500
147011100100	BIG BRANCH	S-111	3.000	16.500
147003600400	TRIB TO PUDDING SWAMP	S-36	0.000	16.000
147007600300	JACKS CREEK	S-76	0.000	16.000
147012300200	JUNEBURN BRANCH	S-123	1.000	16.000
147010400300	NEWMAN BRANCH	S-104	2.000	16.000
147003700100	TRIB TO DOUGLAS SWAMP	S-37	2.000	16.000
147005000600	POCOTALIGO RIVER SWAMP	S-50	2.000	16.000
142052100500	HARVIN CREEK	US 521	3.000	16.000
147026200200	DEEP CREEK	S-262	6.000	16.000
147006100200	SAMMY SWAMP	S-61	2.000	15.500
147004000700	BLACK RIVER	S-40	3.000	15.500
147003600300	PUDDING SWAMP	S-36	0.000	15.000
147003700200	DOUGLAS SWAMP	S-37	0.000	15.000
147004800200	MILL BRANCH	S-48	2.000	15.000
147012500100	FELLOWSHIP BRANCH	S-125	3.000	15.000
147010300100	DEEP CREEK	S-103	4.000	15.000
147006300200	DAVIS BRANCH	S-63	5.000	15.000
147005000700	BREAKFAST BRANCH	S-50	0.000	14.500
147003700300	DOUGLAS SWAMP	S-37	0.000	14.500
147004000300	BLACK RIVER	S-40	0.000	14.500
147004000600	BLACK RIVER	S-40	1.000	14.500
147004000400	BLACK RIVER	S-40	2.000	14.500
147001900100	NEWMANS CREEK	S-19	2.000	14.500
147019400100	NEWMAN BRANCH	S-194	2.000	14.500
147003600200	PUDDING SWAMP	S-36	0.000	14.330
147002600100	SPRING GROVE CREEK	S-26	0.000	14.000
147005000300	MT HOPE SWAMP	S-50	2.000	13.670
144026000100	SECOND WATER-LAKE MARION	SC 260	0.000	13.500
147004900100	TEARCOAT BRANCH	S-49	4.000	13.500
147006300100	FELLOWSHIP BRANCH	S-63	2.000	13.170
147002600300	JACKS CREEK	S-26	0.000	13.000
147006300300	LOSS BRANCH	S-63	0.000	13.000
147007600200	BIG BRANCH	S-76	0.000	13.000
147005000800	TEARCOAT BRANCH	S-50	1.000	13.000
141009510200	LAKE MARION RELIEF	I-95N	2.000	13.000
147026200100	BEAR CREEK	S-262	4.000	13.000
141009511100	TEARCOAT BRANCH	I-95N	0.000	12.500
141009531100	TEARCOAT BRANCH	I-95S	0.000	12.500
142030101000	POCOTALIGO RIVER NO.8	US 301	0.000	12.500
142052100200	BEAR CREEK	US 521	8.000	12.500
147012500200	DAVIS BRANCH	S-125	3.000	12.330
147002300100	SAMMY SWAMP	S-23	0.000	12.170
141009530200	LAKE MARION RELIEF	I-95S	0.000	12.000
147010400100	RAINBOW LAKE	S-104	1.000	12.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 7--Continued

Clarendon County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
147005000500	POCOTALIGO RIVER SWAMP	S-50	2.000	12.000
147003500100	TRIB TO DOUGLAS SWAMP	S-35	2.000	12.000
147004800100	DOCTOR BRANCH	S-48	2.000	12.000
147010400200	RAINBOW CREEK	S-104	4.000	12.000
141009531500	BLACK SWAMP NO. 4	I-95S	6.000	12.000
141009531200	BLACK SWAMP NO.1	I-95S	8.000	12.000
141009531300	BLACK RIVER NO.2	I-95S	12.000	12.000
147004000200	LAKEWOOD DAM	S-40	0.000	11.500
142001500400	SAMMY SWAMP CREEK	US 15	0.000	11.500
147012200100	NEWMAN BRANCH	S-122	1.000	11.500
144026000200	OX SWAMP	SC 260	8.000	11.500
147005100200	GUCKHOLDS BRANCH	S-51	0.000	11.000
142030100900	POCOTALIGO SWAMP NO.7	US 301	0.000	11.000
147004000100	JUNEBURN CREEK	S-40	4.000	11.000
147003800100	TAW CAW CREEK	S-38	6.000	11.000
144026100100	SAMMY SWAMP	SC 261	2.000	10.830
147005300100	BURNT BRANCH	S-53	0.000	10.670
141009510800	POCOTALIGO RIVER NO.2	I-95N	0.000	10.500
141009510100	LAKE MARION	I-95N	0.000	10.500
141009510700	POCOTALIGO SWAMP NO.1	I-95N	0.000	10.500
141009510900	POCOTALIGO SWAMP NO.3	I-95N	0.000	10.500
141009530100	LAKE MARION	I-95S	0.000	10.500
141009530800	POCOTALIGO RIVER NO.2	I-95S	0.000	10.500
147004000500	BLACK RIVER	S-40	0.000	10.500
142030100500	POCOTALIGO SWAMP NO.3	US 301	0.000	10.500
142030101700	PUDDING SWAMP NO.2	US 301	0.000	10.500
142037800300	DOUGLAS SWAMP	US 378	0.000	10.500
142037820100	PUDDING SWAMP	US 378E	0.000	10.500
142037840100	PUDDING SWAMP	US 378W	0.000	10.500
142052100300	OX SWAMP	US 521	12.000	10.500
147006100100	GUCKHOLDS BRANCH	S-61	2.000	10.330
147012800100	BIG BRANCH	S-128	0.000	10.000
147026000100	POTATO CREEK	S-260	0.000	10.000
147010600100	HORSE BRANCH	S-106	1.000	10.000
147012700300	POTATO CREEK	S-127	1.000	10.000
147005000200	MT HOPE SWAMP	S-50	2.000	10.000
144026100600	BROAD CREEK	SC 261	2.000	10.000
141009511500	BLACK SWAMP NO.4	I-95N	4.000	10.000
141009511200	BLACK SWAMP NO.1	I-95N	8.000	10.000
141009530700	POCOTALIGO SWAMP NO.1	I-95S	0.000	9.500
141009530900	POCOTALIGO SWAMP NO.3	I-95S	0.000	9.500
142030100400	POCOTALIGO SWAMP NO.2	US 301	0.000	9.500
142030100600	POCOTALIGO SWAMP NO.4	US 301	0.000	9.500
142030100800	POCOTALIGO SWAMP NO.6	US 301	0.000	9.500
142030100300	POCOTALIGO SWAMP NO.1	US 301	0.000	9.500
142030100700	POCOTALIGO SWAMP NO.5	US 301	0.000	9.500
142030101800	PUDDING SWAMP NO.1	US 301	8.000	9.500
142052100100	DEEP CREEK	US 521	22.000	8.500
141009531600	BLACK SWAMP NO.5	I 95S	4.000	8.000
147021100100	DEEP CREEK	S-211	7.000	8.000
141009531400	BLACK SWAMP NO. 3	I-95S	12.000	8.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 7--Continued

Clarendon County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
142030101200	BLACK RIVER NO. 2	US 301	12.000	8.000
141009511400	BLACK SWAMP NO. 3	I-95N	14.000	8.000
141009511300	BLACK RIVER NO.2	I-95N	0.000	7.000
147031500100	HOME BRANCH	S-315	2.000	7.000
141009511600	BLACK SWAMP NO.5	I-95N	6.000	7.000
147002600200	BIG BRANCH	S-26	0.000	5.000
142030101400	BLACK SWAMP NO.4	US 301	14.000	4.500

Hampton County

Structure_no	Stream	Route	Obs_scour	Pot_scour
257001200100	COOSAWHATCHIE RIVER	S-12	1.000	20.670
257002500100	MILL BAY CREEK	S-25	0.000	19.000
257001700300	BROADWATER CREEK	S-17	0.000	16.000
257006900100	BLOOD HILL CREEK	S-69	2.000	15.500
257001300600	COPE CREEK	S-13	0.000	15.000
252001707300	COMBANEE SWAMP NO.2	US 17	0.000	15.000
257005000100	JOHN PEN BRANCH	S-50	4.000	15.000
252001707200	COMBAHEE SWAMP NO.1	US 17	6.000	15.000
257002000100	MILL BAY CREEK	S-20	0.000	14.500
257005400200	WHIPPY SWAMP	S-54	0.000	14.500
252060100400	WHIPPY SWAMP	US 601	0.000	14.500
252060100500	WHIPPY SWAMP	US 601	0.000	14.500
257005400100	WHIPPY SWAMP	S-54	1.000	14.500
257052600200	CAMP BRANCH	S-526	2.000	14.500
257001300100	UNNAMED	S-13	4.000	14.330
257001700400	UNNAMED	S-17	0.000	14.000
257005000200	CYPRESS CREEK	S-50	0.000	14.000
257006900200	COOSAWHATCHIE RIVER	S-69	6.000	14.000
251009530500	COMBAHEE SWAMP	I-95S	7.000	14.000
257002000200	UNNAMED DITCH	S-20	0.000	13.500
257002000101	UNNAMED STREAM	S-20	0.000	13.000
252060100600	SALKEHATCHIE RIVER	US 601	0.000	13.000
251009510500	COMBAHEE SWAMP	I-95N	1.000	13.000
252027800400	COOSAWHATCHIE RIVER	US 278	1.000	13.000
251009530600	COMBAHEE RIVER	I-95S	3.000	13.000
257005000600	SANDERS BRANCH	S-50	3.000	13.000
251009510600	COMBAHEE RIVER	I-95N	7.000	13.000
257004100100	BLACK CREEK	S-41	0.000	12.500
257004100200	BRIAR CREEK	S-41	0.000	12.500
257002800200	JACKSON CREEK	S-28	1.000	12.500
257004300100	JACKSON CREEK	S-43	4.000	12.500
257001300300	DEEP BRANCH	S-13	0.000	12.000
257005000400	COOSAWHATCHIE RIVER	S-50	0.000	12.000
252060100300	COOSAWHATCHIE RIVER	US 601	0.000	12.000
257002700200	RABBIT BRANCH	S-27	1.000	12.000
257001300200	DEEP BRANCH	S-13	4.000	12.000
257014000100	TRIB TO CAMP BRANCH	S-140	0.000	11.000
257005000300	UNNAMED CREEK	S-50	0.000	11.000
257054700100	BLOOD HILL BRANCH	S-547	0.000	11.000
257001700500	EARLY BRANCH	S-17	2.000	11.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 7--Continued

Hampton County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
254006800200	TRIB TO CAMP BRANCH	SC 68	1.000	10.500
257005000500	COOSAWHATCHIE RIVER	S-50	15.000	10.500
254006300100	SALKEHATCHIE RIVER SWAMP	SC 63	0.000	10.000
252032100200	COOSAWHATCHIE RIVER	US 321	0.000	9.000
254006800100	CAMP BRANCH	SC 68	0.000	7.500
254006300200	SALKEHATCHIE RIVER SWAMP	SC 63	0.000	7.000
252027800300	COOSAWHATCHIE RIVER	US 278	0.000	7.000
254036300100	COOSAWHATCHIE RIVER	SC 363	4.000	7.000

Orangeburg County

Structure_no	Stream	Route	Obs_scour	Pot_scour
382007800100	EDISTO RIVER	US 78	23.000	30.000
387017000200	COW CASTLE SWAMP	S-170	0.000	26.000
387017000100	COW CASTLE CREEK	S-170	0.000	24.500
387120300100	MILL BRANCH	S-1203	2.000	22.670
387010300100	BRINER BRANCH	S-103	8.000	21.170
387160300100	TRIB TO CAW CAW SWAMP	S-1603	19.000	21.000
387003900100	BETTY BRANCH	S-39	0.000	20.000
387114800300	CAW CAW SWAMP	S-1148	6.000	19.670
382017600300	PROVIDENCE SWAMP	US 176	0.000	19.500
382017600100	GOODBYS SWAMP	US 176	2.000	19.000
387013500100	CATTLE CREEK	S-135	0.000	18.160
387007400400	NORTH EDISTO RIVER	S-74	2.000	18.000
387074600100	BULL SWAMP	S-746	2.000	18.000
384033200100	ROCKY SWAMP CREEK	SC 332	3.000	18.000
387019600300	MIDDLE PEN SWAMP	S-196	2.000	17.830
387013600100	SANDY RUN SWAMP	S-136	4.000	17.670
387020000100	BUSHY BRANCH	S-200	4.000	17.500
384003900100	SOUTH EDISTO RIVER SWAMP	SC 39	0.000	17.000
387114800100	CAW CAW SWAMP	S-1148	2.000	17.000
384000300400	NORTH EDISTO RIVER	SC 3	6.000	17.000
387155200100	HORSE RANGE CREEK	S-1552	0.000	16.500
384000400600	GREAT BRANCH	SC 4	3.000	16.500
387003900300	NORTH EDISTO RIVER	S-39	6.000	16.500
387003600100	COW CASTLE CREEK	S-36	2.000	16.000
387010500200	POPLAR CREEK	S-105	3.000	16.000
382030130200	SNAKE SWAMP	US 301S	7.000	16.000
387125600100	BRINER CREEK	S-1256	0.000	15.500
387019900100	BIG POPLAR CREEK	S-199	4.000	15.500
387153000100	TRIB TO PROVIDENCE SWAMP	S-1530	1.000	15.170
382001500100	FOUR HOLE SWAMP	US 15	0.000	15.000
382001500300	FOUR HOLE SWAMP	US 15	0.000	15.000
382017600400	HORSE RANGE CREEK	US 176	0.000	15.000
382017600200	PROVIDENCE SWAMP	US 176	0.000	15.000
387026000100	BULL SWAMP	S-260	1.000	15.000
387114800200	CAW CAW SWAMP	S-1148	2.000	15.000
387160400100	HILL BRANCH	S-1604	2.000	15.000
382017800600	CAW CAW SWAMP	US 178	2.000	15.000
387027900100	BIG BEAVER CREEK	S-279	4.000	15.000
382001500200	FOUR HOLE SWAMP	US 15	8.000	15.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 7--Continued

Orangeburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
382032100100	NORTH EDISTO RIVER	US 321	7.000	14.830
387006300400	NORTH EDISTO RIVER SWAMP	S-63	2.000	14.660
384003900200	SOUTH EDISTO RIVER SWAMP	SC 39	0.000	14.500
382017800300	BULL SWAMP	US 178	0.000	14.500
384026700100	PROVIDENCE SWAMP	SC 267	2.000	14.500
387154000100	EARLY BRANCH	S-1540	0.000	14.000
382030100400	NORTH EDISTO SWAMP	US 301	0.000	14.000
387013200200	TAMPA CREEK	S-132	2.000	14.000
387015400100	GRAMLING CREEK SWAMP	S-154	2.000	14.000
387060700100	HORSE RANGE CREEK	S-607	3.000	14.000
384039400200	NORTH EDISTO RIVER	SC 394	4.000	14.000
384045300100	FOUR HOLE SWAMP	SC 453	22.000	14.000
384000400100	DEAN SWAMP	SC 4	2.000	13.990
381009530300	FOUR HOLE SWAMP	I-95S	0.000	13.500
387016400100	CATTLE CREEK	S-164	0.000	13.500
387003900500	SOUTH EDISTO RIVER SWP	S-39	0.000	13.500
387008000100	CATTLE CREEK	S-80	0.000	13.500
382030130300	COOPER SWAMP	US 301S	0.000	13.500
384000303100	GOODLAND CREEK	SC 3	2.000	13.500
384000300100	SOUTH EDISTO RIVER SWAMP	SC 3	3.000	13.500
387100200100	MIDDLE PEN CREEK	S-1002	0.000	13.000
384000400400	BOLEN MILL CREEK	SC 4	0.000	13.000
382017600600	BRINE CREEK	US 176	0.000	13.000
387017600100	ROBERTS SWAMP	S-176	1.000	13.000
387107200100	TRIB TO N EDISTO RIVER	S-1072	1.000	13.000
382030110200	SNAKE SWAMP	US 301N	2.000	13.000
382030110800	FOUR HOLE SWAMP	US 301N	10.000	13.000
387152000100	TRIB TO N EDISTO RIVER	S-1520	0.000	12.670
387006800100	TARGET SWAMP	S-68	0.000	12.500
387050700100	NORTH EDISTO RIVER	S-507	2.000	12.500
387010500100	POPLAR BRANCH	S-105	0.000	12.000
387014000100	TRIB TO GOODBYS SWAMP	S-140	0.000	12.000
384021000700	PROVIDENCE SWAMP	SC 210	0.000	12.000
382002100100	EDISTO RIVER SWAMP	US 21	0.000	12.000
387017800100	BUCK BRANCH	S-178	2.000	12.000
387019300100	SNAKE SWAMP	S-193	2.000	12.000
384045300200	FOUR HOLE SWAMP	SC 453	2.000	12.000
384000300200	SOUTH EDISTO RIVER SWAMP	SC 3	4.000	12.000
384007000200	SCRATCHNOSE SWAMP	SC 70	6.000	12.000
382030110100	SOUTH EDISTO RIVER SWAMP	US 301N	9.000	12.000
384021000600	FOUR HOLE SWAMP	SC 210	0.000	11.990
387007400300	NORTH EDISTO RIVER SWP	S-74	0.000	11.500
384021000400	FOUR HOLE SWAMP	SC 210	0.000	11.500
387006500300	BULL SWAMP	S-65	1.000	11.500
387003600200	MILL BRANCH	S-36	4.000	11.500
384021000500	FOUR HOLE SWAMP	SC 210	2.000	11.170
387010500300	POPLAR CREEK	S-105	0.000	11.000
387005000300	MIDDLE PEN BRANCH	S-50	0.000	11.000
382002100200	EDISTO RIVER SWAMP	US 21	0.000	11.000
382030110300	COOPER SWAMP	US 301N	0.000	11.000
387075600100	WHIRLWIND CREEK	S-756	1.000	11.000

APPENDIX - The observed- and potential-scour indexes, ranked by county and potential-scour index, for sites in each South Carolina Department of Transportation District, 1990-92--Continued

SCDOT District 7--Continued

Orangeburg County--Continued

Structure_no	Stream	Route	Obs_scour	Pot_scour
387019600100	COW CASTLE CREEK	S-196	2.000	11.000
382030130100	SOUTH EDISTO RIVER SWAMP	US 301S	6.000	11.000
387009200100	COW CASTLE CREEK	S-92	0.000	10.830
382030130700	INDIAN SWAMP BRANCH	US 301S	0.000	10.830
382007800200	EDISTO RIVER SWAMP	US 78	4.000	10.670
387009900100	BULL SWAMP	S-99	2.000	10.340
387018100100	SUNNYSIDE BRANCH	S-181	0.000	10.160
387020200100	KETTLE BRANCH	S-202	0.000	10.000
387020400100	TRIB TO PENN BRANCH	S-204	0.000	10.000
387003900200	NORTH EDISTO RIVER SWAMP	S-39	0.000	10.000
387006300200	EDISTO RIVER SWAMP	S-63	0.000	10.000
384033200200	WILLOW SWAMP	SC 332	0.000	10.000
382030110700	INDIAN SWAMP BRANCH	US 301N	1.000	10.000
382030100500	NORTH EDISTO RIVER	US 301	8.000	10.000
382030130800	FOUR HOLE SWAMP	US 301S	12.000	10.000
387006300100	BETTY BRANCH	S-63	7.000	9.670
381009530500	PROVIDENCE SWAMP	I-95S	0.000	9.500
382001500500	HORSE RANGE CREEK	US 15	0.000	9.500
381009530400	FOUR HOLE SWAMP	I-95S	0.000	9.000
387019800100	COW CASTLE CREEK	S-198	0.000	9.000
387012500100	SUNNYSIDE CANAL	S-125	0.000	9.000
384021000200	COW CASTLE CREEK	SC 210	0.000	9.000
387093200100	MIDDLE PEN CREEK	S-932	1.000	9.000
381009530200	FOUR HOLE SWAMP	I-95S	2.000	9.000
381002620900	COW CASTLE CREEK	I-26E	0.000	8.000
381002640900	COW CASTLE CREEK	I-26W	0.000	8.000
384000400200	GOODLAND CREEK	SC 4	0.000	8.000
381009510200	FOUR HOLE SWAMP	I-95N	2.000	8.000
381009510500	PROVIDENCE SWAMP	I-95N	0.000	7.500
381009510300	FOUR HOLE SWAMP	I-95N	10.000	7.500
384007000100	SOUTH EDISTO RIVER	SC 70	0.000	7.000
382030110900	GOODBYS CREEK	US 301N	2.000	7.000
382030130900	GOODBYS CREEK	US 301S	4.000	7.000
381009510400	FOUR HOLE SWAMP	I-95N	9.000	6.000