

INDEX OF TIME-OF-TRAVEL STUDIES  
OF THE U.S. GEOLOGICAL SURVEY

By C. W. Boning

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U.S. GEOLOGICAL SURVEY

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Rogers C. B. Morton, Secretary

GEOLOGICAL SURVEY

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## PREFACE

This index to studies of surface water traveltimes is part of a catalog of information sources being compiled within the Resource and Land Information Program of the Department of the Interior. It is one of a series of references to studies of importance to resource managers and land use planners.

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## INDEX OF TIME-OF-TRAVEL STUDIES OF THE U.S. GEOLOGICAL SURVEY

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### ABSTRACT

This index identifies locations on streams where the U.S. Geological Survey has investigated the time of travel of a highly soluble material moving through a reach of stream channel. This index provides information only on the location of studied stream reaches; it contains no basic data. It does contain, however, a list of references to published data and analytical reports on time of travel and a list of U.S. Geological Survey offices where basic time-of-travel data are on file.

### INTRODUCTION

The purpose of this index is to assist individuals and agencies locate time of solute travel data. Although a great deal of information is available, some is provided in a variety of publication series, and some is unpublished but available for inspection and use. Since the knowledge of study sites and data sources is not well known, the compilation in this index should benefit future research and analytical efforts.

This index is concerned only with studies conducted by the Geological Survey prior to May 1973. Many of the studies were done in cooperation with other Federal or State agencies.

### STUDY TECHNIQUES

Techniques of determining the time of travel of a soluble material have been refined in the last two decades. The earliest techniques attempted to compute traveltime from the average cross-sectional stream velocity at a sample of cross-sectional sites in a stream reach or from the timing of surface floats. These techniques are an indirect method of estimating the time of travel of a soluble material.

They can produce estimates of only a low reliability and references to those studies are not included in this index. Techniques of using fluorescent dyes or radioactive materials as tracers were subsequently developed and allowed the direct measurement of the time of travel of highly soluble materials. All studies in this index utilized these direct observational techniques. The Geological Survey has used fluorescent dyes almost exclusively in recent years.

The basic procedure in most measurements of the time of travel is to inject into the upstream end of a study reach a volume of radioactive or fluorescent dye tracer and then to monitor the passage of that tracer at one or more downstream sites. Concentrations of radioactive tracers are measured with a radiation detector and concentrations of fluorescent dyes are measured with a fluorometer. Modern fluorometers can accurately measure dye concentrations as low as 0.1 micrograms per liter (0.1 parts per billion). Dye tracing techniques used by the Geological Survey have been described by Kilpatrick and others (written commun.) and Wilson (1968).

Time of travel may be expressed by various indices; for example, the time for an injected tracer to first reach a downstream point, the time for the peak concentration to reach a downstream point and the time for the mass center of the dispersed dye to reach a downstream point. These observed indices may then be analyzed to determine mixing and dispersion characteristics of a stream reach. Also, the duration of time required for all of the tracer to pass a given site is of value in providing a measure of the longitudinal dispersive characteristics of the reach. These indices and characteristics change with variations in the rate of discharge of the stream. Therefore, time of travel is frequently measured two or more times in a reach to determine the magnitude of time-of-travel changes in relation to stream discharge changes.

#### DESCRIPTION OF TABLES

Table 1 lists reports containing basic data and analyses of time of travel or dispersion investigations.

Table 2 lists stream reaches where time of travel has been observed one or more times. Reaches are listed by ascending order of Federal Information Processing Standards (FIPS) codes, and the upstream end of each reach is listed alphabetically by States and counties

within a State. As further identification, both the upstream and downstream ends are coded and referenced to latitude, longitude, nearby cities or prominent landmarks, and river mile where known.

Location where basic time-of-travel data are on file is indicated in the last column of table 2 and in table 3, which gives the FIPS code for each State. Inquiries about time-of-travel data for a specific reach should be addressed to District Chief, U. S. Geological Survey, WRD, at the address indicated in table 3.

Table 1.--Selected Data and Analytical Reports

- Balding, G. O., 1970, Data on dye dispersion in a reach of the Sacramento River near Red Bluff, Calif.: U.S. Geol. Survey open-file report, Menlo Park, Calif., 9 p.
- Bauer, D. P., 1968, Time of travel of water in the Great Miami River, Dayton to Cleves, Ohio: U.S. Geol. Survey Circ. 546, 15 p.
- Bowie, J. E., and Petrie, L. R., Travel of solutes in the Lower Missouri River: U.S. Geol. Survey Hydrol. Inv. Atlas HA 332.
- Buchanan, T. J., 1964, Time of travel of soluble contaminants in streams: Jour. of the Sanitary Engineering Div. Proc. of Am. Soc. of Civil Engrs., v. 90, No. SA3, June 1964, p. 1-12.
- Dunn, Bernard, 1964, Time-of-travel studies, Fall Creek Basin, Tompkins County, N.Y.: U.S. Geol. Survey open-file report, Albany, N.Y., 25 p.
- 1965, Time-of-travel studies, Hoosic River, North Adams, Mass., to Hoosic Falls, N.Y.: U.S. Geol. Survey open-file report, Albany, N.Y., 17 p.
- 1966, Time-of-travel studies, Lake Erie-Niagara River Basins: U.S. Geol. Survey open-file report, No. TT-2, Albany, N.Y., 108 p.
- 1966, Time-of-travel studies, Genesee River Basin: U.S. Geol. Survey open-file report, No. TT-3, Albany, N.Y., 65 p.
- 1966, Time-of-travel studies, Susquehanna River, Binghampton, N.Y., to Athens, Pa.: U.S. Geol. Survey open-file report, TT-4, 18 p.
- Dyar, T. R., Tasker, G. D., Wait, R. L., and others, 1972, Hydrology of the Riceboro area, coastal Georgia: Report to Georgia Water Quality Control Board and Interstate Paper Corporation by U.S. Geol. Survey, p. 43-70.

Table 1.--Selected Data and Analytical Reports--Cont.

- Fischer, H. B., 1968, Methods for predicting dispersion coefficients in natural streams, with applications to lower reaches of the Green and Duwamish Rivers, Wash.: U.S. Geol. Survey Prof. Paper 582-A, 27 p.
- Godfrey, R. G., and Frederick, B. J., 1963, Dispersion in natural streams: U.S. Geol. Survey open-file report, Wash., D.C., 75 p.
- Harris, D. D., 1967, Travel rates of water for selected streams in the Willamette River Basin, Ore.: U.S. Geol. Survey Hydrol. Inv. Atlas HA 273.
- Harris, D. D., and Sanderson, R. B., 1968, Use of dye tracers to collect hydrologic data in Ore.: Am. Water Resources Assoc. Bull., Urbana, Ill., v. 4, No. 2, p. 51-68.
- Horowitz, G. M., and Anderson, P. W., 1966, Time-of-travel measurements on the Passaic and Pompton Rivers, N.J.: U.S. Geol. Survey Prof. Paper 550-B, p. B199-B203.
- Hubbard, E. F., and Stamper, W. G., 1972, Movement and dispersion of soluble pollutants in the Northeast Cape Fear estuary, N.C.: U.S. Geol. Survey WSP 1873.
- Limerinos, J. T., 1967, Data for time-of-travel study of Eel River, Calif.: U.S. Geol. Survey open-file report, Menlo Park, Calif., 38 p.
- \_\_\_\_\_, 1967, Time-of-travel study of Mad River, Calif.: U.S. Geol. Survey open-file report, Menlo Park, Calif., 20 p.
- \_\_\_\_\_, 1967, Time-of-travel study of Trinity River, Calif.: U.S. Geol. Survey open-file report, Menlo Park, Calif., 26 p.
- Morton, R. J., 1962, Status report no. 3 on Clinch River study: Health Physics Div., Oak Ridge National Laboratory, Oak Ridge, Tenn., p. 88-111.

Table 1.--Selected Data and Analytical Reports--Cont.

- 1963, Status report no. 4 on Clinch River study: Health Physics Div., Oak Ridge National Laboratory, Oak Ridge, Tenn., p. 61-76.
- 1965, Status report no. 5 on Clinch River study: Health Physics Div., Oak Ridge National Laboratory, Oak Ridge, Tenn., p. 108-129.
- 1966, Status report no. 6 on Clinch River study: Health Physics Div., Oak Ridge National Laboratory, Oak Ridge, Tenn., p. 42-58.
- Nelson, J. L., Perkins, R. W., and Haushild, W. L., 1966, Determination of Columbia River flow time downstream from Pasco, Wash., using radioactive tracers introduced by the Hanford reactors: Water Resources Res., v. 2, no. 1, p. 31-39.
- Rathbun, R. E., Kennedy, V. C., and Culbertson, J. K., 1971, Transport and dispersion of fluorescent tracer particles for the flat-bed condition, Rio Grande conveyance channel near Bernardo, N. Mex.: U.S. Geol. Survey Prof. Paper 562-I, 56 p.
- Runner, G. S., 1963, Kanawha River Basin time-of-travel study: U. S. Geol. Survey open-file report, Charleston, W. Va., 20 p.
- Schuster, J. C., 1965, Canal discharge measurements with radioisotopes: Am. Soc. of Civil Engrs. Jour., v. 91, no. HY2, p. 101-124.
- Shindel, H. L., 1969, Time-of-travel study, Mohawk River, Rome, N.Y., to Cohoes, N.Y.: New York State Water Resources Comm. Rept. of Inv. RI-6, 48 p.
- 1969, Time-of-travel study, Upper Hudson River, Fort Edward, N.Y., to Troy Lock and Dam, Troy, N.Y.: U.S. Geol. Survey open-file report RI-10, Albany, N.Y., 37 p.
- 1973, Time-of-travel study, Batten Kill from 0.6 mile east of Vermont - N.Y. border to Clarks Mills, N.Y.: U.S. Geol. Survey open-file report RI-12, Albany, N.Y., 18 p.

Table 1.--Selected Data and Analytical Reports--Cont.

- Simpson, E. S., Beetham, W. A., and Ruggles, F. H., 1959, Hydrologic and tracer studies in the Mohawk River at Knolls Atomic Power Laboratory: AEC Research and Development Report, SO-45, 285 p.
- Stewart, M. R., 1967, Time of travel of solutes in Mississippi River from Baton Rouge to New Orleans, La.: U.S. Geol. Survey Hydrol. Inv. Atlas HA-260.
- Taylor, K. R., 1970, Travel time and concentration attenuation of a soluble dye in the Monocacy River, Md.: Maryland Geol. Survey Information Circ. 9, 23 p.
- Wilson, J. F., and Forrest, W. E., 1965, Potomac River time-of-travel measurements, in Ichijo, Takashi, Symposium on Diffusion in Oceans and Fresh Waters, Palisades, N.Y., 1964, Proc.: Lamont Geol. Observatory of Columbia Univ., Pub., p. 1-18.
- Wilson, J. F., and McAvoy, R. L., 1967, Water movement (in the Patuxent River basin), in Crooks, J. W., O'Bryan, Deric, and others, Water resources of the Patuxent River basin, Maryland: U.S. Geol. Survey Hydrol. Inv. Atlas HA-244, Sheet 5.
- Wilson, J. F., Cobb, E. D., and Yotsukura, N., 1969, Movement of a solute in the Potomac River estuary at Washington, D.C.: U.S. Geol. Survey Circ. 529-B, 14 p.
- Yotsukura, Nobuhiko, Fischer, H. B., and Sayre, W. W., 1970, Measurement of mixing characteristics of the Missouri River between Sioux City, Iowa, and Plattsburgh, Nebr.: U.S. Geol. Survey WSP 1899-G, p. G1-G29.

Table 2.--List of stream reaches where time of travel has been observed.

FIPS CODES	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY				
01	097	310810	0875638	Mobile R at confluence of Tombigbee & Alabama R nr Mt. Vernon, Al.	Mile 45.0
01	097	310402	0875748	To: Mobile R at head of Tensaw R nr Mt. Vernon, Al.	Mile 39.4
02	290	612800	1442720	Copper R nr Chitina, Alaska	
02	290	604500	1443240	To: Copper R nr Million Dollar Bridge, Alaska	65
02	290	643355	1490530	Tanana R at Nenana, Alaska	
02	290	645400	1491055	To: Tanana R at Minto, Alaska	30
05	091	330529	0935138	Red R at Spring Bank Ferry, Ark.	Mile 334.5
22	009	311210	0920830	To: Red R at Moncla, La.	Mile 67.5
05	097	342723	0934101	Caddo R at Norman, Ark.	Mile 67.1
05	019	341558	0932145	To: Caddo R at Runyan Bridge nr Alpine, Ark.	Mile 33.8
					33.3
					05

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
05	139	330156	0920517	Quachita R at Fedsenthal, Ark.	Mile 182.8	
22	073	322800	0920657	To: Quachita R at Lock & Dam 4, La. Mile 121.5	63.3	22
06	023	404552	1235317	Mad R at mouth of Maple Cr, Cal.		
06	023	405210	1235937	To: Mad R at Blue Lake, Cal.	16.1	06
06	025	324906	1150451	Coachella Canal nr Holtville, Cal.		
06	025	325818	1151106	To: Coachella Canal nr Holtville, Cal.	12.0	47
06	033	392426	1225730	Eel R at Scott Dam, Cal.		
06	045	392256	1230548	To: Eel R at Van Arsdale Bridge, Cal.	11.0	06
06	045	392939	1231230	Eel R at Hearst Bridge, Cal.		
06	023	402104	1235450	To: Eel R at South Fork Bridge, Cal.	101.5	06
06	105	404220	1224849	Trinity R at Lewiston gaging station, Cal.		
06	023	411105	1234218	To: Trinity R at Weitchpec, Cal.	109.1	06

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
08	065	341443	1041840	Twin Lakes Reservoir nr Granite, Colo.		
08	101	390448	1061843	To: Arkansas R at Colorado canal headgates nr Avondale	175	08
09	003	414659	0723515	Hockanum R nr East Hartford, Ct. Mile 6.9		
09	003	414540	0723845	To: Hockanum R at Main St. at E. Hartford, Ct. Mile 1.1	5.8	25
09	003	413818	0724403	Mattabasset R at Rd. Bl. Rt. 5 nr Berlin, Ct. Mile 9.2		
09	007	413552	0724040	To: Mattabesset R at Rt. 72 nr Cromwell, Ct. Mile 3.1	6.1	25
09	003	414006	0725115	Quinnipiac R at Plainville Ct. Mile 39.5		
09	009	412323	0725220	To: Quinnipiac R at North Haven, Ct. Mile 9.0	30.5	09

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
09	003	415717	0723317	Scantic R at Town Farm Rd. nr Enfield, Ct. Mile 14.9		
09	003	415143	0723615	To: Scantic R at Rt. 5 nr South Windsor, Ct. Mile 1.7	13.2	25
09	005	415548	0730333	Still R at Winsted, Ct. Mile 4.87		
09	005	415735	0730113	To: Still R at Riverton, Ct. Mile 0.10	4.77	09
13	117	340925	0840444	Chattahoochee R at Buford Dam, Ga. Mile 348.1		
13	149	331640	0850603	To: Chattahoochee R nr Franklin, Ga. Mile 235.5	112.6	13
16	055	474137	1170008	Spokane R at Pleasant View, Idaho Mile 98.7		
53	063	474630	1173235	To: Spokane R at Nine Mile Falls, Wash. Mile 58.1	40.6	16
18	001	404546	0844809	St. Marys R at Ohio-Indiana State Line, Ind.		
18	003	410502	0850809	To: St. Marys R at Fort Wayne, Ind.	38.2	18

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
18	003	410456	0850756	Maumee R at Fort Wayne, Ind.		
18	003	410948	0844842	To: Maumee R nr Ohio- Indiana State Line, Ind.	27.5	18
18	003	411152	0850135	St. Joseph R nr Cedar- ville, Ind.		
18	003	410521	0850745	To: St. Joseph R at Fort Wayne, Ind.	14.2	18
18	005	392021	0855911	Driftwood R nr Edinburg, Ind.		
18	005	391200	0855532	To: E. Fk. White R at Columbus, Ind.	14.4	18
18	005	391200	0855532	E. Fk. White R at Columbus, Ind.		
18	093	384933	0863047	To: E. Fk. White R nr Bed- ford, Ind.	97.6	18
18	033	412622	0850221	Cedar Cr nr Waterloo, Ind.		
18	003	411152	0850131	To: Cedar Cr at Cedarville, Ind.	27.7	18

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS STATE	CODES COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)	
						ST	Joseph R nr Newville, Ind.
18	033	412308	0844806	St. Joseph R at Hursh, Ind.	22.7		
18	003	411446	0845823	To: St. Joseph R at Hursh, Ind.			18
18	037	382304	0865608	Patoka R at Jasper, Ind.			
18	037	381946	0865759	To: Patoka R nr Hunting- burg, Ind.	9.3		18
18	051	382108	0873510	Patoka R at Patoka, Ind.			
18	051	382349	0874348	To: Patoka R above con- fluence with Wabash R, Ind.	15.6		18
18	053	402720	0853440	Mississinewa R nr Gas City, Ind.			
18	053	403434	0853934	To: Mississinewa R at Marion, Ind.	12.8		18
18	065	405617	0852303	Big Blue R at New Castle, Ind.			
18	081	392021	0855911	To: Driftwood R nr Edinburg, Ind.	70.3		18
18	067	402908	0860304	Wildcat Cr nr Kokomo, Ind.			
18	157	402713	0865105	To: Wildcat Cr nr Lafayette, Ind.	67.5		18

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
18	075	402458	0845955	Salamonie R nr Portland, Ind.	50.1	18
18	069	404430	0853032	To: Salamonie R nr Lan- caster, Ind.		
18	075	403350	0844810	Wabash R nr New Corydon, Ind.		
18	153	390113	0873407	To: Wabash R at Riverton, Ind.	303.6	18
14	18	411530	0855216	Tippecanoe R nr Warsaw, Ind.		
18	181	405303	0864448	To: Tippecanoe R at Buffalo, Ind.	104.9	18
18	093	384748	0863955	E. Fk. White R nr Williams, Ind.		
18	125	383222	0871324	To: E. Fk. White R nr Petersburg, Ind.	76.6	18
18	097	395425	0855908	Fall Cr at Geist Reservoir, Ind.		
18	097	394824	0860847	To: Fall Cr at Indianapolis, Ind.	13.3	18

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE	COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
18	107	400301	0865425	Sugar Cr at Crawfordsville, Ind.	18	
18	121	395118	0872010	To: Sugar Cr nr West Union, Ind.	37.9	
18	135	401055	0845808	White R at Winchester, Ind.		
18	051	382924	0873300	To: White R at Hazelton, Ind.	335.4	18
18	157	402037	0864443	S. Fk. Wildcat Cr nr Dayton, Ind.		
18	157	402527	0864600	To: S. Fk. Wildcat Cr nr Lafayette, Ind.	11.0	18
18	177	395050	0844955	E. Fk. Whitewater R nr Richmond, Ind.		
18	161	393803	0845951	To: E. Fk. Whitewater R nr Brownsville, Ind.	22.4	18
18	177	395217	0845349	W. Fk. of E. Fk. Whitewater R nr Richmond, Ind.		
18	177	394008	0845345	To: W. Fk. of E. Fk. Whitewater R at Richmond, Ind.	3.0	18

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES	STATE	COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
18	177	395107	0851008		Whitewater R nr Cambridge City, Ind.		
39	061	391500	0844916	To:	Whitewater R at Harrison, Ohio	72.0	18
18	183	410523	0853231		Eel River nr Columbia City, Ind.		
18	017	404507	0862219	To:	Eel R at Logansport, Ind.	71.3	18
22	033	302620	0911156		Mississippi R at Baton Rouge, La.	Mile 229.2	
22	071	295605	0900810	To:	Mississippi R at New Orleans, La.	126.4	22
					Mile 102.8		
22	037	305320	0905040		Amite R at Darlington, La.	Mile 106	
22	063	302750	0905925	To:	Amite R at Denham Springs, La.	52.2	22
					Mile 53.8		
22	037	305130	0910220		Comite R nr Clinton, La.	Mile 46.3	
22	033	302845	0905932	To:	Comite R nr B.R. above mouth	44.8	22
					Mile 1.5		

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTRY					
22	043	313420	0923102	Big Cr nr Dry Prong, La.		
22	043	313157	0921806	To: Big Creek at mouth	22	
22	055	301135	0920137	Vermilion R at Sewage P at Lafayette, La.		
22	055	300947	0920318	To: Vermillion R below Lafayette, La.	6.0	22
22	067	325925	0913920	Bayou Bartholomew nr Jones, La.		
22	067	324342	0920348	To: Bayou Bartholomew at mouth	71.0	22
22	079	305954	0924025	Calcasieu R nr Glenmora, La.	Mile 0	
22	019	301709	0931113	To: Calcasieu R nr Lake Charles, La. Mile 50.0	99.0	22
22	085	311147	0933424	Sabine R at Toledo Bend Dam, La.	Mile 156.5	
48	361	300740	0934205	To: Sabine R at Orange, Tex. Mile 26.2	130.3	22

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
22 091	305547	0904041	Tickfaw R at Liverpool, La.		
22 063	302606	0904039	To: Tickfaw R at Springville, La.	50.6	22
22 105	305615	0902925	Tangipahoa R at Kentwood, La.	Mile 68.5	
22 105	302415	0901925	To: Tangipahoa R nr Lee Landing, La. Mile 8.6	59.9	22
22 105	304910	0901725	Tchefuncte R at Hwy. 10 nr Wilmer, La.		
22 105	302940	0901010	To: Tchefuncte R nr Covington, La.	-	22
22 109	292203	0904355	Houma Navigation Canal nr Dulac, La.		
22 109	291254	0903913	To: Nouma Navigation Canal at Bay Welsh	12.0	22
22 115	305415	0932344	Bayou Anacoco nr DeRidder, La.	Mile 16.5	
22 115	305208	0933327	To: Bayou Anacoco at mouth	16.5	22
			Mile 0		

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
22	117	304735	0894915	Pearl R nr Bogalusa, La. Mile 77.5		
22	103	301753	0894209	To: West Pearl R at I-10 Mile 14.3	63.2	22
22	127	315830	0923910	Dugdemona R nr Winnfield, La. Mile 45.0		
22	127	314540	0922644	To: Dugdemona R nr Rochelle, La. Mile 12.0	33.0	22
24	001	393716	0784624	N. Br. Potomac R nr Cumberland, Md.	Mile 19.6	
11	001	385408	0770413	To: Potomac R at Washington- ton, D.C.	Mile 112.9	192
24	005	394220	0763515	Deer Cr at Gorsuch Mills, Md.	Mile 42.0	24
24	025	393723	0760953	To: Deer Cr nr Darlington, Md.	Mile 1.2	40.8
24	013	392136	0770346	S. Br. Patapsco R at Woodbine, Md.	Mile 48.7	24
24	005	391338	0764324	To: Patapsco R at Relay, Md.	Mile 18.9	29.8

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
24	021	394250	0771257	Monocacy R at Harney, Md. Mile 56.7	56.6	24
24	021	391326	0772708	To: Monocacy R nr Dicker- son, Md. Mile 0.1	56.6	24
24	043	394259	0773628	Antietam Cr nr Waynesboro, Pa. Mile 40.0	39.8	24
24	043	392501	0774432	To: Antietam Cr at Antietam, Md. Mile 0.2	39.8	24
24	043	394253	0774726	Conococheague Cr nr Clearfoss, Md. Mile 21.2	21.2	24
24	043	393604	0774942	To: Conococheague Cr at Williamsport, Md.	21.1	24
25	003	422810	0731149	E. Br. Housatonic R at Colts- ville, Ma. Mile 136.5	136.5	25
25	003	420331	0732057	To: Housatonic R at Andrus R. Ashley Falls, Ma. Mile 84.8	84.8	25
50	003	424214	0731024	Hoosick R at North Adams, Ma.	51.7	25
50	003	424603	0731427	To: Hoosick R at Pownal, Vt.	7.3	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE	COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
25	013	420950	0724940	Westfield R at Br. Bl. Dam at Woronoc, Ma. Mile 19.5	25	
25	013	420524	0723738	To: Westfield R at Rt. 147 Br. nr Agawam, Ma. Mile 2.4	17.1	
25	015	421626	0724014	Manhan R Bl. Dam at East- hampton, Ma. Mile 3.6	25	
25	015	421700	0723828	To: Manhan R at Fort Hill Rd. nr Easthampton, Ma. Mile 0.8	2.8	
25	027	424034	0720405	Millers R at Bridge at Water- ville, Ma. Mile 34.5	25	
25	011	423544	0722946	To: Millers R at Mouth at Millers Falls, Ma. Mile 0.2	34.3	
25	027	423352	0720043	Otter R at Rt. 2A at Gardner, Ma. Mile 9.5	25	
25	027	423518	0720230	To: Otter R at Gage at Otter River, Ma. Mile 5.7	3.8	

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
25	027	423623	0720433	Otter R at Rt. 202 at Baldwinsville, Ma. Mile 3.6		
25	027	423750	0720543	To: Otter R at Mouth nr Baldwinsville, Ma. Mile 0.5	3.1	25
26	065	424502	0843319	Grand R at Lansing, Mich. Mile 152		
26	067	425120	0845445	To: Grand R at Portland, Mich. Mile 115	37	26
28	015	331740	0894209	Big Black R at mouth of Hayes Creek, Miss.		
28	051	330345	0895000	To: Big Black R at State Highway 12 nr Durant, Miss.	34.0	28
28	023	321030	0884915	Chickasawhay R nr Enterprise, Miss.	Mile 158.2	
28	153	303314	0883310	To: Chickasawhay R nr Buckatunna, Miss.	Mile 74.1	28

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
28	035	310306	0891215	Black Cr at U.S. Hwy. 49 nr Brooklyn, Miss.		
28	111	305938	0890302	To: Black Cr at State Hwy. 29 nr Janice, Miss.	18.0	28
28	035	312033	0891646	Leaf R at U.S. Hwy. 11 nr Hattiesburg, Miss. Mile 71.8		
28	041	310610	0884830	To: Leaf R at U.S. Hwy. 98 nr McLain, Miss. Mile 17.9	53.9	28
23	037	313010	0904635	Homochitto R at U.S. Hwy. 84 nr Eddiceton, Miss.		
28	157	312000	0911638	To: Homochitto R at U.S. Hwy. 61 nr Doloroso, Miss.	51.3	28
28	039	305840	0884335	Pascagoula R nr Merrill, Miss. Mile 80.8		
28	039	305245	0884622	To: Pascagoula R at State Hwy. 26 nr Benndale, Miss. Mile 67.0	13.8	28

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE	COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
28	047	303332	0890710	Biloxi R nr Saucier, Miss.		
28	047	302953	0890216	To: Biloxi R at mouth of Little Biloxi R, Miss.	17.8	28
28	047	303245	0885703	Tuxachanie Cr at county road nr White Plain, Miss.		
28	047	303035	0885440	To: Tuxachanie Cr at State Hwy. 15, Miss.	11.2	28
28	049	302349	0900350	Pearl R at Ross Barnett Reservoir nr Jackson, Miss.		
24				Mile 301.8		
28	117	304735	0894915	To: Pearl R at Bogalusa, La.	223.6	
				Mile 78.2		
28	067	314050	0890655	Tallahala Cr at State Hwy. 15 nr Laurel, Miss.		
28	111	311957	0890646	To: Tallahala Cr nr Runnels-town, Miss.	42.4	28
28	075	321935	0885435	Chunky Cr at U.S. Hwy. 80 nr Chunky, Miss.		
28	075	321520	0885115	To: Chunky Cr at county road nr Chunky, Miss.	9.0	28

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT		LONG		STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY							
28	075	322115	0884525	Okatibbee Cr at U.S. Hwy. 80 nr Meridian, Miss.	Mile 21.5			
28	075	321248	0884559	To: Okatibbee Cr nr Basic City, Miss. Mile 11.4		10.1		28
28	081	341740	0884235	Town Cr at U.S. Hwy. 45 nr Tupelo, Miss. Mile 27.3				
28	095	335908	0883310	To: Town Creek at Mouth Mile 0		27.3		28
28	085	312608	0902645	Bogue Chitto nr Bogue Chitto, Miss.				
28	117	315500	0901200	To: Bogue Chitto at La. Hwy. 38 nr Clifton, La.		54.2		28
28	087	333814	0883004	Tombigbee R at Bartons Ferry, Miss.				
28	087	331713	0881815	To: Tombigbee R at Miss-Ala State Line		43.0		28
28	109	305050	0892820	Wolf R at State Hwy. 26 nr Poplarville, Miss.				
28	047	302453	0891208	To: Wolf R at Interstate 10		51.7		28

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTRY					
28	131	304645	0884545	Black Cr at State Hwy. 26 nr Benndale, Miss.		
28	039	304650	0884540	To: Black Cr at State Hwy. 57 nr Vestry, Miss.	20.2	28
28	131	304628	0885445	Red Cr at State Hwy. 15		
28	059	304316	0884415	To: Red Creek at State Hwy. 57	20.2	28
28	163	323628	0902145	Big Black R at U.S. Hwy. 49 nr Bentonia, Miss.		
28	149	322051	0904148	To: Big Black R at U.S. Hwy. 80 nr Bovina, Miss.	39.0	28
29	161	375435	0915350	Little Piney Cr at Newburg, Mo. Mile 4.90		
29	161	375505	0915810	To: Little Piney Cr at Jerome, Mo. Mile 0.35	4.55	29
29	189	383250	0903135	Meramec R nr Valley Park, Mo. Mile 23.90		
29	189	383045	0902550	To: Meramec R at Fenton, Mo. Mile 15.55	8.35	29

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
31	031	411632	0983203	North Loup R nr Elba, Nebr.	6.61	31
31	031	411551	0982550	To: North Loup R nr mouth, Nebr.		
31	143	410814	0972532	Big Blue R at Hwy. 76 nr Shelby, Nebr.		
20	117	393820	0963455	To: Big Blue R at Hwy. 113 south of Blue Rapids (at Irving), Kans.	232.3	31
31	047	405049	0964054	Salt Cr at 27th St. at Lincoln, Nebr.		
31	047	405308	0963728	To: Salt Cr at 70th St. at Lincoln, Nebr.	5.36	31
31	057	420033	0972904	Elkhorn R west of Norfolk, Nebr.		
31	057	420005	0972430	To: Elkhorn R south of Norfolk, Nebr.	4.75	31
31	089	423103	0985814	Elkhorn R at Atkinson, Nebr.		
31	153	410744	0961834	To: Elkhorn R nr Gretna, Nebr.	265.8	31

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
31	109	403928	0963955	Salt Cr at Roca, Nebr.	56.9	31
31	025	410207	0961847	To: Salt Cr at mouth nr Ashland, Nebr.		
31	157	415200	1034315	North Platte R west of Scottsbluff, Nebr.	4.5	31
31	157	415041	1033856	To: North Platte R south of Scottsbluff, Nebr.		
34	003	410021	0740715	Hohokus Brk. at Ridgewood, N.J.		
34	003	405718	0740602	To: Hohokus Brk. at Glen Rock, N.J.	4.7	34
34	003	405718	0740602	Saddle R at Glen Rock, N.J.		
34	003	405320	0740455	To: Saddle R at Lodi, N.J.	5.8	34
34	005	400138	0745520	Rancocas Cr at Willingboro, N.J.		
34	005	400240	0745735	To: Rancocas Cr at River- side, N.J.	2.6	34

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
34	019	403809	0745445	South Branch Raritan R at Clinton, N.J.		
34	035	403247	0744148	To: South Branch Raritan R at South Branch, N.J.	21.8	34
34	021	401452	0744337	Assunpink Cr at Lawrence Twp., N.J.		
34	021	401301	0744604	To: Assunpink Cr at Trenton, N.J.	3.4	34
29	021	401725	0743120	Millstone R nr Hightstown, N.J.		
34	035	403147	0743518	To: Millstone R at Weston, N.J.	24.9	34
34	025	401526	0741530	Debois Cr at Freehold, N.J.		
34	025	401233	0741608	To: Debois Cr nr Adelphia, N.J.	3.8	34
34	025	401227	0741945	Manasquan R at Elton, N.J.		
34	025	400947	0740921	To: Manasquan R at Squankum, N.J.	12.9	34

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
34 025 401251	0741056		Marsh Bog Brk. nr Farmingdale, N.J.		
34 035 401001	0740933	To:	Marsh Bog Brk. at Squankum, N.J.	4.0	34
34 025 401851	0742144		Matchaponix Brk. nr Englishtown, N.J.		
34 023 402022	0742223	To:	Matchaponix Brk. nr Redshaw Corner, N.J.	2.8	34
30 34 025 401215	0741007		Mingamahone Brk. nr Farmingdale, N.J.		
34 025 400956	0740901	To:	Mingamahone Brk. at Squankum, N.J.	2.9	34
34 027 405656	0743328		Green Pond Brk. at Lake Picatinney, N.J.		
34 027 405403	0743230	To:	Green Pond Brk. at Dover, N.J.	10.7	34
34 027 405414	0744246		Musconetcong R at Stanhope, N.J.		
34 027 405124	0744835	To:	Musconetcong R at Hackettstown, N.J.	6.6	34

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
34	027	405403	0743408	Rockaway River at Dover, N.J.		
34	027	405103	0742042	To: Rockaway R at Pine Brook, N.J.	13.2	34
34	027	404738	0743408	Whipppany R at Brookside, N.J.		
34	027	404844	0743044	To: Whippanny R nr Morristown, N.J.	4.0	34
34	027	404916	0742539	Whippanny R at Whippanny, N.J.		
34	027	405042	0742051	To: Whippanny R nr Pine Brook, N.J.	6.2	34
34	029	400338	0740717	Metedeconk R at Laurelton, N.J.		
34	029	400312	0740353	To: Metedeconk R at West Mantoloking, N.J.	3.0	34
34	031	404331	0742323	Passaic R nr Basking Ridge, N.J.		
34	031	405217	0740715	To: Passaic R at Garfield, N.J.	41.4	34

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		STREAM REACH		REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY	LAT	LONG		
34	031	405809	0741656	Pompton R at Pompton Plains, N.J.	
34	031	405352	0741622	To: Pompton R at Two Bridges, N.J.	34
34	035	404222	0743811	North Branch Raritan R nr Far Hills, N.J.	
34	035	403320	0744116	To: N. Br. Raritan R nr Branchburg, N.J.	34
32	34	035	403320	0744116	Raritan R nr Branchburg, N.J.
	34	035	403224	0743044	To: Raritan R nr South Bound Brook, N.J.
34	041	405840	0750810	Delaware R at Dunnfield, N.J.	12.4
34	021	401318	0744642	To: Delaware R at Trenton, N.J.	77.8
36	007	420541	0755019	Susquehanna R nr Five Mile Point, N.Y.	34
36	007	420606	0755351	To: Susquehanna R at Bing- hamton, N.Y.	3.3
				Mile 328.8	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	007	420534	0755454	Susquehanna R at Binghamton, N.Y.	43.4	36
42	015	415728	0763054	To: Susquehanna R at Athens, Pa.		
36	009	420105	0782030	Allegheny R at Millgrove, N.Y.	Mile 262.3	
36	009	420647	0784821	To: Allegheny R at Red House, N.Y.	Mile 225.2	37.1
36	009	422653	0785521	Cattaraugus Cr at Gowanda, N.Y.		
36	009	423124	0785924	To: Cattaraugus Cr at Versailles, N.Y.	8.0	36
36	009	420539	0782646	Two Mile Cr at Olean, N.Y. Mile 2.6		
36	009	420437	0782809	To: Two Mile Cr at Olean, N.Y.	Mile 0.7	1.9
36	011	425615	0763539	Owasco Lake Outlet at Auburn, N.Y.	Mile 12.3	36
36	011	430437	0763855	To: Owasco Lake Outlet nr North Port Bryon, N.Y.	Mile 1.00	12.3

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	013	420754	0791049	Cassadaga Cr at Levant, N.Y.		
36	013	420548	0790925	To: Cassadaga Cr nr Falconer, N.Y. Mile 13.3	6.3	36
36	013	420548	0790925	Conewango Cr nr Falconer, N.Y. Mile 13.3		
36	013	420123	0790936	To: Conewango Cr nr Frewsburg, N.Y. Mile 2.5	10.8	36
34	015	421555	0765008	Catherine Cr at Millport, N.Y. Mile 9.5		
	097	422301	0765147	To: Catherine Cr at Watkins Glen, N.Y. Mile 0.0	9.5	36
36	023	423554	0760930	Tioughnioga R at Cortland, N.Y. Mile 31.5		
36	023	422625	0760210	To: Tioughnioga R at Marathon, N.Y. Mile 18.0	13.5	36
36	025	420116	0750702	E. Br. Delaware R at Harvard, N.Y. Mile 18.5		
36	025	415800	0751050	To: E. Br. Delaware R at Fishs Eddy, N.Y. Mile 11.0	7.5	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	025	415645	0751359	E. Br. Delaware R at Peas Eddy, N.Y.	5.4	36
36	025	415710	0751638	To: E. Br. Delaware R at Hancock, N.Y. Mile 1.1	5.4	
36	025	420430	0745836	E. Br. Delaware R at Downsville, N.Y. Mile 363.3	42	
34	037	411830	0744750	To: Delaware R at Montague, N.Y. Mile 246.3	117.0	
36	025	420339	0752502	W. Br. Delaware R at Deposit, N.Y. Mile 14.6	36	
36	025	415708	0751730	To: W. Br. Delaware R at Hancock, N.Y. Mile 1.2	13.4	
36	025	420429	0752347	W. Br. Delaware R at Stilesville, N.Y. Mile 347.2	42	
34	037	411830	0744750	To: Delaware R at Montague, N.Y. Mile 246.3	100.9	
36	029	425212	0784715	Buffalo R nr Buffalo, N.Y.	36	
36	029	425153	0784810	To: Buffalo R at Buffalo, N.Y. 1.0		

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	029	425323	0783836	Cayuga Cr at Depew, N.Y.		
36	029	425339	0784354	To: Cayuga Cr at Lancaster, N.Y.	36	
36	029	424540	0783842	Cazenovia Cr at East Aurora, N.Y.		
36	029	425100	0784833	To: Cazenovia Cr at Buffalo, N.Y.	16.6	
36	029	423838	0783248	E. Br. Cazenovia Cr at Holland, N.Y.		
36	029	424540	0783842	To: E. Br. Cazenovia Cr nr East Aurora, N.Y. Mile 0.0	16.5	
36	029	423657	0783921	W. Br. Cazenovia Cr at Glen- wood, N.Y. Mile 13.8		
36	029	424540	0783842	To: W. Br. Cazenovia Cr nr East Aurora, N.Y. Mile 0.0	13.8	
36	029	425430	0783031	Ellicott Cr at Alden, N.Y.		
36	029	425616	0783723	To: Ellicott Cr nr Lancaster, N.Y.	10.7	
					36	)

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
36 029 475908	0784609		Ellicott Cr nr Williams-ville, N.Y.		
36 029 430118	0784757		To: Ellicott Cr nr Tonawanda, N.Y.	5.6	36
36 029 430102	0784957		Ellicott Cr nr Tonawanda, N.Y.		
36 029 430115	0785238		To: Ellicott Cr at Tonawanda, N.Y.	2.6	36
36 029 430147	0783024		Murder Cr at Akron, N.Y.		
36 029 430410	0783113		To: Murder Cr nr Swifts Mills, N.Y.	4.3	36
36 031 435053	0732512		Ticonderoga Cr at Ticonderoga, N.Y. Mile 1.8		
36 031 435014	0732340		To: Ticonderoga Cr at Ticonderoga, N.Y. Mile 0.0	1.8	36
36 035 425936	0742354		Cayadutta Cr nr Johnstown, N.Y. Mile 6.8		
36 057 425713	0742251		To: Cayadutta Cr at Fonda, N.Y. Mile 0.2	6.6	36

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT		LONG		STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY							
36	037	430001	0781144	Tonawanda Cr at Batavia, N.Y.	Mile 62.8			
36	037	430337	0782617	To: Tonawanda Cr nr Indian Falls, N.Y.	Mile 45.0	17.8		36
36	049	433707	0752129	Black R at Lyons Falls, N.Y.				
36	045	440014	0760236	To: Black R at Dexter, N.Y.		72.0		36
36	051	424418	0775255	Genesee R at Mount Morris, N.Y.	Mile 66.9			
36	051	424816	0774939	To: Genesee R at Geneseo, N.Y.	Mile 53.1	13.9		36
36	053	430554	0755103	Canaserago Cr nr Oniontown, N.Y.				
36	053	430849	0755222	To: Canaserago Cr at Lake- port, N.Y.		4.7		36
36	053	425357	0753909	Chenango R at Morrisville, N.Y.	Mile 85.8			
36	053	424838	0753446	To: Chenango R nr Randalls- ville, N.Y.	Mile 77.1	8.7		36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	053	424753	0753416	Chenango R at Randalls-ville, N.Y.	Mile 76.0	
36	053	424509	0753317	To: Chenango R at Little Earlville, N.Y.	4.3	36
					Mile 71.7	
36	053	424422	0753318	Chenango R at Big Earlville, N.Y.	Mile 70.7	
36	017	421942	0754605	To: Chenango R at Greene, N.Y.	48.2	36
					Mile 22.5	
36	053	430314	0755210	Chittenango Cr at Chittenango, N.Y.		
36	053	431038	0755931	To: Chittenango Cr nr Bridge-port, N.Y.	23.3	36
36	053	430544	0754505	Cowaselon Cr nr Canastota, N.Y.		
36	053	430731	0755125	To: Cowaselon Cr nr Lakeport, N.Y.	5.8	36
36	053	430551	0753822	Oneida Cr at Oneida, N.Y.	Mile 11.0	
36	053	430953	0754414	To: Oneida Cr at South Bay, N.Y.	11.0	36
					Mile 0.0	

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	053	424902	0753258	Payne Brook at Hamilton, N.Y.	2.40	
36	053	424728	0753342	To: Payne Brook at Middle- port, N.Y. Mile 0.33	2.07	36
36	055	430753	0773100	Allen Creek at Rochester, N.Y.		
36	055	430804	0772956	To: Allen Cr nr Penfield, N.Y.	1.2	36
36	055	430739	0773917	Erie Barge Canal at Rochester, N.Y.		
36	055	430705	0773810	To: Erie Barge Canal at Rochester, N.Y.	1.2	36
36	055	430618	0774035	Genesee R at Rochester, N.Y. Mile 13.7		
36	055	430933	0773643	To: Genesee R at Rochester, N.Y. Mile 11.5	2.2	36
36	055	431211	0773733	Genesee R at Rochester, N.Y. Mile 4.3		
36	055	431535	0773612	To: Genesee R at Rochester, N.Y. Mile 0.0	4.3	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	055	430150	0774324	Genesee R at Browns Bridge, N.Y.	Mile 21.6	
36	055	430531	0774051	To: Genesee R nr Rochester, N.Y.	7.0	36
36	055	425750	0773541	Honeoye Cr at Honeoye Falls, N.Y.	Mile 14.6	
36	055	425801	0773650	To: Honeoye Cr nr Honeoye Falls, N.Y.	1.6	36
41	36	055	430620	0772823	Irondequoit Cr at E. Roch- ester, N.Y.	
	36	055	430853	0773048	To: Irondequoit Cr at Rochester, N.Y.	3.8
36	055	430620	0772728	Thomas Cr nr Fairport, N.Y.		
36	055	430626	0772823	To: Thomas Cr at East Rochester, N.Y.	1.3	36
36	063	430759	0784333	Erie (Barge) Canal nr Lock- Port, N.Y.		
36	063	431158	0783435	To: Erie (Barge) Canal at Lockport, N.Y.	3.0	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		STATE COUNTY		STREAM REACH		REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
	COUNTY	LAT	LONG				
36	063	431110	0784000	Erie (Barge) Canal nr Lockport, N.Y.			
36	063	431158	0783435	To: Erie (Barge) Canal at Gosport, N.Y.	4.8	36	
36	065	431157	0752324	Mohawk R nr Rome, N.Y. Mile 122.0			
36	001	424824	0734320	To: Mohawk R nr Crescent Station, N.Y. Mile 2.9	119.1	36	
42	36	065	425620	0752744	Oriskany Cr at Oriskany Falls, N.Y. Mile 21.0		
	36	065	430921	0751951	To: Oriskany Cr at Oriskany, N.Y. Mile 0.9	20.1	36
36	065	430501	0753232	Sconondoa Cr at Vernon, N.Y.			
36	053	430551	0753822	To: Oneida Cr at Oneida, N.Y.	6.8	36	
36	067	431259	0761449	Erie Canal at Horseshoe Island, N.Y.			
36	067	541361	0761548	To: Erie Canal at Horseshoe Island, N.Y.	1.0	36	

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	067	430157	0760052	Limestone Cr at Fayetteville, N.Y.	8.6	
36	067	430613	0755834	To: Limestone Cr nr North Manlius, N.Y. Mile 0.0	8.6	36
36	067	431424	0760830	Oneida R at Brewerton, N.Y.		
36	067	431205	0761641	To: Oneida R at Three Rivers, N.Y.	16.7	36
43	067	431205	0761641	Oswego R at Three Rivers, N.Y.		
36	075	432636	0762946	To: Oswego R at Oswego, N.Y.	22.3	36
36	067	425655	0762609	Skaneateles Cr at Skaneateles, N.Y.	Mile 14.7	
36	067	430423	0762848	To: Skaneateles Cr at Jordan, N.Y.	Mile 3.9	36
36	069	425228	0771544	Canandaigua Lake Outlet at Canandaigua, N.Y.		
36	117	430338	0765950	To: Canandaigua Lake Outlet at Lyons, N.Y.	33.2	36

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT		LONG		STREAM REACH		REACH LENGTH (MILES)		LOCATION OF DATA (FIPS STATE CODE)	
STATE	COUNTY										
36	069	4225828	0772757	Mud Cr at East Victor,	N.Y. Mile 12.8						
36	117	430341	0771501	To:	Ganargua Cr at Yellow Mills, N.Y. Mile 0.0			12.8			36
36	069	423734	0772325	Naples Cr at Naples,	N.Y. Mile 3.7						
36	123	424808	0772130	To:	Naples Cr nr Naples, N.Y. Mile 0.0			3.7			36
36	071	412956	0743314	Basher Kill nr Wurtsboro,	N.Y. Mile 5.6						
36	071	412714	0743522	To:	Basher Kill nr Cuddeback- ville, N.Y. Mile 0.5			5.1			36
36	071	412536	0741002	Moodna Cr at Washingtonville,	N.Y. Mile 13.2						
36	071	412433	0740425	To:	Moodna Cr nr Mountain- ville, N.Y. Mile 5.9			7.3			36
36	071	412426	0743800	Neversink R at Huguenot,	N.Y. Mile 5.8						
36	071	412140	0744108	To:	Neversink R at Port Jervis, N.Y. Mile 5.2			0.6			36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	071	411937	0740835	Ramapo R at Harriman, N.Y.		
34	003	410551	0740948	To: Ramapo R at Mahwah, N.J.	17.7	36
36	071	412620	0742157	Wallkill R at Phillipsburg, N.Y.	Mile 45.4	
36	111	414116	0740957	To: Wallkill R at Tuthill, N.Y.	Mile 18.6	36
36	073	431500	0782324	Oak Orchard Cr nr Medina, N.Y.	Mile 18.9	
36	073	431834	0781653	To: Oak Orchard Cr at Kenyonville, N.Y.	Mile 8.4	36
36	073	431935	0781421	Oak Orchard Cr at Waterport, N.Y.	Mile 5.7	
36	073	432106	0781135	To: Oak Orchard Cr at The Bridges, N.Y.	Mile 1.8	3.9
36	075	432428	0760737	N. Br. Little Salmon R at Parrish, N.Y.	Mile 19.1	
36	075	433041	0761511	To: Little Salmon R at Texas, N.Y.	Mile 1.8	36
36	075	433358	0760740	Salmon R at Pulaski, N.Y.	Mile 4.9	
36	075	433411	0761115	To: Salmon R at Port Ontario, N.Y.	Mile 1.3	3.6

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	077	424133	0745539	Susquehanna R at Coopers-town, N.Y.	Mile 444.6	
36	077	423143	0745806	To: Susquehanna R at Port-land, N.Y.	18.6	36
36	077	422643	0750349	Susquehanna R at Oneonta, N.Y.	Mile 426.0	
36	077	422620	0750601	To: Susquehanna R at Oneonta, N.Y.	Mile 419.2	
36	077	422200	0751445	Susquehanna R at Wells Bridge, N.Y.	Mile 416.9	36
36	017	420428	0753812	To: Susquehanna R at Windsor, N.Y.	Mile 405.4	
36	089	444003	0745924	Raquette R at Potsdam, N.Y.	Mile 363.1	
36	089	445844	0744300	To: Raquette R at Roosevelt- town, N.Y.	Mile 363.3	36
36	099	425205	0765626	Seneca R at Geneva, N. Y.	Mile 2.3	
36	067	431205	0761641	To: Seneca R at Three Rivers, N.Y.	58.4	36

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES STATE COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
36 101 423336		0774257	Canaseraga Cr at Dansville, N.Y.		
36 051 424019		0774655	To: Canaseraga Cr nr Grove- land, N.Y. Mile 9.9	9.4	36
36 101 422345		0774242	Canisteo R at Arkport, N.Y. Mile 46.3		
36 101 421322		0772610	To: Canisteo R at West Cameron, N.Y. Mile 22.0	24.3	36
36 101 420857		0770427	Chemung R at Painted Post, N.Y.		
36 015 420026		0763337	To: Chemung R at Waverly, N.Y.	37.6	36
36 101 422340		0774152	Marsh Ditch at Arkport, N.Y. Mile 2.4		
36 101 422247		0774128	To: Marsh Ditch nr Arkport, N.Y. Mile 1.2	1.2	36
36 105 413519		0742740	Basher Kill nr Wurtsboro, N.Y. Mile 14.1		
36 105 413416		0742829	To: Basher Kill at Wurtsboro, N.Y. Mile 11.6	2.5	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE COUNTRY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
36 105 413937	0743929	Kiamesha Cr nr Monticella, N.Y.			
36 105 414012	0743734	To: Kiamesha Cr at Thompson- ville, N.Y.	4.0	36	
36 105 412741	0744533	Mongaup R nr Mongaup, N.Y. Mile 263.8			
34 037 411830	0744750	To: Delaware R at Montague, N.Y.	17.5	42	
36 105 414456	0744704	W. Br. Mongaup R at Swan Lake, N.Y.	Mile 246.3		
36 105 414048	0744629	To: W. Br. Mongaup R nr Mongaup Valley, N.Y. Mile 19.9	6.1	36	
36 105 414726	0744356	Middle Br. Mongaup R at Liberty, N.Y.			
36 105 414214	0744421	To: Middle Br. Mongaup R nr Harris, N.Y.	7.1	36	
36 105 414305	0744056	E. Br. Mongaup R at Hurley- ville, N.Y.			
36 105 414214	0744421	To: E. Br. Mongaup R nr Harris, N.Y.	5.1	36	

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	105	414214	0744421	Mongaup R nr Harris, N.Y. Mile 23.4		
36	105	414002	0744656	To: Mongaup R at Mongaup Valley, N.Y. Mile 18.7	4.7	36
36	105	412740	0744532	Mongaup R at Upper Mon- gaup, N.Y. Mile 2.9		
36	105	412537	0744523	To: Mongaup R at Mon- gaup, N.Y. Mile 0.1	2.8	36
36	105	414912	0743809	Neversink R at Neversink, N.Y.		
34	037	411830	0744750	To: Delaware R at Montague, N.J.	48.9	42
34	105	414536	0743600	Neversink R at Woodbourne, N.Y.		
36	105	414039	0743555	To: Neversink R nr Thompson- ville, N.Y. Mile 29.5	7.2	36
36	105	413016	0743853	Neversink R at Oakland Valley, N.Y. Mile 14.9		
36	071	412630	0743610	To: Neversink R at God- effroy, N.Y. Mile 8.9	6.0	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	105	414012	0743734	Sheldrake Stream at Thompsonville, N.Y.		
36	105	413918	0743637	To: Sheldrake Stream nr Thompsonville, N.Y.	1.8	36
36	105	413857	0743954	Tannery Brook at Monticello, N.Y.		
36	105	413935	0743928	To: Tannery Brook nr Monticello, N.Y.	0.8	36
50	109	423305	0761732	Fall Creek at McLean, N.Y.		
	109	422712	0762823	To: Fall Cr nr Ithaca, N.Y.	19.9	36
36	109	422909	0761753	Virgil Cr at Dryden, N.Y.		
36	109	423016	0762133	To: Virgil Cr nr Freeville, N.Y.	5.2	36
36	111	414448	0740528	Wallkill R at New Paltz, N.Y. Mile 11.4		
36	111	414854	0740333	To: Wallkill R nr Tillson, N.Y. Mile 3.4	8.0	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
36	113	431403	0734517	Hudson R at Spier Falls, N.Y.		
36	113	431823	0733831	To: Hudson R at Glens Falls, N.Y.	12.4	36
36	115	431552	0733527	Hudson R at Fort Edward, N.Y.		
36	115	424503	0734109	To: Hudson R at Troy, N.Y.	39.5	36
36	117	430343	0765948	Clyde R at Lyons, N.Y.		
36	099	430012	0764405	To: Clyde R nr Montezuma, N.Y.	20.1	36
36	117	430353	0771500	Ganargua Cr at Palmyra, N.Y.		
36	117	430344	0765948	To: Ganargua Cr at Lyons, N.Y.	20.0	36
36	121	424407	0780754	Oatka Cr at Warsaw, N.Y. Mile 47.5		
36	121	424909	0780512	To: Oatka Cr at Wyoming, N.Y.	9.4	36
36	123	423939	0770253	Keuka Lake Outlet at Penn yan, N.Y.	Mile 38.1	
36	123	424049	0765715	To: Keuka Lake Outlet at Dresden, N.Y.	6.3	36

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
37	035	354325	0811717	Bolicks Dry Branch nr Conover, N.C.		
37	109	352830	0811600	To: Clark Creek at Lincolnton, N.C.	19.8	37
37	067	360210	0801835	Salem Cr at Winston-Salem SEO, N.C.		
37	159	354315	0802320	To: Yadkin R at I-85 nr Salisbury, N.C.	40.8	37
37	071	351348	0810802	Catawba Cr nr Gastonia, N.C.		
37	071	351141	0810453	To: Catawba Cr above mouth nr Cramerton, N.C.	6.5	37
37	081	360618	0794553	N. Buffalo Cr at Summit Ave. at Greensboro, N.C.		
37	081	361039	0793432	To: Reedy Fork nr Ossipee, N.C.	20.9	37
37	081	360405	0795236	S. Buffalo Cr at US 421 at Greensboro, N.C.		
37	001	360112	0792156	To: Haw River at Swepsonville, N.C.	42.0	37

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
37	129	342022	0775902	Northeast Cape Fear R nr Whitesboro, N.C.	7.9	37
37	129	341531	0775658	To: Northeast Cape Fear R nr Wilmington, N.C.		
37	157	352908	0794310	Dan R at Duke Power nr Leaksville, N.C.		
51	143	363338	0792950	To: Dan R nr Danville, Va.	19.3	37
53	113	394526	0841217	Great Miami R at Dayton, Ohio Mile 79.3		
39	061	391022	0844531	To: Great Miami R at Cleves, Ohio Mile 8.0	71.3	39
39	175	405724	0831621	Tymochtee Cr at State Rt. 53, Ohio Mile 67.7		
39	143	412048	0830644	To: Sandusky R at Fremont, Ohio Mile 15.5	52.2	39
39	175	404259	0832332	Tymochtee Cr nr Marseilles, Ohio Mile 38.2		
39	175	405724	0831621	To: Tymochtee Cr at State Rt. 53, Ohio Mile 0.3	37.9	39

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT		LONG		STREAM REACH		REACH LENGTH (MILES)		LOCATION OF DATA (FIPS STATE CODE)	
STATE	COUNTY										
40	089	335517	0950450	Red R at mouth of Garland Cr., Okla.	Mile 595.0						
40	089	334115	0944139	To: Red R nr De Kalb, Tex.	Mile 556.9	38.1		40			
41	019	432719	1230443	Calapooya Cr nr Hinkle Cr Damsite, Ore.							
41	019	432159	1232759	To: Calapooya Cr at mouth, Ore.		33.0		41			
41	019	425053	1231027	Cow Cr nr Anchor, Ore.							
41	019	425653	1232020	To: Cow Cr at mouth, Oreg.		60.4		41			
41	019	425538	1225700	South Umpqua R nr Tiller, Ore.							
41	019	433759	1233359	To: Umpqua R nr Elkton, Ore.		138.4		41			
41	023	442719	1184256	John Day R at Prairie City, Ore.							
41	055	454401	1233855	To: John Day R at mouth, Ore.		262.1		41			

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
41	023	445738	1184057	N. Fk. John Day R nr Dale, Ore.	76.4	41
41	023	444522	1193819	To: N. Fk. John Day R at mouth, Ore.		
41	034	443546	1183115	Middle Fk. John Day R nr Bates, Ore.		
41	023	445500	1191805	To: Middle Fk. John Day R at mouth, Ore.	65.9	41
5	41	023	440518	1192735	S. Fk. John Day R nr Izee, Ore.	
41	023	442825	1193205	To: S. Fk. John Day R at mouth, Ore.	35.3	41
41	039	434313	1230255	Coast Fk. Willamette R nr Cofbays Cr, Ore.		
41	039	440125	1230122	To: Coast Fk. Willamette R at mouth, Ore.	29.5	41

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
41	039	440918	1231725	Long Tom R nr Fern Ridge Reservoir, Ore.	41	
41	039	441127	1231637	To: Long Tom R nr Junction City, Ore.	3.4	
41	039	435526	1224817	Middle Fk. Willamette R below Dexter Dam, Ore.	41	
41	005	452116	1223655	To: Willamette R nr Oregon City, Ore.	177.1	
56	043	441605	1220255	McKenzie R below Train Bridge Dam, Ore.		
	039	440733	1230616	To: McKenzie R at mouth, Ore.	81.5	
41	049	444510	1221750	North Santiam R nr Niagara, Ore.	41	
41	049	444417	1230752	To: Santiam R at mouth, Ore.	57.3	
41	043	442705	1223245	Middle Santiam R at Green Peter Dam, Ore.	41	
41	043	442458	1223755	To: Middle Santiam R at mouth, Ore.	5.7	

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
41	043	442458	1223755	South Santiam R nr Foster, Ore.	40.0	41
41	043	444120	1230024	To: South Santiam at mouth, Ore.		
42	011	403424	0760002	Schuylkill R below Kernsville Dam nr Berne, Pa.		
42	101	395908	0751215	To: Schuylkill R at Columbia Ave. Br. at Philadelphia, Pa.	86.4	42
42	015	415727	0763054	Susquehanna R at Athens, Pa. Mile 283.9		
42	043	402356	0770032	To: Susquehanna R at Clarks Ferry, Pa.	201	42
42	041	401719	0765525	Susquehanna R at Enola Yards, Pa.	Mile 72.2	
42	043	401347	0765120	To: Susquehanna R at Steelton, Pa.	5.3	42
42	075	402010	0762328	Quittapahilla Cr above Lebanon, Pa.	Mile 15.4	
42	075	402059	0763527	To: Quittapahilla Cr at Syner, Pa.	Mile 2.0	42

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
42	079	410632	0754334	Lehigh R at Francis E. Walter Reservoir nr White Haven, Pa.	Mile 77.0	
42	041	404113	0751232	To: Lehigh R at Easton, Pa.	76.7	42
42	103	412805	0750752	Wallenpaupack Cr at Wilson- ville, Pa.	Mile 290.5	
34	037	411830	0744750	To: Delaware R at Montague, N.J.	44.2	42
42	107	403213	07622322	Swatara Cr at Pine Grove, Pa.	Mile 55.3	
42	043	401200	0764300	To: Swatara Cr at Middletown, Pa.	Mile 1.6	42
42	117	415900	0770654	Tioga R at Lawrenceville, Pa.		
36	101	420900	0770550	To: Tioga R at Painted Post, N.Y.	13.2	36
45	003	331151	0814523	Savannah R at mile 155.30 nr Augusta, Ga.		
45	011	330543	0813647	To: Savannah R at mile 141.33 nr Augusta, Ga.	14	45

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
45	013	322625	0804130	Battery Cr nr Beaufort, S.C.		
45	013	322200	0804055	To: Battery Cr nr Beau- fort, S.C.	6	45
45	013	322500	0805000	Port Royal Sound, S.C.		
45	013	321430	0803825	To: Port Royal Sound, S.C.	14	45
45	019	324940	0795309	Hobcaw Cr nr Charleston, S.C.		
45	019	324923	0795351	To: Hobcaw Cr nr Charleston, S.C.	6	45
45	019	324949	0795342	Wando R nr Charleston, S.C.		
45	019	324524	0795154	To: Wando R nr Charleston, S.C.	8	45
45	091	345715	0805733	Catawba R nr Fort Mill, S.C.		
45	023	342400	0805600	To: Catawba R nr Great Falls, 60 S.C.	60	45
46	135	425200	0972400	Missouri R at Yankton, S.Dak. Mile 805.8		
29	189	385035	0901410	To: Missouri R nr St. Louis, Mo. Mile 8.2	797.6	29,11

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
47	067	363456	0831959	Powell R nr Sneedville, Tenn. Mile 112.4		
47	067	363426	0832121	To: Powell R nr Sneedville, Tenn. Mile 108.5	3.9	47
47	145	355345	0842000	Clinch R nr Oak Ridge, Tenn. Mile 20.8		
47	145	355308	0842925	To: Clinch R nr Oak Ridge, Tenn. Mile 4.5	16.3	47
48	373	303419	0945655	Trinity R nr Goodrich, Tex. Mile 112.5		
48	291	300327	0944905	To: Trinity R at Liberty, Tex. Mile 41.1	71.4	48
48	439	324521	0971719	W. Fk. Trinity R at Fort Worth, Tex. Mile 530.1		
48	289	310936	0954404	To: Trinity R at Big Eddy, Tex. Mile 233.2	296.9	48
48	467	324834	0955446	Sabine R nr Wills Point, Tex. Mile 515.4		
48	365	320731	0941206	To: Sabine R nr Deadwood, Tex. Mile 296.2	219.2	48

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS STATE	CODES COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
48	499	324943	0951921	Big Sandy Cr nr Quitman, Tex. Mile 39.5		
48	499	323903	0951000	To: Big Sandy Cr nr Hawkins, Tex. Mile 15.4	24.1	48
48	499	325300	0953733	Lake Fork Cr nr Yantis, Tex. Mile 43.3		
48	499	324545	0952748	To: Lake Fork Cr nr Quit- man, Tex. Mile 23.4	19.9	48
49	013	400950	1101633	Head Grey Mountain Canal nr Bridgeland, Utah Mile 0	11.5	
49	013	401101	1100437	To: End Grey Mountain Canal nr Myton, Utah Mile 11.5		49
49	013	400901	1100934	Head Pleasant Valley Canal nr Myton, Utah Mile 0		
49	013	400621	1100134	To: End Pleasant Valley Canal nr Pleasant Valley, Utah Mile 15.1	15.1	49

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE COUNTRY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
49 013 401333	1102350		Head Rocky Point Canal nr Duchesne, Utah		Mile 0
49 013 401056	1101904	To:	End Rocky Point Canal nr Duchesne, Utah	9.5	Mile 9.5
50 003 430610	0731519		Batten Kill nr West Arlington, Vt.		Mile 31.1
36 115 430657	0783407	To:	Batten Kill at Clarks Mills, N.Y.	30.6	Mile 0.5
50 003 424749	0731559		Hoosic R at North Pownal, Vt.		
36 083 425345	0732135	To:	Hoosic R at Hoosic Falls, N.Y.	12.1	36
50 005 443106	0720014		Passumpsic R at Rt. 5 Bridge at Lyndon, Vt.	Mile 17.8	
50 005 442552	0720106	To:	Passumpsic R at Rt. 5 at St. Johnsbury, Vt.	7.7	25
50 027 434941	0723755		White R at Rt. 107-12 Bridge at Bethel, Vt.	Mile 26.2	
50 027 433901	0721908	To:	White R at Rt. 5 at White R Junction, Vt.	Mile 0.2	25

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES STATE	COUNTY	LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
51	161	363854	0824503	Clinch R nr Speers Ferry Va.	Mile 211.0	
51	169	363731	0824833	To: Clinch R nr Speers Ferry, Va.	Mile 207.3	47
51	169	364227	0823902	Clinch R nr Clinch Port, Va.	Mile 219.3	
51	169	364113	0824245	To: Clinch R nr Clinch Port, Va.	Mile 215.2	47
63	51	169	364250	0823100	Copper Cr nr Gate City, Va.	
	51	169	364136	0823226	To: Copper Cr nr Gate City, Va.	5.2
51	169	364026	0823357	Copper Cr nr Gate City, Va.		47
51	169	364005	0823634	To: Copper Cr nr Gate City, Va.	2.6	47
53	005	464200	1193315	Columbia R nr Pasco, Wash. Mile 378.0		
41	007	461130	1235200	To: Columbia R at Astoria, Ore.	365	11
53	027	465707	1234253	Chehalis R at Preacher's Slough, Wash.	Mile 6.9	
53	027	465520	1240244	To: Grays Harbor nr West- haven, Wash.	Mile 12.6	53

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
53	033	471910	1215332	Green R at Kanasket, Wash. Mile 57.6		
53	033	473417	1222110	To: Duwamish (Green) R at Spokane St. at Seattle Wash. Mile 0.3	57.3	53
53	033	473243	1215028	Snoqualmie R nr Snoqualmie, Wash. Mile 40.0		
53	061	474815	1220006	To: Snoqualmie R at High Bridge, Wash. Mile 2.7	37.3	53
64	047	485606	1192628	Similkameen R at Oroville, Wash. (Okanogan R tributary, mile 74.1)		
	047	480601	1194229	To: Okanogan R nr Brewster, Wash. Mile 1.4	77.7	53
53	061	481210	1220735	Stillaguamish R at Arlington, Wash. Mile 17.75		
53	061	481240	1222010	To: Stillaguamish R at Florence, Wash. Mile 1.9	15.85	53

Table 2.--List of stream reaches where time of travel has been observed. --cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
53	073	484838	1221213	Nooksack R at Deming, Wash. Mile 36.6		
53	074	484729	1223520	To: Nooksack R at Marietta, Wash. Mile 1.4	35.2	53
54	023	385918	0790730	S. Br. Potomac R at Peters- burg, W. Va. Mile 69.0		
54	027	393110	0783522	To: S. Br. Potomac R at mouth, W. Va.Mile 0.6	68.4	54
54	075	383235	0795000	Greenbrier R at Durbin, W. Va. Mile 150.1		
54	075	381115	0800750	To: Greenbrier R at Buckeye, W. Va. Mile 103.1	47	54
55	025	430624	0893821	Black Earth Cr nr Cross Plains, Wis. Mile 20.2		
55	049	430946	0895146	To: Black Earth Cr nr Arena, Wis. Mile 0.4	19.8	55

Table 2.--List of stream reaches where time of travel has been observed.--cont.

FIPS CODES		LAT	LONG	STREAM REACH	REACH LENGTH (MILES)	LOCATION OF DATA (FIPS STATE CODE)
STATE	COUNTY					
55	075	450314	0874449	Peshtigo R at Peshtigo, Wis. Mile 11.9		
55	075	450114	0874251	To: Peshtigo R nr Peshtigo, Wis. Mile 7.0	4.9	55
56	013	432507	1081038	Wind R below Boysen Dam, Wyo.		
56	003	442920	1080245	To: Bighorn R at Greybull, Wyo.	112.7	56
66	72	180822	0661153	Rio de la Plata nr Proyecto La Plata, P.R.		
	72	180937	0661344	To: Rio de la Plata at Proyecto La Plata, P.R.	5.1	72
72	181317	0661244		Rio de la Plata at Comerio, P.R.		
72	181155	0661231		To: Rio de la Plata nr Comerio, P.R.	2.3	72

Table 3.--U.S. Geological Survey Offices in  
United States and Possessions.

STATE AND	FIPS CODE	OFFICE LOCATION
Alabama	01	P. O. Box V University, Alabama 35486
Alaska	02	218 E Street - Skyline Building Anchorage, Alaska 99501
Arizona	04	P.O. Box 4070 2555 E. First Street Tucson, Arizona 85717
Arkansas	05	Room 2301 Federal Office Bldg. 700 West Capitol Avenue Little Rock, Arkansas 72201
California	06	855 Oak Grove Avenue Menlo Park, California 94025
Colorado	08	Building 25, Denver Federal Center Lakewood, Colorado 80225
Connecticut	09	P.O. Box 715 Hartford, Connecticut 06101
District of Columbia	11	U.S. Geological Survey, WRD National Center, Mail Stop #415 Reston, Virginia 22092
Florida	12	903 W. Tennessee Street Tallahassee, Florida 32304
Georgia	13	Room 301, 900 Peachtree St., N.E. Atlanta, Georgia 30309
Hawaii	15	Room 330 First Insurance Bldg. 1100 Ward Avenue Honolulu Hawaii 96814
Idaho	16	Box 036, FBUSCH, Rm. 365 550 West Fort Street Boise, Idaho 83702
Illinois	17	P.O. Box 1026 Champaign, Illinois 61820
Indiana	18	1819 North Meridian Street Indianapolis, Indiana 46202

Table 3.--U.S. Geological Survey Offices in  
United States and Possessions.--Continued

STATE AND	FIPS CODE	OFFICE LOCATION
Iowa	19	1041 Arthur Street Iowa City, Iowa 52240
Kansas	20	1950 Avenue "A" - Campus West University of Kansas Lawrence, Kansas 66044
Kentucky	21	Room 572 Federal Building 600 Federal Place Louisville, Kentucky 40202
Louisiana	22	P.O. Box 66492 Baton Rouge, Louisiana 70806
Maine	23	State House Annex - Capitol Shopping Center Augusta, Maine 04330
Maryland	24	8809 Satyr Hill Road Parkville, Maryland 21234
Massachusetts	25	150 Causeway Street, 10th Floor Boston, Massachusetts 02114
Michigan	26	2400 Science Parkway Red Cedar Research Park Okemos, Michigan 48864
Minnesota	27	1033 Post Office Building St. Paul, Minnesota 55101
Mississippi	28	430 Bounds Street Jackson, Mississippi 30206
Missouri	29	P.O. Box 340 Rolla, Missouri 65401
Nebraska	31	Room 127, Nebraska Hall 901 17th Street Lincoln, Nebraska 68508
Nevada	32	Room 229 - Federal Building 705 North Plaza Street Carson City, Nevada 89701

Table 3.--U.S. Geological Survey Offices in  
United States and Possessions.--Continued

STATE	AND	FIPS CODE	OFFICE LOCATION
New Hampshire		33	Room 307 Federal Building 55 Pleasant Street Concord, Massachusetts 03301
New Jersey		34	P.O. Box 1238 Trenton, New Jersey 08607
New Mexico		35	P.O. Box 4369 Albuquerque, New Mexico 87106
New York		36	P.O. Box 948 Albany, New York 12201
North Carolina		37	P.O. Box 2857 Raleigh, North Carolina 27602
North Dakota		38	P.O. Box 778 Bismarck, North Dakota 58501
Ohio		39	975 West Third Avenue Columbus, Ohio 43212
Oklahoma		40	Room 4301, Federal Building and U.S. Courthouse 200 Northwest 4th Street Oklahoma City, Oklahoma 73102
Oregon		41	P.O. Box 3202 Portland, Oregon 97208
Pennsylvania		42	P.O. Box 1107 Harrisburg, Pennsylvania 17108
Rhode Island		44	Room 314 Federal Bldg. & USPO Providence, Rhode Island 02903
South Carolina		45	2001 Assembly Street, Suite 200 Columbia, South Carolina 29201
South Dakota		46	P.O. Box 1412 Huron, South Dakota 57350
Tennessee		47	144 Federal Office Bldg. Nashville, Tennessee 37203

Table 3.--U.S. Geological Survey Offices in  
United States and Possessions.--Continued

<u>STATE</u>	<u>AND</u>	<u>FIPS CODE</u>	<u>OFFICE LOCATION</u>
Texas		48	630 Federal Building 300 East 8th Street Austin, Texas 78701
Utah		49	8002 Federal Building 125 South State Street Salt Lake City, Utah 84111
Vermont		50	P.O. Box 628 8 East State Street Montpelier, Vermont 05602
Virginia		51	200 West Grace Street, Room 304 Richmond, Virginia 23220
Washington		53	Room 300, 1305 Tacoma Avenue South Tacoma, Washington 98402
West Virginia		54	Room 3303, Federal Building and Court House 500 Quarrier Street, East Charleston, West Virginia 25301
Wisconsin		55	Room 200, 1815 University Avenue Madison, Wisconsin 53706
Wyoming		56	P.O. Box 2087 Cheyenne, Wyoming 82001

<u>POSSESSIONS AND CODE</u>	<u>OFFICE LOCATION</u>
Puerto Rico	72 Building 652 Ft. Buchanan, Puerto Rico 00934

## REFERENCES

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U.S. Geol. Survey Techniques Water-Resources Inv., book 3,  
chap. A12, 31 p.

