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Stream Generic Terms as Indicators of Historical Settlement Patterns

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Abstract

U.S. geographic names may be analyzed with relative ease using data sorting techniques with the Geographic Names Information System. An intensive computer search of the stream names in each state reveals and locates on base maps, using computer-driven plotters, unusual stream generic terms, such as *kill, coulee,* and *cañada.* Tables show the relative frequency and the distribution of toponymic generic terms. The study of selected generic terms in placenames demonstrates some degree of correlation with historical patterns of settlement and provides an instructive, but not always reliable, aid to historical research.

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Introduction

Geographic names serve as enduring signposts in the cultural landscape. They reflect historical and cultural motifs, just as barn types, field patterns, and cemetery configurations do. Studies using geographic names as historical evidence usually examine the specific part of the name, such as the surname *Kurtz* in *Kurtz Hill* or the word *buffalo* in *Buffalo Creek;* but the generic terms in toponyms, the words that indicate the kind of feature named, are no less significant. Generic terms like *brook, hollow, sierra,* and *slough* function as distinct grammatical units in geographic names. They are fundamental to the language of place description and wayfinding. While the selection of an apt word as the specific part of a geographic name is subject to few limits, the choice of an appropriate generic term is constrained and directed by the vocabulary of the namer's language or dialect. Because of their original association with definite culture groups, and because generic terms commonly prove to be a durable element in toponyms, the distribution of these terms across the land can give modern observers valuable clues about past cultural settings.

Broad studies of the topic of generic terms in toponyms have previously depended on the manual compilation of terms from maps and gazetteers and so were necessarily restricted to partial analyses of the available data by the immense volume of names to be reviewed and

tabulated. In a 1956 study, toponymist Meredith Burrill wrote of personally reviewing 15,000 maps and recording placenames, map names, and geographic coordinates on index cards (Burrill 131). Today the existence of the Geographic Names Information System (GNIS) and the automated power of computers make possible the systematic analysis of geographic names on a national scale. Based on a computer-driven review of data in the GNIS, this essay attempts to publicize and illustrate the distribution of the toponymic terms that are found in the names of streams in the United States and to appraise the possible use of this distribution as an indicator of settlement history.

The names of streams were selected as the focus of this study for three reasons. First, more than hills, valleys, or any other class of geographic feature, streams can be easily defined. For this study, the word *stream* is defined as any natural body of flowing water regardless of size. When a knoll becomes a hill or where a swale changes into a valley may be questioned, but most observers will agree on what traits constitute a stream, although streams sometimes melt into marshes or guts in low areas and in arid regions evaporate into arroyos and washes. Second, streams are more nearly ubiquitous across the landscape than any other class of geographic feature; the existence of stream names in a given area is not as dependent on the topography of that area as are the names of hills, lakes, valleys, or swamps. Some factors that determine the density of stream names are geological conditions, climate, and population density, but except in the most extraordinary circumstances, there are some stream features to be named in any landscape. Third, although American geographic names exhibit an engaging variety of generic terms overall,[2] fewer than twenty different generic terms make up the vast majority of stream names. The generally uniform spelling of these terms permits an automated search. Also, the word order of stream names that have generic terms from English is predictably specific-generic, as in the name *Page Brook*. The programmed search employed in this study was designed to expose names that did not fit the anticipated pattern. Routine allowances were made for the generic-specific order of stream names from Romance languages, as in the name *Rio Grande*.

The emphasis on stream names in this study should not leave the impression that the pattern of a particular generic term in stream names is entirely representative of the pattern of the term in more general geographic nomenclature. To illustrate, in Montana 1,570 valley names, compared to 26 stream names, use *coulee* as the generic term. Thus the term *coulee* is much more widespread among all Montana geographic names than the list of stream names alone would indicate. Similarly, the

terms *arroyo* or *wash* may refer to a valley as well as a stream; the term *slough* may refer to a stream, lake, gut, or swamp.

In many parts of the country there is a local understanding of a hierarchy of stream terms based on stream size.[3] However, this related topic will not be addressed here. On a national scale the formulation of useful generalizations about the relation of particular stream generic terms to stream size is deterred by the immeasurable factors of the regional importance of this idea, and its actual implementation in stream names, as well as the differing relationships of the various terms.

The National Geographic Names Data Base of the GNIS[4] is the source of the stream names under consideration. Very nearly all of the stream names found in the GNIS were compiled from federal government topographic maps, principally the large-scale topographic map series published by the U.S. Geological Survey (USGS). The number of stream names in the GNIS changes as the USGS pursues the second phase of geographic names compilation, which includes names from nongovernment publications and historical sources. The total number of stream names in several states increased slightly during the course of this inquiry.

Federally published topographic maps have several deficiencies in toponymy. Government surveyors generally have little specialized training in collecting placenames. The completeness and accuracy of the names may vary with the toponymic interest and cartographic talent of the field surveyors and map editors involved in the production of a map. Misleading placement of names on the map may result in erroneous conclusions about the connotations of generics. Inadequate map symbology can prevent a toponymist from recognizing the distinctions that the inhabitants of an area may use in applying a topographic term. Entering placenames from topographic map sheets into a geographic names data base presents another opportunity for errors in spelling and in classifying placenames into broad feature classes. Despite these shortcomings, the large-scale series of topographic maps published by the USGS render a comprehensive, invaluable collection of placenames of the United States. The names on these maps constitute a sweeping register of the nation's history and culture.

Method

The method employed in the automated search of the GNIS was uncomplicated. Previous studies of the subject and prior research by the USGS produced a list of twenty-four stream generic terms that were likely to be most prevalent among the country's hydronyms. Each term in this

list was computer tested by a character-string or text search of all names in the GNIS that are classified as streams. The twenty most common terms were winnowed out for further study. Each term in the select group of twenty appears at least ninety-nine times nationwide as the operative or true generic term in a stream name.

In the interest of consistency, the character-string search tested only whether a stream generic word appeared as a separate word in the name of a stream. Thus, in the search for the term *kill*, the name *Bush Kill Creek* would be selected by the computer for more processing and *Bushkill Creek* with its embedded generic would be discarded. Otherwise, the name *Skillet Run* would have been erroneously included. The character-string search also tested whether the term is the last word in the name and serves as the operative generic term. The incidence of terms that occur in the interior of stream names, as in *South Branch Pronghorn River* and *Frog Brook Run*, was also recorded. Generic terms from Spanish or French (e.g., *arroyo* or *coulee*) that might not follow an English word order were individually examined.

After the terms were culled from the GNIS and counted, the resulting data were compiled and constructed into a term-by-term data table (see Appendix), which stresses the percentage of use of generic terms in stream names within a state, not the total number of occurrences. Emphasizing percentages rather than absolute numbers, the results facilitate toponymic comparisons of one geographic area with another. By this method, for example, the great number of streams in Alaska that have the word *river* as the generic term in their names (1,284 occurrences, 15.1% of all stream generics) does not obscure the fact that the term *river* is actually more familiar in the hydronymy of Minnesota (425 occurrences, 22.4%). Similarly, Delaware has fewer streams using the generic *prong* (22) than Tennessee (37), but in Delaware this term is manifest in 5.1% of the state's stream names versus 0.4% in Tennessee.

The data files that had been developed for the data table were then used to produce computer-driven plots that illustrate the distribution of each stream term, except *creek* and *river*, throughout the contiguous forty-eight states (see Figs. 1–4). *Creek* was not plotted because the volume of data for this term made showing individual cases of its occurrence unwieldy even with computer technology. The term *river* exhibits comparatively little differentiation in its use throughout the nation. Although the plotted distribution of any term is subtly influenced by the wide fluctuation of stream name density across the country, the plots chart geographic patterns of generic term distribution within states and across state boundaries. The distinctive patterns that are revealed in plotting the terms provoke consideration of the basis for their spatial configurations.

Terms

The twenty most common stream generic terms in the United States are listed below in descending order of use. The figures in brackets that follow the term indicate, respectively, the percentage of incidence among all stream terms nationwide and the states with the highest percentage of use of that term.

Creek [U.S., 60.9%; Idaho and Montana, 96.5%]

Creek is by far the most common stream generic term in the United States. It occurs most frequently in the stream names of Montana and Idaho. Wyoming, Oregon, South Dakota, Washington, Colorado, and Kansas have the word *creek* in 90% or more of their stream names. *Creek* appears least frequently among the stream names of the New England states; of these, Massachusetts has the highest percentage, with 6.6%. A strong generic term that is itself rarely suppressed into the specific part of a stream name, the term *creek* has often been added to a stream name with another, possibly older, generic term, for example, *Bear Branch Creek* and *Seco Arroyo Creek*. *Creek Brook* in Essex County, Massachusetts, provides a rare example of *creek* as the specific.

The standard account of differing applications of the term *creek* in Great Britain and North America is that early English-speaking explorers of the North American coast bestowed the term on various tidal inlets or arms using the placename terminology customary in England. These creeks retained their designation even after they were found to be tributaries of some length and, consequently, the word *creek* received a new and different application in the New World (*OED*; Gritzner 235).

Branch (Fig. 1) [U.S., 16.6%; Tennessee, 56.8%]

At its etymological root, the stream term *branch* is a figurative application suggested by the relation of a branch to a tree. A 1642 citation from the *Dictionary of American English on Historical Principles* (*DAE*) refers to "Weston's branch" in Maryland. The use of the term in the sense of a tributary along with a directional specific (as in *West Branch North River*) is fairly common throughout the country. Using the term in an unequivocal generic sense appears to be an Americanism. The plotted concentration of the term (see Fig. 1) corresponds well to Wilbur Zelinsky's depiction of "The South" culture area in *The Cultural Geography of the United States*, although the concentration trends somewhat north of Zelinsky's line in the Midwest (118). The term *branch* as a true generic

includes a high percentage of the stream names of Tennessee, Kentucky, and Delaware and is quite common throughout the Southeast.

Run (Fig. 1) [U.S., 6.0%; Pennsylvania, 65.0%]

The *Oxford English Dictionary* (*OED*) lists a 1581 citation from the legal records of Edinburgh, Scotland, as its earliest reference to the word *run* as a stream term. In the United States the term is most common among the stream names of Pennsylvania, and *run* is the generic in about half the stream names of Ohio and West Virginia. Previous studies of toponymic generics by Hans Kurath (40) and Zelinsky ("Some Problems" 326) have pointed out the clear division between the use of *run* and *branch* along the Kanawha River in West Virginia. *Run* is used to refer to smaller streams north of the river; *branch* is preferred south of the river. The accompanying plots of these terms bear out this observation (see Fig. 1). Kurath equates the distribution of the term *run* with what he calls the North Midland speech pattern.

Brook (Fig. 1) [U.S., 5.1%; New Hampshire, 86.3%]

The word *brook* is a longstanding stream term. The earliest reference to its use given by the *OED* dates from 888. The association of this term with the streams of New England is well known, but the term did not travel well with westering New Englanders. New Hampshire has the greatest percentage of streams with the generic *brook*.

River [U.S., 3.7%; Minnesota, 22.2%]

River is the one stream generic term that definitely denotes size. Hierarchical systems of stream terms based on stream size vary widely across the nation, but the term *river* is usually reserved for the largest streams. One characteristic exception can be found a few miles west of USGS headquarters near Aldie, Virginia, where the Little River flows into Goose Creek, which in turn flows into the Potomac River. Minnesota has the highest percentage of *river*s among its stream names. The term is also relatively more common in the New England states.

The method of data collection in this study understates the importance of the term *river* in general topographic vocabulary. A long river that may flow through many counties in a state is counted as only one occurrence of the generic term. Nevertheless, as the statistical method is the same in every state, the relative use of the term among states can still be evaluated.

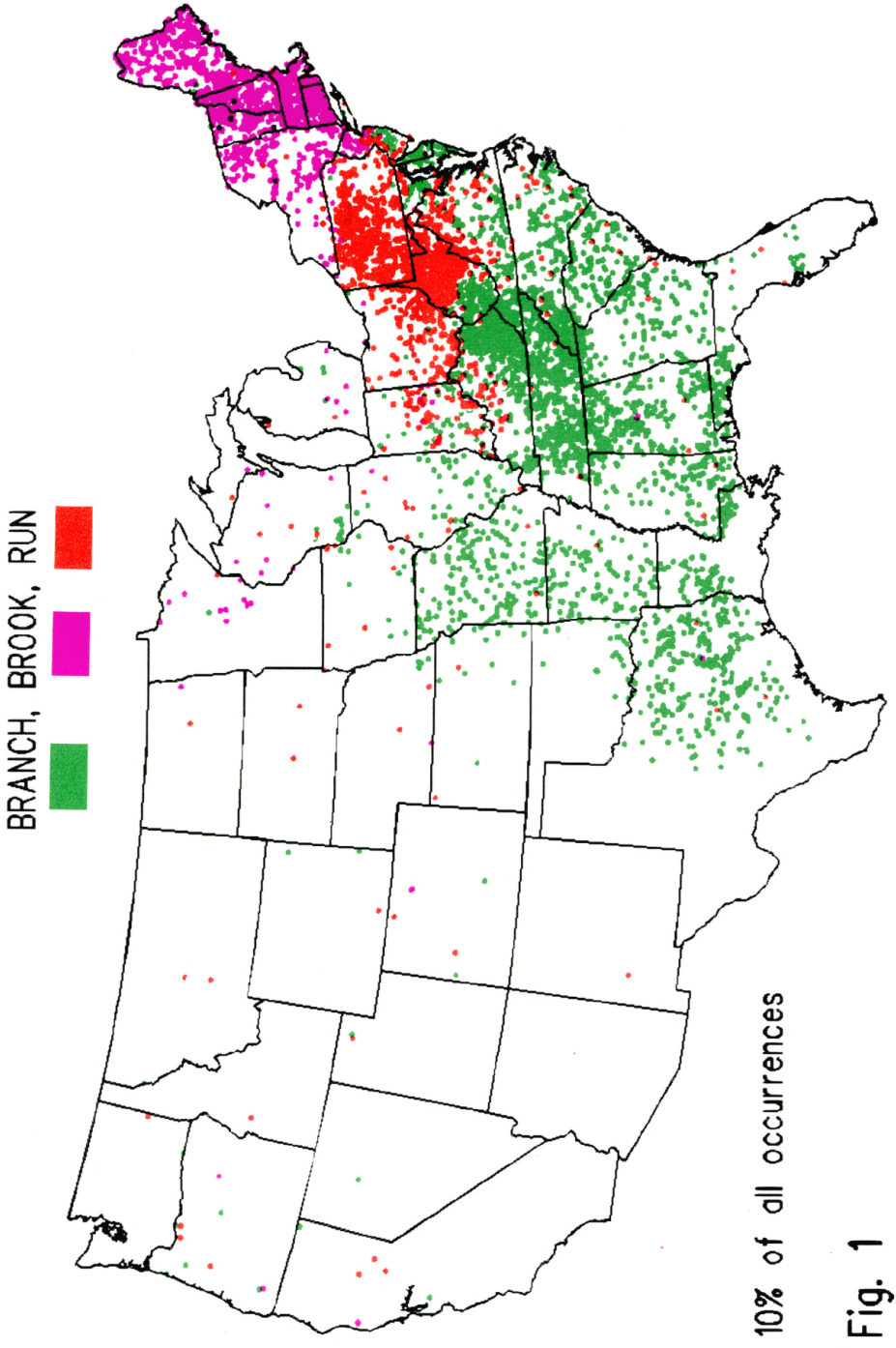

Fig. 1

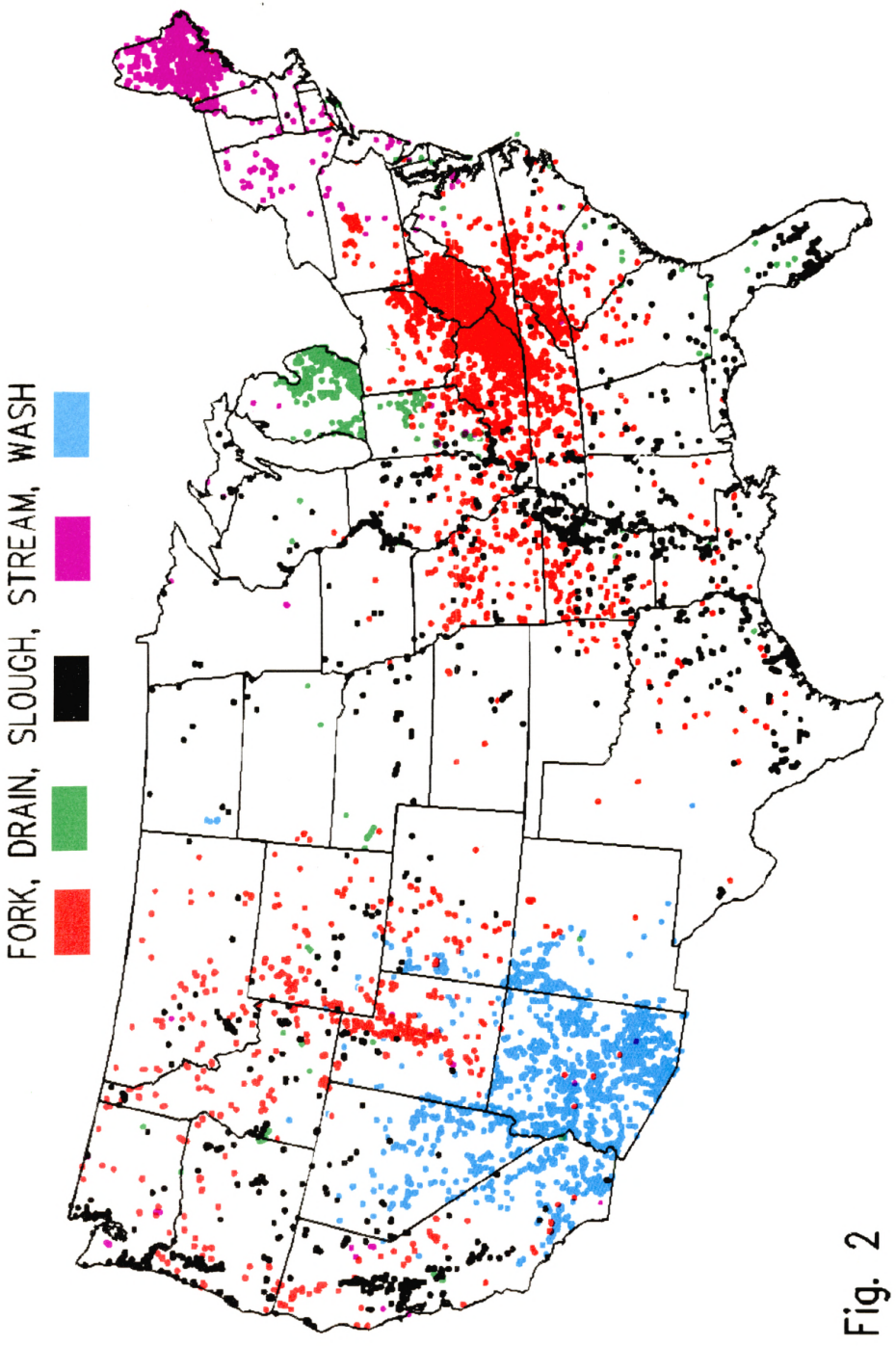

Fig. 2

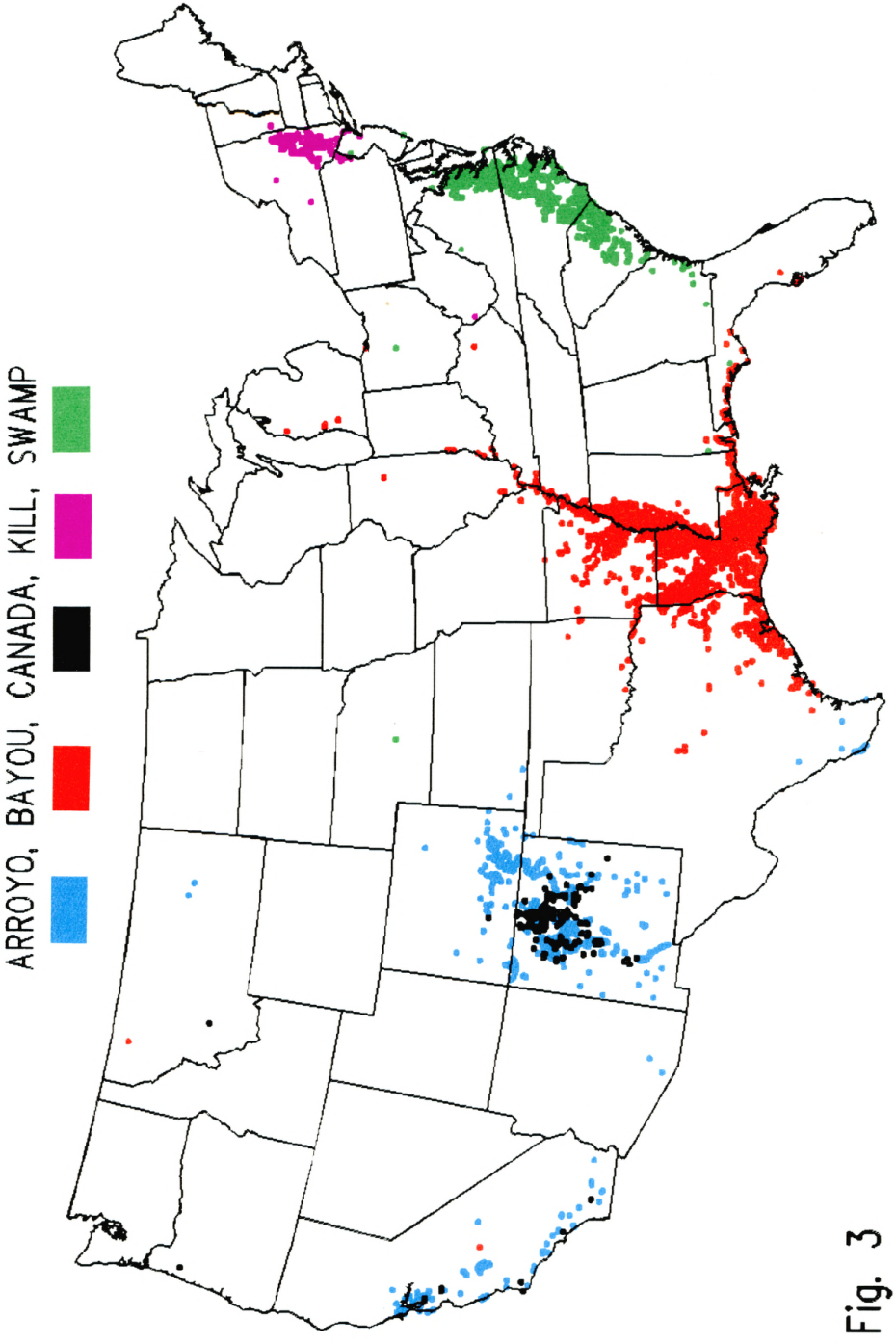

Fig. 3

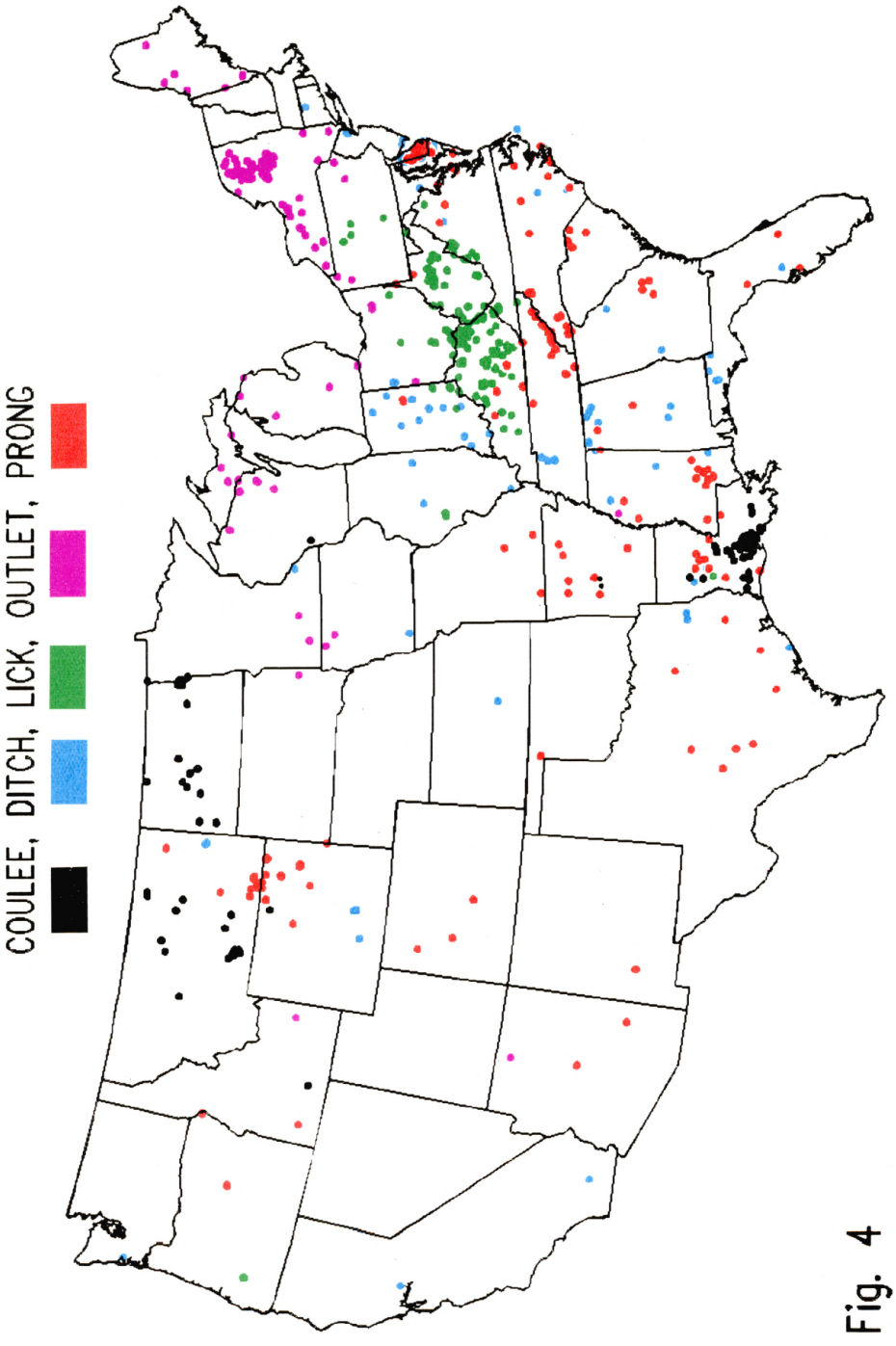

Fig. 4

Fork (Fig. 2) [U.S., 2.0%; West Virginia, 13.4%]

The term *fork*, along with the similar terms *branch* and *prong*, form a subgroup of stream generics that can function as either directional terms within a stream name (e.g., *Left Fork Rocky Creek*) or as the full generic (e.g., *Harman Fork*). As a complete generic term, *fork* is most common in the stream names of West Virginia and Kentucky.

Bayou (Fig. 3) [U.S., 1.2%; Louisiana, 39.5%]

In his 1954 study of the term *bayou*, Robert C. West examined the usage of this term from a historical perspective and determined that its application to streams in the Mississippi delta dates from the earliest French settlement in the area at the close of the seventeenth century. He concurred with William A. Read (xii) that the word *bayou* is derived from the French translation of the Choctaw word *báyuk*, meaning a sluggish stream or river. Of the twenty most common stream terms, then, *bayou* is the only one that stems from a Native American language. Modern applications of the term to several types of features share the connotation of a sluggish or stagnant water body, except in east Texas and parts of Arkansas and Oklahoma where the it refers to full-flowing streams and would seem to be interchangeable with *creek*. In Louisiana the term *bayou* is even more common in stream names (39.5%) than the ubiquitous *creek* (30.0%).

Wash (Fig. 2) [U.S., 0.8%; Arizona, 47.7%]

The *DAE* defines the term *wash* as "the dry bed of an intermittent stream." This definition, common in the western United States, may well be related to an older English sense of the word given in the *OED* as "a low-lying tract of ground, often flooded, and interspersed with shallow pools and marshes." *Wash, arroyo*, and *cañada* constitute a class of terms common in the arid regions of the West that connote an intermittent stream and often apply to the valley as well as to the water in it.

Slough (Fig. 2) [U.S., 0.8%; Arkansas, 3.3%]

The term *slough* has several connotations throughout the United States. In parts of the country it is applied to side channels of rivers with stagnant or slow moving water, as in the name *Running Slough* in Fulton County, Kentucky. Other applications of the word *slough* are to channels of slow-moving water in coastal marshlands and to small marshy areas. *Slu, slue*, and *slew* are alternate spellings. The distribution of this stream term across the country is wide, but shallow.

Stream (Fig. 2) [U.S., 0.5%; Hawaii, 95.2%]

The word *stream*, used in this paper to refer to a broad class of geographic features, also functions more particularly as a generic term. It is the generic term in more than 95% of Hawaiian stream names. Possibly it was introduced there by missionaries from New England where the term is fairly common, especially in Maine.

Drain (Fig. 2) [U.S., 0.4%; Michigan, 16.8%]

The term *drain* is most frequently found in the stream names of the formerly swampy tracts of southeast Michigan, but according to definitions and citations in the *DAE* and the *OED*, the use of the term does not necessarily imply human alteration of a watercourse.

Arroyo (Fig. 3) [U.S., 0.3%; New Mexico, 24.2%]

The term *arroyo* may refer either to a stream or to the dry bed of a stream. This term forms the generic element in more than 24% of New Mexico's stream names and occurs more than 100 times in the stream names of Colorado and California.

Swamp (Fig. 3) [U.S., 0.3%; South Carolina, 4.8%]

The *OED* and *DAE* give the conventional definitions of the term *swamp* as a "marsh" or a "bog," but neither source mentions that the term may also be applied to a watercourse. G. D. McJimsey has suggested that in some places in Virginia the term was originally applied to the area occupied by the swamp and the stream. After the lowland was drained, the term *swamp* survived in the narrowed sense of watercourse (McJimsey 28). The use of this term as a stream generic is generally restricted to the Atlantic Coastal Plain from the Chesapeake Bay to Georgia. On a percentage basis, the stream names of South Carolina use this term most often, although there are about twice as many cases of its use in North Carolina. An example is *Bachelors Delight Swamp*, a stream in Onslow County, North Carolina.

Cañada (Fig. 3) [U.S., 0.1%; New Mexico, 11.4%]

The *OED* and the *DAE* define the term *cañada* similarly as "a narrow valley or glen; a ravine or small cañon." No reference consulted listed a hydrographic sense of this term, but according to GNIS data the term is applied to more than 200 streams on USGS topographic maps. *Cañada* is the generic term in more than 11% of New Mexico's stream names and there are nine occurrences in California.

Prong (Fig. 4) [U.S., 0.1%; Delaware, 5.1%]

Like *branch* and *fork*, the term *prong* may serve as a directional term within a stream name or as a complete generic element.

Lick (Fig. 4) [U.S., 0.1%; Kentucky, 0.7%]

The word *lick* is often found in the names of streams that pass by a place where salt or salt earth is found and licked by animals. As a stream term *lick* is usually part of a compound specific, as in the name *Blue Lick Branch* (Franklin County, Alabama), but it is rare as a complete generic term, as in the name *Slate Lick* (Delaware County, Ohio).

Kill (Fig. 3) [U.S., 0.1%; New York, 3.2%]

Kill is a stream term of Dutch ancestry that is found most frequently in New York. The term is rare in adjacent states and is virtually unknown elsewhere.

Ditch (Fig. 4) [U.S., 0.1%; Delaware, 12.0%]

Ditch, like *drain*, is an ambiguous term that may connote some degree of manmade improvement in the natural drainage. Placename authority H. F. Raup has written that in Ohio the term is applied to faint natural drainage channels that have been deepened in efforts to drain swampy low ground (Raup 164).

Outlet (Fig. 4) [U.S., 0.1%; New York, 1.8%]

The term *outlet* is occasionally employed, most often in upper New York State, in the names of streams that empty lakes or ponds.

Coulee (Fig. 4) [U.S., less than 0.1%; North Dakota, 2.6%]

The term *coulee*, a geographic term of French origin, is believed to be an Americanism,[5] since it is not used as a toponymic term in France. In Montana and North Dakota the term *coulee* refers more often to valleys than to streams. In these states all stream names that have *coulee* as the generic follow the usual English specific-generic word order. In Louisiana, where the term *coulee* is applied exclusively to streams, about one-half of the names are in English word order and the other half have a French generic-specific word order.

Conclusions

The promise of extensively plotting stream generics would seem to be that the mapped pattern of a given term will correspond to the area settled by a particular language or culture group. Where European and American settlers made their homes in the wilderness, streams must have been among the first natural features that they named because the knowledge of water features was fundamental in a frontier setting. Streams were first used as landmarks for land and water navigation (Raup 164; Jordan and Kaups 77) and then for property boundaries. Streams provided vital drinking water for people and livestock. They were essential for transportation, communication, water power, hunting and fishing, and, sometimes, for irrigation.[6] Consequently, stream names had to be commonly understood in a frontier community. A widely held tenet in historical geography, known as the principle of initial occupance,[7] holds that the first effective, self-perpetuating settlement in an area, no matter how small the original assembly, determines the later social and cultural geography of that area. That the first effective settlement group should leave its cultural imprint on the stream generic terms of a region might appear, initially, to be a justifiable assumption.

This supposition holds for several non-English generics. Outlines shown by the plotted terms *arroyo* and *cañada* (Fig. 3) roughly follow the known pattern of Spanish-Mexican settlement in California, New Mexico, and southern Colorado before the acquisition of this region by the United States after the Mexican War.[8] The plotted overlay of stream names containing the word *bayou* (Fig. 3) correlates to areas of historical French influence, principally in the Mississippi Valley.[9] The plot of the term *kill* (Fig. 3) shows that this Dutch word endures in stream names in the Hudson Valley, the core settlement area of New Netherlands (Wacker 4).

Conversely, many other stream terms must have existed in the languages of various ethnic groups but have not survived on current maps. Two of the many possible examples of this circumstance will serve to establish an obvious point. German-speaking pioneers were the first settlers in the Shenandoah Valley of Virginia in 1726, and they continued to form a large part of the population there through the eighteenth century (Mitchell 27, 43), but no generic terms of German origin linger in Virginia stream names. Scandinavians made up a substantial portion of the first wave of settlers in Clay County, Dakota Territory (now South Dakota), yet there, too, English terms prevailed in the stream nomenclature (Ostergren 74). It is not very surprising that English terminology should have been employed for geographic names by English-speaking surveyors and government officials who drew maps, located properties, and recorded deeds. The official sanc-

tion established the written name, and any oral use of other terms probably ceased with increased acculturation of the language group.[10]

As a device for research in the field of historical geography, the distribution of generic terms should be considered as an indicative but not a correlative tool; that is, the existence in an area of a certain stream generic term that is identified with a culture group suggests the historical presence of that group, but the absence of the term is not conclusive evidence that the group never inhabited the region. As noted above, the generic terms that are used in a spoken language or dialect may never appear in official documents or on published maps. Furthermore, the topographic vocabulary of subsequent settlement groups may erase previously existing generic terms. This has been the fate of the term *kill* on Long Island. If the modern range of this term were to be considered the extent of Dutch settlement in the Northeast, then the western end of Long Island would be mistakenly excluded. There all the places the Dutch referred to as *kill* are now known by other generic terms.[11] In other circumstances more recent generic terms used by a later culture group may subsume older terms in stream names. The name *Schuylkill River* is a model example of this process. In this instance the older Dutch term *kill* is embedded in the specific component of the name and the more current term *river* forms the generic element. There are hundreds of other similar cases, most notably with the generic *creek*, as in the names *Bog Branch Creek* and *Seco Arroyo Creek*.

A key point in evaluating the modern distribution of stream terms as historical evidence is whether present-day usage accurately reflects past usage. The national scope of this project has precluded the examination of primary sources of historical toponymy, such as initial descriptions of surveyors, early deeds, and old large-scale maps, that would provide a baseline for considering when and how much given stream terms have changed through time. Such an intensive study would have to be conducted at a very local level. Two factors, at least, certainly work to preserve a stream generic term and protect it from cultural influences that change other aspects of language. One factor is the pervasive use of streams as property markers, especially in the metes and bounds system of indicating land boundaries by reference to natural objects. Even when the meaning of one generic in a stream name can easily be replaced by another term, the original term is not likely to be supplanted while it is used as a name in a land title.[12] A second, more theoretical factor is the linguistic protection that a generic term is afforded by its existence as an element of a geographic name. Names, writes W. F. H. Nicolaisen, have a "power of survival" that other words do not have. Names are durable because "they can be meaningful as names even if they have become meaningless as words" (4).

Clearly *creek* is the historically ascendant stream term. It appears to have greatly increased in popularity since about 1800. Assuming for a moment that the year of a state's entry into the Union provides a rough guide to the time of settlement, and excluding Hawaii, Alaska, Arizona, and New Mexico as having anomalous settlement histories, the states whose stream names employ *creek* as the generic term less than 30% of the time were all states before 1800.[13] Overlooking Georgia at 61.4%, a state that was settled much later than the other former colonies, none of the rest of the original thirteen states has more than 50% *creeks* in its stream generics compared to the national average of 60.9%. On the other hand, of the states where the term *creek* appears in more than 90% of stream names, only one, Oregon, achieved statehood before 1875 (in 1859). The popularity of *creek* grew at the expense of other terms common in eastern states, such as *run, branch*, and *brook*, even though these terms are just as applicable to western streams.

The demonstrated distribution patterns of stream generics invite further study. For instance, the terms *branch* and *prong* in New Jersey, Pennsylvania, and Maryland are not nearly as common as they are in neighboring Delaware. The combination of percentages of stream generic terms in Delaware is more similar to that of Tennessee. Although a linguistic thread between the two areas is unlikely, what factors account for the coincident use of the uncommon term *prong* in Delaware and eastern Tennessee? Why did the term *brook* not flourish outside of New England, New York, and New Jersey? In the places where New Englanders settled across the Midwest and West, there must have been many unnamed streams that suited the connotation of this term. How did the term *creek* come to predominate in later American settlement history? Lewis and Clark, Virginia men both, employed the term exclusively for the names of lesser streams during their historic expedition. Did their practice influence subsequent American cartography and toponymy? Or was the use of the term *creek* increasing in any case in the early nineteenth century due, perhaps, to a shared literary or educational experience of the namers? Scholars from the fields of American history, cultural and historical geography, toponymy, linguistics, folklore, and related disciplines may wish to formulate their own programmed inquiries for the data in the Geographic Names Information System.

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Notes

1. This is a revised version of a paper presented at the meeting of the Association of American Geographers in Toronto in April 1990. I am grateful to John Findley and Lou Yost of the U.S. Geological Survey for their technical assistance in producing the term-distribution plots. Financial support from the USGS has made possible the color reproduction of the plots.

2. The U.S. Geological Survey has recorded more than 100 different stream terms from Survey maps (Orth and Payne 112–14).

3. Gritzner has stated that, in stream names on the eastern shore (Delaware, Maryland, Virginia), the distinction in the use of the terms *river, creek, branch,* and *run* was based on the navigational qualities of the stream (236–37).

4. The GNIS at the U.S. Geological Survey is made up of several data bases related to geographic names, but the National Geographic Names Base is by far the largest and most important. The use of this particular data base is assumed in any following reference to the GNIS.

5. *Coulee* is an Americanism in the broad sense of the word. The term is also applied to terrain features in western Canada, principally in southern Alberta and southwestern Saskatchewan (Rayburn 95).

6. In the Far West the doctrine of appropriation allowed priority to exploit a stream to the first person who came to it and claimed part of its water (Sauder 411).

7. A principle enunciated separately by Kniffen (551) and Zelinsky (*Cultural* 13).

8. See Bolton and the two articles by Nostrand.

9. See West, McDermott.

10. One intriguing case of a Dutch stream generic other than *kill* that survives on USGS maps is *Feuri Spruyt,* a small stream in Albany County, New York.

11. No present use of the term is found on federal government maps, according to the GNIS data. See also Hale.

12. Mitchell notes that almost all references to colonial land grants were made in relation to the nearest stream (43).

13. This statement is true also for West Virginia and Maine, which were sections of Virginia and Massachusetts in 1800.

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Appendix

Stream Generic Terms by Term

Abbreviation Key:

all streams - the number of stream names in the state according to GNIS data
all cases - the number of stream names in the state that contain the listed term
not genr - the number of stream names that contain the term but do not use it as the generic, e.g., West *Fork* Johnson Branch
as genr - the number of stream names that do use the term as the generic, e.g., West Branch Johnson *Fork*
all % - the percentage of stream names in the state that contain the term
genr % - the percentage of stream names in the state that use the term as the generic

State	all streams	all cases	not genr	as genr	all %	genr %
CREEK						
Montana	8995	8681	1	8680	96.5	96.5
Idaho	8941	8629	1	8628	96.5	96.5
Wyoming	5271	4985	0	4985	94.6	94.6
Oregon	11587	10928	6	10922	94.3	94.3
South Dakota	1347	1267	0	1267	94.1	94.1
Washington	5959	5451	3	5448	91.5	91.4
Colorado	5350	4881	1	4880	91.2	91.2

State	all streams	all cases	not genr	as genr	all %	genr %
(CREEK, cont.)						
Kansas	2488	2240	0	2240	90.0	90.0
Oklahoma	3073	2759	0	2759	89.8	89.8
California	9555	8513	7	8506	89.1	89.0
Nebraska	1426	1257	0	1257	88.1	88.1
Utah	2366	2023	1	2022	85.5	85.5
North Dakota	622	520	0	520	83.6	83.6
Nevada	2028	1671	4	1667	82.4	82.2
Iowa	1962	158	1	1585	80.8	80.8
Alaska	8526	6890	13	6877	80.8	80.7
Wisconsin	2965	2343	4	2339	79.0	78.9
Texas	11259	7782	4	7778	69.1	69.1
Minnesota	1907	1320	4	1316	69.2	69.0
Illinois	2560	1764	2	1764	69.0	68.9
Michigan	4346	2942	10	2932	67.7	67.5
Arkansas	4676	2970	1	2969	63.5	63.5
Georgia	5506	3381	0	3381	61.4	61.4
United States	221667	135054	107	134947	60.9	60.9
Missouri	4907	2883	1	2882	58.8	58.7
Mississippi	4556	2663	1	2662	58.5	58.4
Florida	2936	1628	3	1625	55.4	55.3
Alabama	6506	3543	1	3542	54.5	54.4
Indiana	3466	1891	5	1886	54.6	54.4
South Carolina	3535	1727	0	1727	48.9	48.9
Arizona	2267	109	3	1091	48.3	48.1
North Carolina	9129	34386	3	4383	48.0	48.0
New York	4382	1997	0	1997	45.6	45.6
New Mexico	2065	922	1	921	44.6	44.6
Virginia	7159	3113	0	3113	43.5	43.5
Maryland	1795	766	0	766	42.7	42.7
Ohio	3491	1388	1	1387	39.7	39.7
Tennessee	9224	3551	8	3543	38.5	38.4
New Jersey	1345	478	2	476	35.5	35.4
Louisiana	4162	1252	2	1250	30.1	30.0
Kentucky	11247	3243	10	3233	28.8	28.7
Pennsylvania	6691	1855	2	1853	27.7	27.7
Dist. Columbia	19	5	0	5	26.3	26.3
Delaware	433	89	0	89	20.6	20.6
West Virginia	8468	1452	0	1452	17.1	17.1
Massachusetts	2057	136	1	135	6.6	6.6
Rhode Island	254	15	0	15	5.9	5.9
Vermont	1263	52	0	52	4.1	4.1
Connecticut	1468	46	0	46	3.1	3.1
Maine	3935	76	0	76	1.9	1.9
New Hampshire	1684	18	0	18	1.1	1.1
BRANCH						
Tennessee	9224	5252	10	5242	56.9	56.8
Kentucky	11247	6043	23	6020	53.7	53.5
Delaware	433	208	5	203	48.0	46.9

State	all streams	all cases	not genr	as genr	all %	genr %
(BRANCH, cont.)						
Alabama	6506	2769	9	2760	42.6	42.4
North Carolina	9129	3784	19	3765	41.5	41.2
South Carolina	3535	143	9	1428	40.7	40.4
Georgia	5506	1885	15	1870	34.2	34.0
Missouri	4907	1652	28	1624	33.7	33.1
Dist. Columbia	19	6	0	6	31.6	31.6
Virginia	7159	2328	72	2256	32.5	31.5
Florida	2936	916	24	892	31.2	30.4
Mississippi	4556	1281	21	1260	28.1	27.7
Texas	11259	2847	45	2802	25.3	24.9
Maryland	1795	479	45	434	26.7	24.2
Arkansas	4676	1078	8	1070	23.1	22.9
West Virginia	8468	1871	23	1848	22.1	21.8
Louisiana	4162	892	10	882	21.4	21.2
United States	221667	39516	2776	36740	17.8	16.6
New Jersey	1345	273	53	220	20.3	16.4
Illinois	2560	477	63	414	18.6	16.2
Indiana	3466	556	47	509	16.0	14.7
Oklahoma	3073	267	27	240	8.7	7.8
Iowa	1962	193	53	140	9.8	7.1
Kansas	2488	234	107	127	9.4	5.1
Nebraska	1426	130	70	60	9.1	4.2
Wisconsin	2965	254	148	106	8.6	3.6
Vermont	1263	96	55	4	7.6	3.2
Ohio	3494	191	103	88	5.5	2.5
Pennsylvania	6691	473	310	163	7.1	2.4
New Hampshire	1684	86	68	18	5.1	1.1
Michigan	4346	353	322	31	8.1	0.7
Maine	3935	274	251	23	7.0	0.6
New York	4382	198	171	27	4.5	0.6
Minnesota	1907	90	78	12	4.7	0.6
Oregon	11587	100	40	60	0.9	0.5
California	9555	131	105	26	1.4	0.3
Colorado	5350	58	42	16	1.1	0.3
Massachusetts	2057	54	48	6	2.6	0.3
Wyoming	5271	47	29	18	0.9	0.3
North Dakota	622	40	38	2	6.4	0.3
South Dakota	1347	38	35	3	2.8	0.2
Hawaii	505	5	4	1	1.0	0.2
Connecticut	1468	42	41	1	2.9	0.1
Montana	8995	38	25	13	0.4	0.1
Washington	5959	36	33	3	0.6	0.1
Utah	2366	10	7	3	0.4	0.1
Nevada	2028	9	6	3	0.4	0.1
Idaho	8941	13	13	0	0.1	0.0
Alaska	8526	12	10	2	0.1	0.0
Arizona	2267	5	4	1	0.2	0.0
New Mexico	2065	3	2	1	0.1	0.0
Rhode Island	254	2	2	0	0.8	0.0

RUN	State	all streams	all cases	not genr	as genr	all %	genr %
	Pennsylvania	6691	4351	3	4348	65.0	65.0
	Ohio	3494	1682	4	1678	48.1	48.0
	West Virginia	8468	3815	0	3815	45.1	45.1
	Dist. Columbia	19	6	1	5	31.6	26.3
	Maryland	1795	435	2	433	24.2	24.1
	Indiana	3466	698	5	693	20.1	20.0
	Virginia	7159	1083	12	1071	15.1	15.0
	New Jersey	1345	159	3	156	11.8	11.6
	Delaware	433	33	0	36	7.6	7.6
	United States	221909	13572	197	13375	6.1	6.0
	Illinois	2560	90	1	89	3.5	3.5
	Kentucky	11247	351	8	343	3.1	3.0
	Iowa	1962	60	2	58	3.1	3.0
	New York	4382	84	2	82	1.9	1.9
	South Dakota	1353	24	1	23	1.8	1.7
	North Carolina	9129	163	24	139	1.8	1.5
	South Carolina	3535	47	13	34	1.3	1.0
	Wisconsin	2965	30	0	30	1.0	1.0
	Nebraska	1426	16	3	13	1.1	0.9
	Michigan	4371	34	1	33	0.8	0.8
	Florida	2936	26	3	23	0.9	0.8
	Rhode Island	254	2	0	2	0.8	0.8
	Massachusetts	2057	17	2	15	0.8	0.7
	Kansas	2488	18	2	16	0.7	0.6
	Minnesota	1911	12	3	9	0.6	0.5
	North Dakota	626	4	1	3	0.6	0.5
	Missouri	4907	27	5	22	0.6	0.4
	Tennessee	9224	33	5	28	0.4	0.3
	Colorado	5350	19	2	17	0.4	0.3
	Mississippi	4643	14	2	12	0.3	0.3
	Texas	11260	32	6	26	0.3	0.2
	California	9555	30	11	19	0.3	0.2
	Georgia	5506	20	11	9	0.4	0.2
	Alaska	8526	20	5	15	0.2	0.2
	Wyoming	5273	17	6	11	0.3	0.2
	Arizona	2267	5	1	4	0.2	0.2
	Vermont	1263	3	0	3	0.2	0.2
	Oregon	11587	25	15	10	0.2	0.1
	Montana	9011	19	11	8	0.2	0.1
	Idaho	8941	15	8	7	0.2	0.1
	Alabama	6506	14	6	8	0.2	0.1
	Washington	5959	9	3	6	0.2	0.1
	Arkansas	4676	9	2	7	0.2	0.1
	Louisiana	4162	5	0	5	0.1	0.1
	New Hampshire	1684	3	1	2	0.2	0.1
	Utah	2459	3	0	3	0.1	0.1
	New Mexico	2065	3	0	3	0.1	0.1
	Oklahoma	3073	3	0	3	0.1	0.1
	Maine	3935	2	0	2	0.1	0.1

State	all streams	all cases	not genr	as genr	all %	genr %
(RUN, cont.)						
Connecticut	1468	1	0	1	0.1	0.1
Nevada	2032	1	1	0	0.0	0.0
BROOK						
New Hampshire	1684	1453	0	1453	86.3	86.3
Connecticut	1468	1268	3	1265	86.4	86.2
Vermont	1263	1039	0	1039	82.3	82.3
Massachusetts	2057	1632	1	1631	79.3	79.3
Maine	3935	2996	2	2994	76.1	76.1
Rhode Island	254	185	0	185	72.8	72.8
New York	4382	1749	0	1749	39.9	39.9
New Jersey	1345	390	2	388	29.0	28.8
Minnesota	1907	114	1	113	6.0	5.9
United States	221660	11423	33	11390	5.2	5.1
Indiana	3466	118	2	116	3.4	3.3
Pennsylvania	6691	174	2	172	2.6	2.6
Wisconsin	2965	74	0	74	2.5	2.5
Michigan	4346	65	5	60	1.5	1.4
Ohio	3494	24	0	24	0.7	0.7
Delaware	433	2	0	2	0.5	0.5
Maryland	1795	8	0	8	0.4	0.4
Colorado	5350	18	3	15	0.3	0.3
North Dakota	622	2	0	2	0.3	0.3
Oregon	11587	22	1	21	0.2	0.2
Alabama	6506	16	0	16	0.2	0.2
Iowa	1962	4	0	4	0.2	0.2
Illinois	2560	4	0	4	0.2	0.2
Virginia	7159	9	1	8	0.1	0.1
California	9555	8	1	7	0.1	0.1
Washington	5959	6	0	6	0.1	0.1
Florida	2936	4	0	4	0.1	0.1
Kansas	2488	4	1	3	0.2	0.1
South Dakota	1347	2	0	2	0.1	0.1
Utah	2366	2	0	2	0.1	0.1
Nebraska	1426	1	0	1	0.1	0.1
North Carolina	9129	5	1	4	0.1	0.0
West Virginia	8468	5	2	3	0.1	0.0
Texas	11259	4	2	2	0.0	0.0
Montana	8995	3	0	3	0.0	0.0
Idaho	8941	2	1	1	0.0	0.0
Missouri	4900	2	0	2	0.0	0.0
Wyoming	5271	2	0	2	0.0	0.0
New Mexico	2065	1	0	1	0.0	0.0
Kentucky	11247	1	0	1	0.0	0.0
Arkansas	4676	1	0	1	0.0	0.0
Mississippi	4556	1	1	0	0.0	0.0
Tennessee	9224	1	0	1	0.0	0.0
Oklahoma	3073	1	1	0	0.0	0.0
Georgia	5506	1	0	1	0.0	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
RIVER						
Minnesota	1911	428	3	42	22.4	22.2
Rhode Island	254	52	0	52	20.5	20.5
Alaska	8526	1288	4	1284	15.1	15.1
Massachusetts	2057	25	2	255	12.5	12.4
Wisconsin	2965	361	0	361	12.2	12.2
Michigan	4371	523	11	512	12.0	11.7
Dist. Columbia	19	2	0	2	10.5	10.5
Connecticut	1468	143	0	143	9.7	9.7
North Dakota	626	6	1	60	9.7	9.6
New Hampshire	1684	155	0	155	9.2	9.2
Vermont	1263	110	0	110	8.7	8.7
Florida	2936	204	2	202	6.9	6.9
Maine	3935	262	2	260	6.7	6.6
Iowa	1962	117	0	117	6.0	6.0
Washington	5959	348	1	347	5.8	5.8
New Jersey	1345	72	1	71	5.4	5.3
New York	4382	215	0	215	4.9	4.9
Illinois	2560	118	1	117	4.6	4.6
Delaware	433	19	0	19	4.4	4.4
Maryland	1795	72	0	72	4.0	4.0
Nebraska	1426	57	0	57	4.0	4.0
United States	221909	8241	79	8162	3.7	3.7
Hawaii	505	18	0	18	3.6	3.6
Utah	2459	89	2	87	3.6	3.5
Kansas	2488	81	0	81	3.3	3.3
California	9555	301	4	297	3.2	3.1
Missouri	4907	155	3	152	3.2	3.1
South Carolina	3535	109	0	109	3.1	3.1
Georgia	5506	169	4	165	3.1	3.0
Virginia	7159	206	1	205	2.9	2.9
Ohio	3494	102	0	102	2.9	2.9
South Dakota	1353	38	0	38	2.8	2.8
Colorado	5350	146	0	146	2.7	2.7
New Mexico	2065	55	0	55	2.7	2.7
Oregon	11587	280	0	280	2.4	2.4
North Carolina	9129	195	4	191	2.1	2.1
Wyoming	5273	112	0	112	2.1	2.1
Louisiana	4162	90	2	88	2.2	2.1
Indiana	3466	74	3	71	2.1	2.0
Nevada	2032	41	2	39	2.0	1.9
Arkansas	4676	85	2	83	1.8	1.8
Arizona	2267	42	1	41	1.9	1.8
Montana	9011	149	0	149	1.7	1.7
Idaho	8941	136	0	136	1.5	1.5
Mississippi	4643	69	1	68	1.5	1.5
Texas	11260	164	4	160	1.5	1.4
Tennessee	9224	114	4	110	1.2	1.2
Alabama	6506	81	2	79	1.2	1.2
Oklahoma	3073	38	0	38	1.2	1.2

State	all streams	all cases	not genr	as genr	all %	genr %
(RIVER, cont.)						
West Virginia	8468	92	7	85	1.1	1.0
Kentucky	11247	91	4	87	0.8	0.8
Pennsylvania	6691	55	1	54	0.8	0.8
FORK						
West Virginia	8468	1564	429	1135	18.5	13.4
Kentucky	11247	1921	537	1384	17.1	12.3
Utah	2366	542	364	178	22.9	7.5
Ohio	3494	312	137	175	8.9	5.0
Virginia	7159	423	215	208	5.9	2.9
Missouri	4907	328	204	124	6.7	2.5
United States	221667	14546	10160	4386	6.6	2.0
Tennessee	9224	539	355	184	5.8	2.0
North Carolina	9129	383	208	175	4.2	1.9
Illinois	2560	139	90	49	5.4	1.9
Indiana	3466	176	113	63	5.1	1.8
Arkansas	4676	182	104	78	3.9	1.7
Wyoming	5271	653	581	72	12.4	1.4
Pennsylvania	6691	166	101	65	2.5	1.0
Idaho	8941	968	893	75	10.8	0.8
Colorado	5350	501	466	35	9.4	0.7
South Carolina	3535	59	34	25	1.7	0.7
Montana	8995	1263	1211	52	14.0	0.6
California	9555	867	806	61	9.1	0.6
Alaska	8526	359	307	52	4.2	0.6
Oregon	11587	941	895	46	8.1	0.4
New Mexico	2065	108	100	8	5.2	0.4
Oklahoma	3073	83	71	12	2.7	0.4
Louisiana	4162	69	53	16	1.7	0.4
Washington	5959	565	546	19	9.5	0.3
Georgia	5506	89	74	15	1.6	0.3
Arizona	2267	78	72	6	3.4	0.3
South Dakota	1347	75	71	4	5.6	0.3
Texas	11259	357	331	26	3.2	0.2
Alabama	6506	105	92	13	1.6	0.2
Kansas	2488	97	91	6	3.9	0.2
Mississippi	4556	47	40	7	1.0	0.2
Maryland	1795	19	16	3	1.1	0.2
Wisconsin	2965	84	81	3	2.8	0.1
Iowa	1962	58	56	2	3.0	0.1
Nebraska	1426	56	54	2	3.9	0.1
Maine	3935	15	13	2	0.4	0.1
New Jersey	1345	14	12	2	1.0	0.1
Connecticut	1468	2	1	1	0.1	0.1
Nevada	2028	192	191	1	9.5	0.0
Minnesota	1907	53	53	0	2.8	0.0
Florida	2936	32	31	1	1.1	0.0
North Dakota	622	23	23	0	3.7	0.0
Michigan	4346	10	9	1	0.2	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
(FORK, cont.)						
New York	4382	9	9	0	0.2	0.0
Vermont	1263	6	6	0	0.5	0.0
New Hampshire	1684	5	5	0	0.3	0.0
Hawaii	505	4	4	0	0.8	0.0
Delaware	433	4	4	0	0.9	0.0
Massachusetts	2057	1	1	0	0.0	0.0
BAYOU						
Louisiana	4162	1642	0	1642	39.5	39.5
Mississippi	4556	422	1	421	9.3	9.2
Arkansas	4676	257	1	256	5.5	5.5
Texas	11259	247	1	246	2.2	2.2
Florida	2936	54	3	51	1.8	1.7
United States	221660	2714	13	2701	1.2	1.2
Alabama	6506	34	0	34	0.5	0.5
Missouri	4900	14	0	14	0.3	0.3
Oklahoma	3073	7	0	7	0.2	0.2
Illinois	2560	7	1	6	0.3	0.2
Tennessee	9224	10	0	10	0.1	0.1
Indiana	3466	6	2	4	0.2	0.1
Michigan	4346	4	0	4	0.1	0.1
Kentucky	11247	7	4	3	0.1	0.0
Ohio	3494	1	0	1	0.0	0.0
Montana	8995	1	0	1	0.0	0.0
California	9555	1	0	1	0.0	0.0
WASH						
Arizona	2267	1082	1	1081	47.7	47.7
Nevada	2032	287	2	285	14.1	14.0
New Mexico	2065	141	0	141	6.8	6.8
California	9555	263	2	261	2.8	2.7
Colorado	5350	57	0	57	1.1	1.1
North Dakota	626	7	0	7	1.1	1.1
United States	221909	1910	53	1857	0.9	0.8
Utah	2459	18	1	17	0.7	0.7
Wyoming	5273	4	0	4	0.1	0.1
Idaho	8941	6	4	2	0.1	0.0
West Virginia	8468	5	5	0	0.1	0.0
Florida	2936	4	4	0	0.1	0.0
Alabama	6506	4	4	0	0.1	0.0
Texas	11260	4	3	1	0.0	0.0
North Carolina	9129	3	3	0	0.0	0.0
Kentucky	11247	3	3	0	0.0	0.0
Pennsylvania	6691	3	3	0	0.0	0.0
Georgia	5506	2	2	0	0.0	0.0
Washington	5959	2	2	0	0.0	0.0
South Carolina	3535	2	2	0	0.1	0.0
Oregon	11587	2	1	1	0.0	0.0
Massachusetts	2057	1	1	0	0.0	0.0
Michigan	4371	1	1	0	0.0	0.0
Louisiana	4162	1	1	0	0.0	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
(WASH, cont.)						
Mississippi	4643	1	1	0	0.0	0.0
Alaska	8526	1	1	0	0.0	0.0
Connecticut	1468	1	1	0	0.1	0.0
Illinois	2560	1	1	0	0.0	0.0
Indiana	3466	1	1	0	0.0	0.0
Missouri	4907	1	1	0	0.0	0.0
Virginia	7159	1	1	0	0.0	0.0
Tennessee	9224	1	1	0	0.0	0.0
SLOUGH						
Arkansas	4676	157	1	156	3.4	3.3
Illinois	2560	83	0	83	3.2	3.2
Alaska	8526	195	0	195	2.3	2.3
Florida	2936	68	1	67	2.3	2.3
California	955	184	0	184	1.9	1.9
Louisiana	4162	74	0	74	1.8	1.8
Iowa	1962	39	4	35	2.0	1.8
Washington	5959	106	2	104	1.8	1.7
Oregon	11587	188	1	187	1.6	1.6
Nevada	2032	29	1	28	1.4	1.4
North Dakota	626	9	1	8	1.4	1.3
Texas	11260	139	3	136	1.2	1.2
Nebraska	1426	18	1	17	1.3	1.2
Missouri	4907	52	4	48	1.1	1.0
United States	221909	1716	41	1675	0.8	0.8
Utah	2459	20	0	20	0.8	0.8
Wisconsin	2965	21	1	20	0.7	0.7
Mississippi	4643	30	1	29	0.6	0.6
Minnesota	1911	12	0	12	0.6	0.6
Tennessee	9224	43	0	43	0.5	0.5
Alabama	6506	31	1	30	0.5	0.5
Idaho	8941	39	1	38	0.4	0.4
Montana	9011	36	4	32	0.4	0.4
Wyoming	5273	20	1	19	0.4	0.4
South Dakota	1353	5	0	5	0.4	0.4
Kentucky	11247	34	2	32	0.3	0.3
Georgia	5506	18	1	17	0.3	0.3
Indiana	3466	14	2	12	0.4	0.3
Kansas	2488	12	4	8	0.5	0.3
Colorado	5350	11	1	10	0.2	0.2
Michigan	4371	8	0	8	0.2	0.2
Oklahoma	3073	8	1	7	0.3	0.2
North Carolina	9129	5	0	5	0.1	0.1
South Carolina	3535	3	0	3	0.1	0.1
Maryland	1795	1	0	1	0.1	0.1
New Jersey	1345	1	1	0	0.1	0.0
West Virginia	8468	1	0	1	0.0	0.0
Virginia	7159	1	1	0	0.0	0.0
Arizona	2267	1	0	1	0.0	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
STREAM						
Hawaii	505	481	0	481	95.2	95.2
Maine	3935	538	1	537	13.7	13.6
Dist. Columbia	19	1	0	1	5.3	5.3
New Hampshire	1684	26	0	26	1.5	1.5
Vermont	1263	14	1	13	1.1	1.0
New York	4382	41	0	41	0.9	0.9
New Jersey	1345	8	0	8	0.6	0.6
United States	221909	1206	6	1200	0.5	0.5
Connecticut	1468	6	0	6	0.4	0.4
Massachusetts	2057	8	1	7	0.4	0.3
Minnesota	1911	6	0	6	0.3	0.3
Alaska	8526	14	0	14	0.2	0.2
Washington	5959	9	0	9	0.2	0.2
Indiana	3466	6	0	6	0.2	0.2
Delaware	433	1	0	1	0.2	0.2
Virginia	7159	10	0	10	0.1	0.1
Pennsylvania	6691	8	0	8	0.1	0.1
California	9555	7	0	7	0.1	0.1
Michigan	4371	5	1	4	0.1	0.1
Arizona	2267	3	0	3	0.1	0.1
Utah	2459	3	0	3	0.1	0.1
South Carolina	3535	2	0	2	0.1	0.1
Kentucky	11247	2	1	1	0.0	0.0
North Carolina	9129	2	0	2	0.0	0.0
Montana	9011	2	0	2	0.0	0.0
Maryland	1795	1	1	0	0.1	0.0
Georgia	5506	1	0	1	0.0	0.0
West Virginia	8468	1	0	1	0.0	0.0
DRAIN						
Michigan	4346	733	3	730	16.9	16.8
Indiana	3466	72	0	72	2.1	2.1
Arizona	2267	15	0	15	0.7	0.7
Nebraska	1426	10	0	10	0.7	0.7
Delaware	433	3	1	2	0.7	0.5
United States	221667	935	12	923	0.4	0.4
Florida	2936	10	0	10	0.3	0.3
Iowa	1962	5	0	5	0.3	0.3
Idaho	8941	21	0	21	0.2	0.2
West Virginia	8468	10	0	10	0.1	0.1
Georgia	5506	5	0	5	0.1	0.1
Virginia	7159	5	0	5	0.1	0.1
Wyoming	5271	4	0	4	0.1	0.1
South Carolina	3535	4	0	4	0.1	0.1
Illinois	2560	2	0	2	0.1	0.1
Wisconsin	2965	2	0	2	0.1	0.1
South Dakota	1347	2	0	2	0.1	0.1
Maryland	1795	2	0	2	0.1	0.1
New Jersey	1345	1	0	1	0.1	0.1
California	9555	4	1	3	0.0	0.0
Oregon	11587	3	1	2	0.0	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
(DRAIN, cont.)						
Texas	11259	3	2	1	0.0	0.0
North Carolina	9129	3	0	3	0.0	0.0
Utah	2366	2	1	1	0.1	0.0
Louisiana	4162	2	1	1	0.0	0.0
Montana	8995	2	2	0	0.0	0.0
Arkansas	4676	2	0	2	0.0	0.0
New York	4382	2	0	2	0.0	0.0
Massachusetts	2057	1	0	1	0.0	0.0
Kentucky	11247	1	0	1	0.0	0.0
Mississippi	4556	1	0	1	0.0	0.0
New Mexico	2065	1	0	1	0.0	0.0
Ohio	3494	1	0	1	0.0	0.0
Washington	5959	1	0	1	0.0	0.0
ARROYO						
New Mexico	2065	499	0	499	24.2	24.2
Colorado	5350	119	1	118	2.2	2.2
California	9555	111	1	110	1.2	1.2
United States	221909	750	5	745	0.3	0.3
Texas	11260	15	1	14	0.1	0.1
Arizona	2267	2	0	2	0.1	0.1
Montana	9011	2	1	1	0.0	0.0
Kansas	2488	2	1	1	0.1	0.0
SWAMP						
South Carolina	3535	185	17	168	5.2	4.8
North Carolina	9129	349	30	319	3.8	3.5
Virginia	7159	234	12	22	3.3	3.1
United States	221909	1087	358	729	0.5	0.3
Hawaii	505	1	0	1	0.2	0.2
New Jersey	1345	23	21	2	1.7	0.1
Georgia	5506	18	10	8	0.3	0.1
Maryland	1795	10	8	2	0.6	0.1
Florida	2936	7	5	2	0.2	0.1
Nebraska	1426	2	0	2	0.1	0.1
Oregon	11587	38	38	0	0.3	0.0
Montana	9011	34	34	0	0.4	0.0
Connecticut	1468	25	25	0	1.7	0.0
Pennsylvania	6691	22	22	0	0.3	0.0
Massachusetts	2057	18	18	0	0.9	0.0
Alabama	6506	13	11	2	0.2	0.0
Washington	5959	11	11	0	0.2	0.0
Idaho	8941	10	10	0	0.1	0.0
New York	4382	10	10	0	0.2	0.0
West Virginia	8468	9	9	0	0.1	0.0
Maine	3935	7	7	0	0.2	0.0
Rhode Island	254	6	6	0	2.4	0.0
California	9555	6	6	0	0.1	0.0
Wisconsin	2965	5	5	0	0.2	0.0
Kentucky	11247	5	5	0	0.0	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
(SWAMP, cont.)						
Mississippi	4643	4	4	0	0.1	0.0
Minnesota	1911	4	4	0	0.2	0.0
Michigan	4371	4	4	0	0.1	0.0
Ohio	3494	4	3	1	0.1	0.0
New Hampshire	1684	3	3	0	0.2	0.0
Tennessee	9224	3	3	0	0.0	0.0
Indiana	3466	3	3	0	0.1	0.0
Alaska	8526	3	3	0	0.0	0.0
Delaware	433	3	3	0	0.7	0.0
Colorado	5350	2	2	0	0.0	0.0
Arizona	2267	1	1	0	0.0	0.0
North Dakota	626	1	1	0	0.2	0.0
Louisiana	4162	1	1	0	0.0	0.0
Missouri	4907	1	1	0	0.0	0.0
Wyoming	5273	1	1	0	0.0	0.0
Texas	11260	1	1	0	0.0	0.0
CANADA						
New Mexico	2065	236	0	236	11.4	11.4
United States	221909	265	18	247	0.1	0.1
California	9555	9	0	9	0.1	0.1
New York	4382	5	5	0	0.1	0.0
Pennsylvania	6691	4	4	0	0.1	0.0
Michigan	4371	2	2	0	0.0	0.0
Colorado	5350	1	0	1	0.0	0.0
Montana	9011	1	1	0	0.0	0.0
Virginia	7159	1	1	0	0.0	0.0
Oregon	11587	1	1	0	0.0	0.0
Nebraska	1426	1	1	0	0.1	0.0
Arkansas	4676	1	1	0	0.0	0.0
Ohio	3494	1	1	0	0.0	0.0
Georgia	5506	1	1	0	0.0	0.0
Texas	11260	1	0	1	0.0	0.0
PRONG						
Delaware	433	22	0	22	5.1	5.1
Tennessee	9224	96	59	37	1.0	0.4
North Carolina	9129	137	109	28	1.5	0.3
Wyoming	5273	71	53	18	1.3	0.3
Louisiana	4162	32	21	11	0.8	0.3
Mississippi	4643	27	15	12	0.6	0.3
Maryland	1795	13	8	5	0.7	0.3
Arkansas	4676	36	26	10	0.8	0.2
United States	221909	792	577	215	0.4	0.1
Texas	11260	82	73	9	0.7	0.1
Georgia	5506	32	26	6	0.6	0.1
Missouri	4907	32	29	3	0.7	0.1
Virginia	7159	26	16	10	0.4	0.1
Kentucky	11247	25	19	6	0.2	0.1
Alabama	6506	24	20	4	0.4	0.1
Florida	2936	24	21	3	0.8	0.1

State	all streams	all cases	not genr	as genr	all %	genr %
(PRONG, cont.)						
Montana	9011	18	8	10	0.2	0.1
South Carolina	3535	16	11	5	0.5	0.1
Colorado	5350	12	9	3	0.2	0.1
Arizona	2267	11	9	2	0.5	0.1
Indiana	3466	9	7	2	0.3	0.1
New Mexico	2065	4	2	2	0.2	0.1
Oregon	11587	12	9	3	0.1	0.0
West Virginia	8468	8	7	1	0.1	0.0
Oklahoma	3073	4	3	1	0.1	0.0
Nebraska	1426	4	4	0	0.3	0.0
Washington	5959	3	3	0	0.1	0.0
Illinois	2560	2	2	0	0.1	0.0
South Dakota	1353	2	2	0	0.1	0.0
Ohio	3494	2	2	0	0.1	0.0
Idaho	8941	2	1	1	0.0	0.0
Pennsylvania	6691	1	0	1	0.0	0.0
California	9555	1	1	0	0.0	0.0
North Dakota	626	1	1	0	0.2	0.0
Kansas	2488	1	1	0	0.0	0.0
LICK						
Kentucky	11247	440	362	78	3.9	0.7
West Virginia	8468	273	237	36	3.2	0.4
Ohio	3494	53	39	14	1.5	0.4
Virginia	7159	115	96	19	1.6	0.3
United States	221909	1511	1350	161	0.7	0.1
Pennsylvania	6691	94	90	4	1.4	0.1
Indiana	3466	52	49	3	1.5	0.1
Illinois	2560	26	24	2	1.0	0.1
Maryland	1795	8	7	1	0.4	0.1
Tennessee	9224	98	97	1	1.1	0.0
Arkansas	4676	48	48	0	1.0	0.0
Missouri	4907	43	43	0	0.9	0.0
Texas	11260	31	31	0	0.3	0.0
North Carolina	9129	31	31	0	0.3	0.0
Alabama	6506	30	30	0	0.5	0.0
Louisiana	4162	26	25	1	0.6	0.0
Oregon	11587	25	23	2	0.2	0.0
Idaho	8941	16	16	0	0.2	0.0
California	9555	16	16	0	0.2	0.0
Mississippi	4643	16	16	0	0.3	0.0
South Carolina	3535	12	12	0	0.3	0.0
Georgia	5506	11	11	0	0.2	0.0
Montana	9011	11	11	0	0.1	0.0
Oklahoma	3073	8	8	0	0.3	0.0
Iowa	1962	7	7	0	0.4	0.0
Colorado	5350	6	6	0	0.1	0.0
Washington	5959	4	4	0	0.1	0.0
New York	4382	4	4	0	0.1	0.0
Wyoming	5273	3	3	0	0.1	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
(LICK, cont.)						
Vermont	1263	1	1	0	0.1	0.0
Michigan	4371	1	1	0	0.0	0.0
Alaska	8526	1	1	0	0.0	0.0
Utah	2459	1	1	0	0.0	0.0
KILL						
New York	4382	143	1	142	3.3	3.2
New Jersey	1345	5	1	4	0.4	0.3
Vermont	1263	3	1	2	0.2	0.2
United States	221667	169	14	155	0.1	0.1
Pennsylvania	6691	5	0	5	0.1	0.1
Kansas	2488	3	3	0	0.1	0.0
West Virginia	8468	2	0	2	0.0	0.0
Arkansas	4676	1	1	0	0.0	0.0
California	9555	1	1	0	0.0	0.0
Michigan	4346	1	1	0	0.0	0.0
Kentucky	11247	1	1	0	0.0	0.0
Nevada	2028	1	1	0	0.0	0.0
North Carolina	9129	1	1	0	0.0	0.0
Indiana	3466	1	1	0	0.0	0.0
Montana	8995	1	1	0	0.0	0.0
DITCH						
Delaware	433	53	1	52	12.2	12.0
Maryland	1795	14	2	12	0.8	0.7
Indiana	3466	15	2	13	0.4	0.4
New Jersey	1345	4	0	4	0.3	0.3
Florida	2936	8	3	5	0.3	0.2
United States	221667	200	64	136	0.1	0.1
Wyoming	5271	14	8	6	0.3	0.1
Alabama	6506	11	2	9	0.2	0.1
Mississippi	4556	5	1	4	0.1	0.1
Ohio	3494	3	0	3	0.1	0.1
Illinois	2560	3	0	3	0.1	0.1
Connecticut	1468	1	0	1	0.1	0.1
Iowa	1962	1	0	1	0.1	0.1
Minnesota	1907	1	0	1	0.1	0.1
Idaho	8941	13	13	0	0.1	0.0
California	9555	8	6	2	0.1	0.0
Oregon	11587	7	7	0	0.1	0.0
North Carolina	9129	6	3	3	0.1	0.0
Texas	11259	5	0	5	0.0	0.0
Montana	8995	4	2	2	0.0	0.0
Tennessee	9224	4	1	3	0.0	0.0
Georgia	5506	3	1	2	0.1	0.0
Louisiana	4162	2	0	2	0.0	0.0
Pennsylvania	6691	2	2	0	0.0	0.0
Virginia	7159	2	1	1	0.0	0.0
Colorado	5350	2	2	0	0.0	0.0

State	all streams	all cases	not genr	as genr	all %	genr %
(DITCH, cont.)						
Maine	3935	1	1	0	0.0	0.0
Alaska	8526	1	1	0	0.0	0.0
Nevada	2028	1	1	0	0.0	0.0
Kansas	2488	1	0	1	0.0	0.0
Missouri	4907	1	1	0	0.0	0.0
South Dakota	1347	1	1	0	0.1	0.0
West Virginia	8468	1	1	0	0.0	0.0
Washington	5959	1	0	1	0.0	0.0
South Carolina	3535	1	1	0	0.0	0.0
OUTLET						
New York	4382	78	1	77	1.8	1.8
Michigan	4371	15	2	13	0.3	0.3
Wisconsin	296	10	1	9	0.3	0.3
Maine	3935	10	2	8	0.3	0.2
United States	221909	143	17	126	0.1	0.1
Pennsylvania	691	6	0	6	0.1	0.1
Ohio	3494	5	0	5	0.1	0.1
Minnesota	1911	3	1	2	0.2	0.1
Iowa	1962	3	1	2	0.2	0.1
South Dakota	1353	1	0	1	0.1	0.1
Washington	5959	4	4	0	0.1	0.0
Idaho	8941	2	1	1	0.0	0.0
Arizona	2267	1	0	1	0.0	0.0
California	9555	1	1	0	0.0	0.0
Indiana	3466	1	1	0	0.0	0.0
Mississippi	4643	1	0	1	0.0	0.0
Wyoming	5273	1	1	0	0.0	0.0
Montana	9011	1	1	0	0.0	0.0
COULEE						
North Dakota	626	16	0	16	2.6	2.6
Louisiana	4162	59	0	59	1.4	1.4
Montana	9011	28	9	19	0.3	0.2
Minnesota	1911	2	1	1	0.1	0.1
United States	221909	126	27	99	0.1	0.0
Washington	5959	7	7	0	0.1	0.0
Wisconsin	2965	7	6	1	0.2	0.0
Alaska	8526	1	0	1	0.0	0.0
Wyoming	5273	1	0	1	0.0	0.0
Iowa	1962	1	1	0	0.1	0.0
Oregon	11587	1	1	0	0.0	0.0
South Dakota	1353	1	1	0	0.1	0.0
Utah	2459	1	1	0	0.0	0.0
Idaho	8941	1	0	1	0.0	0.0

Geographic Names Information System (GNIS)

GNIS, developed by the Branch of Geographic Names, Office of Geographic and Cartographic Research, National Mapping Division, is the basis for Professional Paper 1200—*The National Gazetteer of the United States*, which is being published as a series of individual state gazetteer volumes. The information contained in GNIS is interactively available at the U.S. Geological Survey's information offices of the National Mapping Division. Special searches of this system may be requested with the results available in bound listings and on magnetic tape.

Geographical names for all of the states have been collected from large scale topographic maps, and lists of these names are available as interim products. This is Phase I of the project. Phase II, including names found in federal, state, and other sources as well as historical material, has been completed for only seven states and is in progress for about sixteen more.

State volumes, representing Phase II, are so far available for New Jersey, Delaware, Kansas, Arizona, Indiana, South Dakota, and North Dakota. Also available is the *United States Concise 1990*, which lists in one volume the major features in all of the states. These may be ordered from

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