

BIBLIOGRAPHY OF STUDIES OF SELECTED STREAM VALLEYS IN KANSAS

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Introduction

The following bibliography was compiled to provide references on the groundwater hydrology of selected major stream valleys in Kansas (see map). The listings are from many sources, published and unpublished, and previously compiled bibliographies as well as the individual works themselves. Since stream valleys generally have surface water associated with them, some of the publications are basically concerned with stream flow, but have application to groundwater hydrology.

Some of the references are less than complete. These citations are for publications which are not easily available in libraries, etc., but can be had by checking with the publishing agency. They were included to alert the reader that previous work had been done.

The citations can be grouped into four broad categories, identified by the numbers 1 through 4. Each citation has been annotated with a number.

1) Studies that apply to only a stream valley or a portion of a stream valley. For example:

Fader, S.W., 1974, Groundwater in the Kansas River Valley, Junction City to Kansas City, Kansas: Kansas Geological Survey Bulletin 206, pt. 2, 12 p.

2) Studies that cover a geographical area larger than a valley, but in which the valley is a major feature. For Example:

Bayne, C.K., 1962, Geology and groundwater resources of Cowley County, Kansas: Kansas Geological Survey Bulletin 158, 219 p.

3) Studies in which a reference to the valley is minor, perhaps only a few water analyses or water-level measurements. For example:

Darton, N.H., 1905, Preliminary report on the geology and underground water resources of the central great plains: U.S. Geological Survey Professional Paper 32, p. 1-409, Fig. 1-18, plates 1-72 (including maps).

4) Studies designed to supply data or discuss a number of valleys in the State. For example

Moore, R.C., 1940, Groundwater resources of Kansas: Kansas Geological Survey Bulletin 27, 112 p.

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Bibliography of Stream Valley Studies

Arkansas River

- ²Bayne, C.K., 1956, Geology and groundwater resources of Reno County,
Kansas: Kansas Geological Survey Bulletin 120, 130 p.
- ²Bayne, C.K., 1962, Geology and groundwater resources of Cowley County,
Kansas: Kansas Geological Survey Bulletin 158, 219 p.
- ²Bayne, C.K. and Ward, J.R., 1974, Geology and hydrology of Rice County,
central Kansas: Kansas Geological Survey Bulletin 206, pt. 3, 17 p.
- ²Black and Veatch Engineers, 1952, Report on long range water supply plan,
Wichita, Kansas: Kansas City, Missouri, 83 p.
- ¹Collins, D.N., 1959, A study of sediment transportation by the Arkansas River
in Colorado and Kansas: Kansas Geological Survey Open-File Report 59-2
(M.S. Thesis, Department of Geology, The University of Kansas).
- ³Darton, N.H., 1905, Preliminary report on the geology and underground water
resources of the central great plains: U.S. Geological Survey
Professional Paper 32, p. 1-409, Fig. 1-18, Plates 1-72 (including maps).
- ²Darton, N.H., 1920, Description of the Syracuse and Lakin Quadrangles,
Kansas: U.S. Geological Survey Atlas Folio 212, 10 p.
- ²Fader, S.W. and Morton, R.B., 1975, Groundwater in the middle Arkansas River
Basin, Kansas and Oklahoma: U.S. Geological Survey Open-File Report 75-
367, 44 p.
- ²Fader, S.W. and Stullken, L.E., 1978, Geohydrology of the Great Bend Prairie,
south-central Kansas: Kansas Geological Survey Irrigation Series No. 4,
19 p.
- ²Fent, O.S., 1950, Geology and groundwater resources of Rice County, Kansas:
Kansas Geological Survey Bulletin 85, 142 p.

- ²Fent, O.S., 1950, Pleistocene drainage history of central Kansas: Kansas Academy of Science Transactions, v. 53, no. 1, p. 81-90.
- ⁴Foley, F.C., Smrha, R.V., and Metzler, D.F., 1955, Water in Kansas: Report by Kansas Water Resources Fact Finding and Research Committee to the 1955 Legislature of Kansas, 216 p.
- ²Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.
- ²Frye, J.C. and Fishel, V.C., 1949, Groundwater in southwestern Kansas: Kansas Geological Survey, 24 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ²Gogel, T., 1981, discharge of saltwater from Permian rocks to major stream-aquifer systems in central Kansas: Kansas Geological Survey Chemical Quality Series 9, 60 p.
- ⁴Gottlieb, Selma, 1928, Mineral analyses of municipal water supplies in Kansas: University of Kansas Engineering and Architecture Bulletin 17, 22 p.
- ²Gutentag, E.D., Lobmeyer, D.H., and McGovern, H.E., 1972, Groundwater in Kearny County, southwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-416, maps.
- ²Gutentag, E.D., Lobmeyer, D.H., McGovern, H.E., and Long, W.A., 1972, Groundwater in Finney County, southwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-442, maps.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.

- ³Haskins, C.A. and Young, C.C., 1915, Water supplies of Kansas, part 1 - groundwater supplies: University of Kansas Engineering and Architecture Bulletin 5, 187 p.
- ²Hathaway, L.R., Carr, B.L., Galle, O.K., Magnuson, L.M., Waugh, T.C., and Dickey, H.P., 1976, Chemical quality of irrigation waters in Hamilton, Kearny, Finney, and northern Gray counties, Kansas: Kansas Geological Survey Chemical Quality Series 4, 33 p.
- ²Hathaway, L.R., Galle, O.K., Waugh, T.C., and Dickey, H.P., 1978, Chemical quality of irrigation waters in Ford County and the Great Bend Prairie of Kansas: Kansas Geological Survey Chemical Quality Series 7, 41 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1981, Chemical quality of irrigation waters in the Equus Beds area, south-central Kansas: Kansas Geological Survey Chemical Quality Series 10, 45 p.
- ³Haworth, Erasmus, 1897, Underground waters of southwestern Kansas: U.S. Geological Survey Water Supply and Irrigation Paper 6, 65 p.
- ³Haworth, Erasmus, 1913, Special report on well waters in Kansas: Kansas University Geological Survey Bulletin 1, 110 p.
- ¹Heijl, H.R., 1973, Arkansas River near Garden City, Kansas - flood flow characteristics at bridge site on proposed U.S. Highway 83 bypass: U.S. Geological Survey Administrative Report, 15 p.
- ³Hess, R.H., 1952, Long range water supply planning for Wichita: American Water Works Association Journal, v. 44, no. 11, p. 1043-1051.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute, Contribution No. 176, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.

- ¹Kansas State Board of Health, 1954, Arkansas River Basin pollution report, Rice - Barton County line to Mulvane: Kansas State Board of Health (2 volumes).
- ²Kansas State Board of Health, 1961, Chemical quality of surface waters in southwest Kansas, 1898-1961: Kansas State Board of Health.
- ²Kansas Water Resources Board, 1960, Preliminary appraisal of Kansas water problems, section 4, lower Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, part A, 177 p.
- ²Kansas Water Resources Board, 1962, Preliminary appraisal of Kansas water problems, section 11, upper Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, part A, 121 p.
- ⁴Kansas Water Resources Board, 1967, Irrigation in Kansas: Planning for Development, "701" Project No. Kansas P-43, Report No. 16 (E), 233 p.
- ²Keplinger and Wanenmacher Engineers, 1954, A preliminary investigation of the use of water resources of the "Equus Beds" in McPherson, Harvey, and Sedgwick counties, Kansas: Tulsa, Oklahoma, 13 p.
- ²Lane, C.W. and Miller, D.E., 1965, Logs of wells and test holes in Sedgwick County, Kansas: Kansas Geological Survey Special Distribution Publication 22, 175 p.
- ²Lane, C.W. and Miller, D.E., 1965, Geohydrology of Sedgwick County, Kansas: Kansas Geological Survey Bulletin 176, 100 p.
- ²Lane, C.W., Revis, E.L., and Stramel, G.J., 1962, Emergency water supplies in the Wichita area, Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-58, 36 p., map.
- ²Latta, B.F., 1944, Geology and groundwater resources of Finney and Gray counties, Kansas: Kansas Geological Survey Bulletin 55, 272 p.

- ²Latta, B.F., 1948, Geology and groundwater resources of Kiowa County, Kansas: Kansas Geological Survey Bulletin 65, 151 p.
- ²Latta, B.F., 1950, Geology and groundwater resources of Barton and Stafford counties, Kansas: Kansas Geological Survey Bulletin 88, 228 p.
- ²Lohman, S.W., 1942, Groundwater supplies available for national defense industries in south-central Kansas: Kansas Geological Survey Bulletin 41, pt. 1, 19 p.
- ⁴Lohman, S.W. and Burtis, V.M., 1953, Areas of principal groundwater investigations in the Arkansas, White, and Red River basins: U.S. Geological Survey Hydrologic Investigations Atlas HA-2, map.
- ⁴Lohman, S.W. and Burtis, V.M., 1953, General availability of groundwater and depths to water level in the Arkansas, White, and Red River basins: U.S. Geological Survey Hydrologic Investigations Atlas HA-3, map.
- ²McGovern, H.E., 1970, Geology and groundwater in the Ogallala Formation and undifferentiated Pleistocene deposits, southwestern Kansas, in Ogallala Aquifer Symposium: International Center for Arid and Semi-Arid Land Studies, Texas Tech University Special Report 39, p. 15-29.
- ²McGovern, H.E. and Long, W.A., 1975, Groundwater in Gray County, southwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-517, maps.
- ²McLaughlin, T.G., 1943, Geology and groundwater resources of Hamilton and Kearny counties, Kansas: Kansas Geological Survey Bulletin 49, 220 p.
- ²McLaughlin, T.G., 1949, Geology and groundwater resources of Pawnee and Edwards counties, Kansas: Kansas Geological Survey Bulletin 80, 189 p.
- ²Meinzer, O.E., 1914, Preliminary report on groundwater for irrigation in the vicinity of Wichita, Kansas: U.S. Geological Survey Water Supply Paper 345, 9 p.

- ²Meyer, W.R., Gutentag, E.D., and Lobmeyer, D.H., 1969, Finney County basic data: U.S. Geological Survey Open-File Report, 146 p.
- ²Meyer, W.R., Gutentag, E.D., and Lobmeyer, D.H., 1970, Geohydrology of Finney County, southwestern Kansas: U.S. Geological Survey Water Supply Paper 1891, 117 p.
- ³Miller, G.H., Jr., 1959, Economic development in south-central Kansas, part 6, Mineral and water resources: University of Kansas Center for Research in Business, 142 p.
- ²Nettleton, C.W., 1892, Artesian and underflow investigations - final report of the Chief Engineer to the Secretary of Agriculture (with accompanying maps, profiles, diagrams, and additional papers): U.S. 42nd Congress, First Session, S.Ex.Doc. 41, part 2, p. 1-116.
- ⁴Parker, H.N., 1911, Quality of the water supplies of Kansas, with a preliminary report on stream pollution by mine waters in southeastern Kansas by E.H.S. Bailey: U.S. Geological Survey Water Supply Paper 273, 375 p.
- ²Petri, L.R., Lane, C.W., and Furness, L.W., 1964, Water resources of the Wichita area, Kansas: U.S. Geological Survey Water Supply Paper 1499-I, 69 p.
- ⁴Pfister, R., 1955, Water resources and irrigation, part 6, economic development in southwestern Kansas: University of Kansas Center for Research in Business, 107 p.
- ⁴Schoewe, W.H., 1949, The geography of Kansas, part 2, physical geography: Kansas Academy of Science Transactions, v. 52, no. 3, p. 261-333.
- ⁴Schoewe, W.H., 1951, The geography of Kansas, part 3, hydrogeography: Kansas Academy of Science Transactions, v. 54, no. 3, p. 263-329.

- ²Selm, R.P., 1961, Hutchinson water plan: Wilson and Company Engineers, Salina, Kansas, 60 p.
- ³Slichter, S.C., 1902, The motions of underground waters: U.S. Geological Survey Water Supply Paper 67, 106 p., 8 pls.
- ¹Slichter, C.S., 1906, The underflow in the Arkansas Valley in western Kansas: U.S. Geological Survey Water Supply Paper 153, 90 p.
- ²Smith, H.T.U., 1938, Preliminary notes on Pleistocene gravels in southwestern Kansas: Kansas Academy of Science Transactions, v. 40, p. 283-291.
- ³Smith, H.T.U., 1940, Geologic studies in southwestern Kansas: Kansas Geological Survey Bulletin 34, 212 p.
- ²Stramel, G.J., 1956, Progress report on the groundwater hydrology of the Equus Beds area, Kansas: Kansas Geological Survey Bulletin 119, pt. 1, 59 p.
- ²Stramel, G.J., Lane, C.W., and Hodson, W.G., 1958, Geology and groundwater hydrology of the Ingalls area, Kansas: Kansas Geological Survey Bulletin 132, 154 p.
- ²Stullken, L.E. and Fader, S.W., 1976, Hydrogeologic data from the Great Bend Prairie, south-central Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 5, 50 p.
- ³Sutton, W.B., 1897, Introduction: Report Board of Irrigation Survey and Experiment for 1895 and 1896 to the Legislature of Kansas, 48 p., 6 figs.
- ¹U.S. Bureau of Reclamation, 1957, Reconnaissance study 1951-54 and status report, the Ingall pumping project, northern Gray County and eastern Finney County, Kansas: U.S. Bureau of Reclamation (Region VII), Denver.

- ²U.S. Bureau of Reclamation, 1960s, Status and inventory report, Granada project and Arkansas River Basin below John Martin Reservoir, Colorado and Kansas: U.S. Bureau of Reclamation Status and Inventory Report: U.S. Bureau of Reclamation, Region VII, Denver.
- ²U.S. Corps of Engineers, 1955, Domestic and industrial water supply: Report of the Arkansas, White, Red Basins Inter-Agency Committee, part 2, section 8, 126 p.
- ¹U.S. Corps of Engineers, 1960s, Detailed planning flood study on the Arkansas River at Dodge City: U.S. Corps of Engineers, Albuquerque District.
- ²U.S. Corps of Engineers, 1960s, Arkansas River - Red River basins - water quality control study, a survey report on ways and means to control or reduce flows from natural chlorides (pt. 2): U.S. Corps of Engineers, Tulsa District.
- ¹U.S. Corps of Engineers, c.1968, A study of the Arkansas River - Great Bend to John Martin Dam, a comprehensive survey investigation: U.S. Corps of Engineers, Albuquerque District.
- ¹U.S. Corps of Engineers, c.1972, A study of the Arkansas River - Great Bend to mouth Cimarron River, a comprehensive survey investigation: U.S. Corps of Engineers, Tulsa District.
- ¹U.S. Corps of Engineers, 1973, Great Bend local protection project, Great Bend, Kansas and vicinity: U.S. Corps of Engineers Design Memorandum 1, Hydrology, Serial No. 23, Albuquerque District Corps of Engineers, 33 p.
- ³U.S. Department of Agriculture, 1941, Water facilities area plan for the Arkansas Valley, western Kansas: Bureau of Agricultural Economics, 103 p.
- ²U.S. Geological Survey and Kansas Groundwater Management District No. 5, 1982, Geohydrologic study of Ford County, Kansas: in preparation.

- ¹Waite, H.A., 1939, Groundwater resources of the Arkansas Valley in Ford County, Kansas: Kansas Geological Survey Open-File Report 39-2.
- ²Waite, H.A., 1942, Geology and groundwater resources of Ford County, Kansas: Kansas Geological Survey Bulletin 43, 250 p.
- ³Ward, P.E., 1961, Geology and groundwater features of salt springs, seeps, and plains in the Arkansas and Red River basins of western Oklahoma and adjacent parts of Kansas and Texas: U.S. Geological Survey Open-File Report, 94 p.
- ³Ward, P.E. and Leonard, A.R., 1961, Hypothetical circulation of groundwater around salt springs in western Oklahoma, Kansas and Texas: U.S. Geological Survey Professional paper 424-D, p. D150-D151.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.
- ²Wichita [City of], 1940, The Wichita municipal water supply: Wichita, Kansas, 27 p.
- ²Wichita Mayor's Advisory Committee, 1956, Water report: Wichita, 35 p.
- ¹Williams, C.C., 1946, Groundwater conditions in the Arkansas River Valley in the vicinity of Hutchinson, Kansas: Kansas Geological Survey Bulletin 64, pt. 5, p. 149-216.
- ³Williams, C.C. and Lohman, S.W., 1947, Methods used in estimating the groundwater supply in the Wichita, Kansas well-field area: Transactions of the American Geophysical Union, v. 28, no. 1, p. 120-131.

- ³Williams, C.C. and Lohman, S.W., 1949, Geology and groundwater resources of a part of south-central Kansas, with special reference to the Wichita water supply: Kansas Geological Survey Bulletin 79, 455 p.
- ³Wright, A.E. and Collins, A.B., 1905, Irrigation near Garden City, Kansas, 1904: U.S. Department of Agriculture Office Experiment Station Bulletin 154, p. 585-591.

Chikaskia River

- ²Bayne, C.K., 1960, Geology and groundwater resources of Harper County, Kansas: Kansas Geological Survey Bulletin 143, 184 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ¹Kansas Water Resources Board, 1960, Preliminary appraisal of Kansas water problems, section 4, lower Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, Part A, 177 p.
- ²Lane, C.W., 1960, Geology and groundwater resources of Kingman County, Kansas: Kansas Geological Survey Bulletin 144, 174 p.
- ⁴Schoewe, W.H., 1949, The geography of Kansas, part 2, physical geography: Kansas Academy of Science Transactions, v. 52, no. 3, p. 261-333.
- ⁴Schoewe, W.H., 1951, The geography of Kansas, part 3, hydrogeography: Kansas Academy of Science Transactions, v. 54, no. 3, p. 263-329.
- ⁴Schoewe, W.H., 1953, The geography of Kansas, part 3, concluded, hydrogeography: Kansas Academy of Science Transactions, v. 56, no. 2, p. 131-190.

¹U.S. Bureau of Reclamation, 1968, A feasibility investigation for a multipurpose reservoir on the Chikaskia River: U.S. Bureau of Reclamation, Denver.

²Walters, K.L., 1961, Geology and groundwater resources of Sumner County, Kansas: Kansas Geological Survey Bulletin 151, 198 p.

Cottonwood River

³Byrne, F.E., Walters, C.P., Hill, J.L., and Riseman, L., 1959, Geology and construction material resources of Marion County, Kansas: U.S. Geological Survey Bulletin 1060-B, 95 p.

⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.

²Kansas State Department of Health, 1962, Water quality survey of the Cottonwood River Basin: unpublished report by the Kansas State Department of Health.

⁴Kansas Water Resources Board, 1961, State water plan series, part A, section 7, Neosho unit: Kansas Water Resources Board, State Water Plan Studies, 99 p.

²Moore, R.C., Jewett, J.M., O'Connor, H.G., and Smith, R.K., 1951, Geology, mineral resources, and groundwater resources of Chase County, Kansas: Kansas Geological Survey Volume 11, 48 p.

²O'Connor, H.G., 1949, Notes on the groundwater resources of Chase County, Kansas: Kansas Academy of Science Transactions, v. 52, no. 3, p. 399-405.

- ²O'Connor, H.G., Goebel, E.D., and Plummer, N., 1953, Geology, mineral resources, and groundwater resources of Lyon County, Kansas: Kansas Geological Survey Volume 12, 59 p.
- ²Prosser, C.S. and Beede, J.W., 1904, Geologic folio of Cottonwood Falls, Kansas: U.S. Geological Survey Folio 109, 6 p.
- ⁴Schoewe, W.H., 1949, The geography of Kansas, part 2, physical geography: Kansas Academy of Science Transactions, v. 52, no. 3, p. 261-333.
- ⁴Schoewe, W.H., 1951, The geography of Kansas, part 3, hydrogeography: Kansas Academy of Science Transactions, v. 54, no. 3, p. 263-329.
- ⁴Schoewe, W.H., 1953, The geography of Kansas, part 3, concluded, hydrogeography: Kansas Academy of Science Transactions, v. 56, no. 2, p. 131-190.
- ²Smith, S.M. and Minor, J.R., 1964, Stream pollution from feedlot runoff: Kansas State Department of Health Bulletin 2-1 (Whitewater, Cottonwood, and Fox Creek).
- ²U.S. Corps of Engineers, Detailed planning (pre-construction) studies for the Cedar Point Reservoir (Cottonwood River): U.S. Corps of Engineers, Kansas City District.

Elm Creek

- ⁴Schoewe, W.H., 1949, The geography of Kansas, part 2, physical geography: Kansas Academy of Science Transactions, v. 52, no. 3, p. 261-333.
- ⁴Schoewe, W.H., 1951, The geography of Kansas, part 3, hydrogeography: Kansas Academy of Science Transactions, v. 54, no. 3, p. 263-329.
- ⁴Schoewe, W.H., 1953, The geography of Kansas, part 3, concluded, hydrogeography: Kansas Academy of Science Transactions, v. 56, no. 2, p. 131-190.
- ¹Williams, C.C. and Bayne, C.K., 1946, Groundwater conditions in Elm Creek Valley, Barber County, Kansas: Kansas Geological Survey Bulletin 64, pt. 3, p. 81-124.

Kansas River

- ¹Albert, C.D., 1973, Fluvial sediment characteristics of the Kansas River at Wamego, Kansas, 1957-70: U.S. Geological Survey Open-File Report, 13 p.
- ²Bayne, C.K. and Fent, O.S., 1963, The drainage history of the upper Kansas River Basin: Kansas Academy of Science Transactions, v. 66, no. 3, p. 363-377.
- ¹Beck, H.V., 1959, Geology and groundwater resources of the Kansas River Valley between Wamego and Topeka vicinity: Kansas Geological Survey Bulletin 135, 88 p.
- ²Beede, J.W., 1898, The stratigraphy of Shawnee County: Kansas Academy of Science Transactions, v. 15, p. 27-34.
- ²Bennett, J., 1896, A geologic section along the Kansas River from Kansas City to McFarland: Kansas University, Geological Survey Volume 1, p. 107-124.

- ¹Carlson, W.A., 1952, Quaternary geology and groundwater resources of the Kansas River Valley between Newman and Lawrence, Kansas: Unpublished M.S. Thesis, Department of Geology, The University of Kansas, 94 p.
- ¹Dabiri, H.E., Green, D.W., and Winslow, J.D., 1970, Digital computer simulation of an aquifer, in Proceedings of 1970 Summer Computer Simulation Conference, Denver, Colorado, p. 944-954.
- ¹Davis, S.N., 1951, Quaternary geology and groundwater resources in the vicinity of Topeka, Kansas: Unpublished M.S. thesis, Department of Geology, The University of Kansas, 74 p.
- ¹Davis, S.W. and Carlson, W.A., 1952, Geology and groundwater resources of the Kansas River Valley between Lawrence and Topeka, Kansas: Kansas Geological Survey Bulletin 96, pt. 5, p. 201-276.
- ¹Dort, W., Jr., 1970, Recent variations in course and regimen, Kansas River and nearby reaches of Missouri River: Kansas Water Resources Research Institute Contribution No. 50, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, Washington, D.C.
- ¹Dufford, A.E., 1953, Quaternary geology and groundwater resources of Kansas River Valley between Bonner Springs and Lawrence, Kansas: Unpublished M.S. Thesis, Department of Geology, The University of Kansas, 177 p.
- ¹Dufford, A.E., 1958, The Quaternary geology and groundwater resources of Kansas River Valley between Bonner Springs and Lawrence, Kansas: Kansas Geological Survey Bulletin 130, pt. 1, 96 p.
- ¹Fader, S.W., 1974, Groundwater in the Kansas River Valley, Junction City to Kansas City, Kansas: Kansas Geological Survey Bulletin 206, pt. 2, 12 p.
- ⁴Federal Security Agency, Public Health Service, 1949, Kansas River Basin water pollution investigations.

- ²Fishel, V.C., 1948, Groundwater resources of the Kansas City, Kansas area: Kansas Geological Survey Bulletin 71, 109 p.
- ²Fishel, V.C., 1952, Fluctuations of groundwater levels in Kansas - Missouri floods of 1951: U.S. Geological Survey Water Supply Paper 1139, p. 229-234.
- ²Fishel, V.C., Searcy, J.K., and Rainwater, F.H., 1953, Water resources of the Kansas City area, Missouri and Kansas: U.S. Geological Survey Circular 293, 52 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ¹Furness, L.W., Albert, D.C., and Leonard, R.B., 1967, Kansas River, Bonner Springs to mouth - degradation of channel: U.S. Geological Survey Administrative Report (Kansas District), 18 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ²Jewett, J.M., 1941, The geology of Riley and Geary counties, Kansas: Kansas Geological Survey Bulletin 39, 164 p.
- ²Jewett, J.M. and Newell, N.D., 1935, Geology of Wyandotte County and Johnson County, Kansas: Kansas Geological Survey Bulletin 21, pt. 2, p. 151-205.
- ¹Jewett, J.M., O'Connor, H.G., and Seevers, W.J., 1965, Hydrology of the lower Kansas River Valley: Geological Society of America and associated societies, Guidebook for the 1965 annual meetings, 45 p.

- ²Jewett, J.M. and Williams, C.C., 1935, Water resources of Johnson County during the drought of 1934: Kansas Academy of Science Transactions, v. 38, p. 191-198.
- ²Johnson, W.D. and Adkison, W.L., 1967, Geology of eastern Shawnee County, Kansas and vicinity: U.S. Geological Survey Bulletin 1215-A, p. 1-123.
- ²Johnson, W.D., and Wagner, H.C., 1967, Geology of western Shawnee County, Kansas and vicinity: U.S. Geological Survey Bulletin 1215-B, p. 125-254.
- ²Johnson, W.D., Jr., Adkison, W.L., and Wagner, H.C., 1967, Geology of Shawnee County, Kansas: U.S. Geological Survey Bulletin 1215, 254 p.
- ⁴Kansas State Board of Health, 1958, Chemical quality of surface waters in the Kansas River unit, 1892-1958: Kansas State Board of Health.
- ¹Kansas State Department of Health, 1967, Water quality and time of travel studies in the lower Kansas River Basin: Kansas State Department of Health (possibly unpublished).
- ⁴Kansas Water Resources Board, 1959, State water plan studies series, part A, section 3, Kansas unit: Kansas Water Resources Board, Topeka, Kansas.
- ²Kansas Water Resources Board, 1962, State water plan studies, part A, section 12, Smoky Hill unit: Kansas Water Resources Board, Topeka, Kansas.
- ¹Latta, B.F., 1949, Groundwater conditions in the Smoky Hill Valley in Saline, Dickinson, and Geary counties, Kansas: Kansas Geological Survey Bulletin 84, 152 p.
- ¹Leeson, E.R., 1957, History of natural flow, Kansas River: U.S. Geological Survey Open-File Report.
- ¹Lohman, S.W., 1941, Groundwater conditions in the vicinity of Lawrence, Kansas: Kansas Geological Survey Bulletin 38, pt. 2, p. 17-64.

- ²McCourt, W.E., Albertson, M., and Bennett, J.W., 1917, The geology of Jackson County, Missouri: Missouri Bureau of Geology and Mines, Section Series, v. 24, 158 p.
- ¹Merriam, D.F., 1954, Electrical resistivity studies in the Kansas River Valley: Kansas Geological Survey Bulletin 109, pt. 7, p. 97-112.
- ¹Moulthrop, J.S., 1963, Pleistocene geology and groundwater of Kansas River Valley between Manhattan and Junction City, Kansas: Unpublished M.S. Thesis, Kansas State University, 42 p.
- ²Mudge, M.R., 1955, Early Pleistocene geomorphic history of Wabaunsee, southeastern Riley, and southern Pottawatomie counties, Kansas: Kansas Academy of Science Transactions, v. 58, no. 2, p. 271-281.
- ²Mudge, M.R. and Burton, R.H., 1959, Geology of Wabaunsee County, Kansas: U.S. Geological Survey Bulletin 1068, 210 p.
- ¹Nelson, D.M. and Pine, W.H., 1969, The value of water for irrigation in the Kansas River Valley: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 20, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, Washington, D.C., 45 p.
- ²Newell, N.D., 1935, The geology of Johnson and Miami counties, Kansas: Kansas Geological Survey Bulletin 21, pt. 1, 150 p.
- ²O'Brien, W.J. and Angino, E.E., 1966, Chemical water quality of the lower Kansas River Basin: Project report, Center for Research and Engineering Science, University of Kansas.

- ¹O'Brien, W.J., Angino, E.E., Waugh, T.C., and Stoltenberg, G.A., xxxx, Water quality in the Kansas River, now and in the future: Transactions of the 17th Annual Conference on Sanitary Engineering, in the Bulletin of Engineering and Architecture No. 57 of the School of Engineering and Architecture, University of Kansas, p. 37-48.
- ²O'Connor, H.G., 1960, Geology and groundwater resources of Douglas County, Kansas: Kansas Geological Survey Bulletin 148, 200 p.
- ²O'Connor, H.G., 1971, Geology and groundwater resources of Johnson County, Kansas: Kansas Geological Survey Bulletin 203, 68 p.
- ²O'Connor, H.G., 1973, Geohydrology for urban planning in Johnson County, northeastern Kansas: Kansas Geological Survey Open-File Report 73-9, 41 p.
- ²O'Connor, H.G. and Fowler, L.W., 1963, Pleistocene geology in a part of the Kansas City area: Kansas Academy of Science Transactions, v. 66, no. 4, p. 622-631.
- ²Scott, G.R., Foster, F.W., and Crumpton, C.F., 1958, Geology and construction material resources of Pottawatomie County, Kansas: U.S. Geological Survey Bulletin 1060-C, 178 p.
- ²Scott, G.R., Foster, F.W., and Crumpton, C.F., 1959, Geology and construction-material resources of Pottawatomie County, Kansas: U.S. Geological Survey Bulletin 1060-C, 178 p.
- ¹Simms, J.J., 1975, A study of the bedrock valleys of the Kansas and Missouri rivers in the vicinity of Kansas City: unpublished M.S. thesis, Department of Geology, The University of Kansas, 106 p.
- ¹Smith, J.T., 1959, Groundwater resources of Big Blue and Kansas River Valleys from Manhattan to Wamego, Kansas: Unpublished M.S. Thesis, Kansas State University, 52 p.

- ¹Smith, R., O'Brien, W.J., Lefevre, A., and Pogge, E., 1967, An evaluation of a mathematical model of the lower reaches of the Kansas River drainage system: University of Kansas Center for Research.
- ²Todd, J.E., 1908, Drainage of the Kansas ice sheet: Kansas Academy of Science Transactions, v. 22, p. 107-112.
- ²Todd, J.E., 1917, History of Kaw Lake, Kansas: Kansas Academy of Science Transactions, v. 28, p. 27-199.
- ³U.S. Corps of Engineers, 1966, Investigation of water quality, Tuttle Creek Reservoir, 1963 - June 1966: Corps of Engineers, Kansas City District, Kansas City, Missouri.
- ¹U.S. Corps of Engineers, c.1968, Kansas River navigation, a survey investigation for navigation from the mouth to Lawrence: U.S. Corps of Engineers, Kansas City District.
- ¹U.S. Geological Survey, 1958, Pumping tests at the Goodyear Tire and Rubber Company, Topeka, Kansas: U.S. Geological Survey Open-File Report (Kansas District), 12 p.
- ⁴U.S. Public Health Service and Kansas State Board of Health, 1953 (revised 1959), Kansas River drainage basin: Public Health Service and Kansas State Board of Health (water pollution study).
- ⁴U.S. Public Health Service and Kansas State Department of Health, 1949, Kansas River Basin water pollution investigation: Public Health Service and Kansas State Department of Health.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

²Winslow, J.D., 1972, Geohydrology of Jefferson County, northeastern Kansas:
Kansas Geological Survey Bulletin 202, pt. 4, 20 p.

¹Winslow, J.D. and Nuzman, C.E., 1966, Electronic simulation of groundwater hydrology in the Kansas River Valley near Topeka, Kansas: Kansas Geological Survey Special Distribution Publication 29, 24 p.

¹Young, C.C., 1913, On the immunity of the Kansas bottom groundwaters to changes in the composition of the Kansas River water: Kansas Academy of Science Transactions, v. 25, p. 153-159.

¹Yu, Y.S., 1970, Longitudinal dispersion of the lower Kansas River: Kansas Water Resources Research Institute, Contribution No. 37, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, Washington, D.C.

Little Arkansas River Valley

²Albert, C.D., 1964, Brine in surface water of the Little Arkansas River Basin, Kansas: Kansas State Department of Health Bulletin No. 1-5, 15 p.

²Bayne, C.K., 1956, Geology and groundwater resources of Reno County, Kansas: Kansas Geological Survey Bulletin 120, 130 p.

²Bayne, C.K. and Ward, J.R., 1974, Geology and hydrology of Rice County, central Kansas: Kansas Geological Survey Bulletin 206, pt. 3, 17 p.

²Beck, H.V., 1955, Groundwater of central Kansas "Equus Beds" area: Kansas State College [University] Bulletin, v. 39, no. 3.

- ²Dabiri, H.E., 1969, A digital computer model for evaluation of the Wichita well field area of the Equus beds, a part of the Little Arkansas River Basin Study: Kansas Geological Survey Open-File Report 69-1, prepared for the Kansas Water Resources Board.
- ²Fent, O.S., 1950, Geology and groundwater resources of Rice County, Kansas: Kansas Geological Survey Bulletin 85, 142 p.
- ²Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ²Gogel, T., 1981, Discharge of saltwater from Permian rocks to major stream-aquifer systems in central Kansas: Kansas Geological Survey Chemical Quality Series 9, 60 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1981, Chemical quality of irrigation waters in the Equus Beds area, south-central Kansas: Kansas Geological Survey Chemical Quality Series 10, 45 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ²Kansas State Board of Health, 1954, Little Arkansas River Basin pollution report: Kansas State Board of Health (2 volumes).
- ⁴Kansas Water Resources Board, 1960, Preliminary appraisal of Kansas water problems, section 4, lower Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, Part A, 177 p.

- ²Lane, C.W. and Miller, D.E., 1965, Geohydrology of Sedgwick County, Kansas: Kansas Geological Survey Bulletin 176, 100 p.
- ²Lane, C.W. and Miller, D.E., 1965, Logs of wells and test holes in Sedgwick County, Kansas: Kansas Geological Survey Special Distribution Publication 22, 175 p.
- ²Lawrence, R.E. and Hess, R.H., 1963, Wichita's past, present, and future water supply: American Water Works Association Journal, v. 55, no. 8, p. 1081-1092.
- ²Leonard, R.B. and Kleinschmidt, M.K., 1976, Saline water in the Little Arkansas River Basin area, south-central Kansas: Kansas Geological Survey Chemical Quality Series No. 3, 24 p.
- ²Lohman, S.W., 1942, Groundwater supplies available for national defense industries in south-central Kansas: Kansas Geological Survey Bulletin 41, pt. 1, 19 p.
- ²Meinzer, O.E., 1914, Preliminary report on groundwater for irrigation in the vicinity of Wichita, Kansas: U.S. Geological Survey Water Supply Paper 345, p. 1-9.
- ³Miller, G.H., Jr., 1959, Economic development in south-central Kansas, part 6, mineral and water resources: University of Kansas Center for Research in Business, 142 p.
- ²Petri, L.R., Lane, C.W., and Furness, L.W., 1964, Water resources of the Wichita area, Kansas: U.S. Geological Survey Water Supply Paper 1499-I, 69 p.
- ²Pinney, J.J., Jr., Henderson, J.A., and KostECKI, D., 1975, Little Arkansas River Basin: Kansas Water Office, State Water Plan Studies, Part C.

- ²Richards, D.B. and Dunaway, T.W., 1972, Geohydrologic data for numerical modeling of groundwater withdrawals in the Little Arkansas River Basin area, south-central Kansas: U.S. Geological Survey Open-File Report, 426 p.
- ²Stramel, G.J., 1956, Progress report on the groundwater hydrology of the Equus Beds area, Kansas: Kansas Geological Survey Bulletin 119, pt. 1, 59 p.
- ⁴U.S. Army Engineers District, Tulsa, Oklahoma, 1965, Survey report on Arkansas-Red River Basins water quality control study, Texas-Oklahoma-Kansas: U.S. Army Corps of Engineers, Tulsa, Oklahoma, pt. 1, 5 vols.
- ³U.S. Bureau of Reclamation, 1950s or 60s, An information report of a reconnaissance grade study concerning water availability and/or alternative use in the following basins of south-central Kansas: South Fork of the Ninnescah River, Slate Creek, Rattlesnake Creek, Little Arkansas River, and Cow Creek: U.S. Bureau of Reclamation (Region V), Albuquerque.
- ⁴U.S. Corps of Engineers, 1955, Domestic and industrial water supply: Report of the Arkansas, White, Red Basins Inter-Agency Committee, part 2, section 8, 126 p.
- ³Ward, P.E., 1961, Geology and groundwater features of salt springs, seeps, and plains in the Arkansas and Red River basins of western Oklahoma and adjacent parts of Kansas and Texas: U.S. Geological Survey Open-File Report, 94 p.
- ³Ward, P.E. and Leonard, A.R., 1961, Hypothetical circulation of groundwater around salt springs in western Oklahoma, Kansas and Texas: U.S. Geological Survey Professional paper 424-D, p. D150-D151.

²Wichita [City of], 1940, The Wichita municipal water supply: Wichita, Kansas, 27 p.

²Wichita Mayor's Advisory Committee, 1956, Water report: Wichita, Kansas, 35 p.

²Williams, C.C. and Lohman, S.W., 1949, Geology and groundwater resources of a part of south-central Kansas, with special reference to the Wichita water supply: Kansas Geological Survey Bulletin 79, 455 p.

Marais des Cygnes River

²Ball, S.M., Ball, M.M., and Laughlin, D.J., 1963, Geology of Franklin County, Kansas: Kansas Geological Survey Bulletin 163, 57 p.

⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.

⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.

¹Jewett, J.M., 1948, The Melvern Dam site: Kansas Geological Survey Open-File Report 48-5.

⁴Kansas State Board of Health, 1957, Chemical quality of surface waters in the Marais des Cygnes River Basin, 1899-1957: Kansas State Board of Health.

⁴Kansas Water Resources Board, 1958, Preliminary appraisal of Kansas water problems, section 1, Marais des Cygnes unit: Kansas Water Resources Board, State Water Plan Studies, part A, 189 p.

- ²Miller, D.E., 1966, Geology and groundwater resources of Miami County, Kansas: Kansas Geological Survey Bulletin 181, 66 p.
- ²Newell, N.D., 1935, The geology of Johnson and Miami counties, Kansas: Kansas Geological Survey Bulletin 21, pt. 1, 150 p.
- ²O'Connor, H.G., Goebel, E.D., and Plummer, N., 1953, Geology, mineral resources, and groundwater resources of Lyon County, Kansas: Kansas Geological Survey Volume 12, 59 p.
- ²O'Connor, H.G., Goebel, E.D., Schoewe, W.H., and Plummer, N., 1955, Geology, mineral resources, and groundwater resources of Osage County, Kansas: Kansas Geological Survey Volume 13, 50 p.
- ²SeEVERS, W.J., 1969, The geology and groundwater resources of Linn County, Kansas: Kansas Geological Survey Bulletin 193, 65 p.
- ¹SeEVERS, W.J. and Jungmann, W.L., 1963, Terrace development - Marais des Cygnes and Neosho River valleys: Kansas Academy of Science Transactions, v. 66, no. 3, p. 393-397.
- ²Swallow, G.C. and Hawn, F., 1865, Report of the geological survey of Miami County, Kansas: [Kansas Geological Survey], 24 p., sketch map, Kansas City, Missouri.
- ¹U.S. Corps of Engineers, various years, Hydrologic studies for Pomona Reservoir and Melvern Reservoir in the Marais des Cygnes River Basin.
- ⁴U.S. Public Health Service and Kansas State Board of Health, 1952, Osage (Marais des Cygnes) drainage basins: Public Health Service and Kansas State Board of Health (water pollution study).

Neosho River

- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ⁴Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ²Jungmann, W.L., 1966, Geology and groundwater resources of Neosho County, Kansas: Kansas Geological Survey Bulletin 183, 46 p.
- ²Jungmann, W.L. and Williams, C.C., 1968, Geology and groundwater in Labette County, Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-279, Maps.
- ¹Kansas State Board of Health, 1958, Cherry Creek investigation report: Kansas State Board of Health, Topeka.
- ⁴Kansas State Board of Health, 1960, Chemical quality of surface waters in the Neosho River Basin, 1892-1960: Kansas State Board of Health, Topeka.
- ⁴Kansas Water Resources Board, 1961, State water plan series, part A, section 7, Neosho unit: Kansas Water Resources Board, State Water Plan Studies, 99 p.
- ²Miller, D.E., 1969, Geology and groundwater resources of Allen County, Kansas: Kansas Geological Survey Bulletin 195, 50 p.

- ⁴Morton, R.B. and Fader, S.W., 1975, Groundwater in the Grand (Neosho) River Basin, Kansas and Oklahoma: U.S. Geological Survey Open-File Report 75-366, 63 p.
- ²Mudge, M.R., Matthews, C.W., and Wells, J.D., 1959, Geology and construction material resources of Morris County, Kansas: U.S. Geological Survey Bulletin 1060-A, 61 p.
- ²O'Connor, H.G., Goebel, E.D., Plummer, N., 1953, Geology, mineral resources, and groundwater resources of Lyon County, Kansas: Kansas Geological Survey Volume 12, 59 p.
- ²Prescott, G.C., 1948, Preliminary report on the groundwater resources of Labette County, Kansas: Kansas Geological Survey Open-File Report 48-7, prepared in cooperation with the U.S. Geological Survey for State Board of Health.
- ²SeEVERS, W.J., 1975, Description of the surficial rocks in Cherokee County, southeastern Kansas: Kansas Geological Survey Geology Series 1, 7 p.
- ¹SeEVERS, W.J. and Jungmann, W.L., 1963, Terrace development - Marais des Cygnes and Neosho River valleys: Kansas Academy of Science Transactions, v. 66, no. 3, p. 393-397.
- ²Stallard, A.H., 1966, Materials inventory of Coffey County, Kansas: State Highway Commission of Kansas, Materials Inventory Report No. 2, 127 p.
- ⁴U.S. Corps of Engineers, c.1970, A survey investigation for development of water resources of the Grand (Neosho) River Basin: U.S. Corps of Engineers, Kansas City District.
- ¹Williams, C.C., 1944, Groundwater conditions in the Neosho River Valley in the vicinity of Parsons, Kansas: Kansas Geological Survey Bulletin 52, part 2, 80 p.

⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

Ninnescah River - North Fork

²Bayne, C.K., 1956, Geology and groundwater resources of Reno County, Kansas: Kansas Geological Survey Bulletin 120, 130 p.

³Cobb, P.C., 1980, The distribution and mechanisms of salt water intrusion in the fresh water aquifer and in Rattlesnake Creek, Stafford County, Kansas: unpublished M.S. thesis, Department of Civil Engineering, The University of Kansas.

⁴Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.

⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.

²Gogel, T., 1981, Discharge of saltwater from Permian rocks to major stream-aquifer systems in central Kansas: Kansas Geological Survey Chemical Quality Series 9, 60 p.

⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.

- ²Hathaway, L.R., Galle, O.K., Waugh, T.C., and Dickey, H.P., 1978, Chemical quality of irrigation waters in Ford County and the Great Bend Prairie of Kansas: Kansas Geological Survey Chemical Quality Series 7, 41 p.
- ⁴Kansas Water Resources Board, 1960, Preliminary appraisal of Kansas water problems, section 4, lower Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, Part A, 177 p.
- ²Lane, C.W. and Miller, D.E., 1965, Geohydrology of Sedgwick County, Kansas: Kansas Geological Survey Bulletin 176, 100 p.
- ⁴U.S. Army Engineers District, Tulsa, Oklahoma, 1965, Survey report on Arkansas-Red River Basins water quality control study, Texas-Oklahoma-Kansas: U.S. Army Corps of Engineers, Tulsa, Oklahoma, pt. 1, 5 vols.
- ⁴U.S. Corps of Engineers, 1955, Domestic and industrial water supply: Report of the Arkansas, White, Red Basin Inter-Agency Committee, part 2, section 8, 126 p.
- ²Walters, K.L., 1961, Geology and groundwater resources of Sumner County, Kansas: Kansas Geological Survey Bulletin 151, 198 p.
- ³Ward, P.E., 1961, Geology and groundwater features of salt springs, seeps, and plains in the Arkansas and Red River basins of western Oklahoma and adjacent parts of Kansas and Texas: U.S. Geological Survey Open-File Report, 94 p.
- ³Ward, P.E. and Leonard, A.R., 1961, Hypothetical circulation of groundwater around salt springs in western Oklahoma, Kansas and Texas: U.S. Geological Survey Professional Paper 424-D, p. D150-D151.

Ninnescah River - South Fork

- ²Barrett, J.M., 1961, Status and inventory report, Granada project and Arkansas River Basin below John Martin Reservoir, Colorado and Kansas: U.S. Bureau of Reclamation Status and Inventory Report, p.
- ²Diaz, A.M., 1965, Cooperative water-quality investigation, South Fork Ninnescah Basin: Kansas Water News, v. 8, no. 3, p. 3-4.
- ⁴Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ²Gogel, T., 1981, Discharge of saltwater from Permian rocks to major stream-aquifer systems in central Kansas: Kansas Geological Survey Chemical Quality Series 9, 60 p.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.
- ²Hathaway, L.R., Galle, O.K., Waugh, T.C., and Dickey, H.P., 1978, Chemical quality of irrigation waters in Ford County and the Great Bend Prairie of Kansas: Kansas Geological Survey Chemical Quality Series 7, 41 p.
- ²Kansas State Department of Health, 1965, Water quality survey of the South Fork Ninnescah River Basin: unpublished report by the Kansas State Department of Health.
- ⁴Kansas Water Resources Board, 1960, Preliminary appraisal of Kansas water problems, section 4, Lower Arkansas Unit: Kansas Water Resources Board, State Water Plan Studies, Part A, 177 p.
- ²Lane, C.W., 1960, Geology and groundwater resources of Kingman County, Kansas: Kansas Geological Survey Bulletin 144, 174 p.

- ²Layton, D.W. and Berry, D.W., 1973, Geology and groundwater resources of Pratt County, south-central Kansas: Kansas Geological Survey Bulletin 205, 33 p.
- ³U.S. Army Engineer District, Tulsa, Oklahoma, 1965, Survey report on Arkansas-Red River Basins water quality control study, Texas-Oklahoma-Kansas: U.S. Army Corps of Engineers, Tulsa, Oklahoma, pt. 1, v. 1-5.
- ¹U.S. Bureau of Reclamation, 1950s or 60s, An information report of reconnaissance grade studies concerning water availability and/or alternative use in the following basins of south-central Kansas: South Fork of the Minnescah River, Slate Creek, Rattlesnake Creek, Little Arkansas River, and Cow Creek: U.S. Bureau of Reclamation (Region V), Albuquerque.
- ⁴U.S. Corps of Engineers, 1955, Domestic and industrial water supply: report of the Arkansas, White, Red Basins Inter-Agency Committee, part 2, section 8, 126 p.
- ³Ward, P.E., 1961, Geology and groundwater features of salt springs, seeps, and plains in the Arkansas and Red River basins of western Oklahoma and adjacent parts of Kansas and Texas: U.S. Geological Survey Open-File Report, 94 p.
- ³Ward, P.E. and Leonard, A.R., 1961, Hypothetical circulation of groundwater around salt springs in western Oklahoma, Kansas, and Texas: U.S. Geological Survey Professional Paper 424-D, p. D150-D151.

Pawnee Valley

- ¹Cobb, P.M., 1979, Description and analysis of aquifer tests conducted by the Kansas Geological Survey in Stafford and Pawnee counties, Kansas: Kansas Geological Survey Open-File Report 79-6.
- ¹Fishel, V.C., 1952, Groundwater resources of Pawnee Valley, Kansas: Kansas Geological Survey Bulletin 94, 144 p.
- ³Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ²Hathaway, L.R., Galle, O.K., Waugh, T.C., and Dickey, H.P., 1978, Chemical quality of irrigation waters in Ford County and the Great Bend Prairie of Kansas: Kansas Geological Survey Chemical Quality Series 7, 41 p.
- ¹Heidari, M., 1982, Groundwater management options for the Pawnee Valley of south-central Kansas: Kansas Geological Survey Groundwater Series 4, 56 p.
- ²Jenkins, E.D. and Pabst, M.E., 1977, Water resources reconnaissance of Ness County, west-central Kansas: Kansas Geological Survey Irrigation Series 3, 26 p.
- ⁴Kansas Water Resources Board, 1962, State water plan studies, part A, section 11, upper Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, Part A, 99 p.
- ²McLaughlin, T.G., 1949, Geology and groundwater resources of Pawnee and Edwards counties, Kansas: Kansas Geological Survey Bulletin 80, 189 p.
- ¹Sophocleous, M.S., 1980, Hydrologic investigations in the Pawnee Valley, Kansas: Kansas Geological Survey Open-File Report 80-6.

¹Sophocleous, M.S., 1981, The declining groundwater resources of alluvial valleys: a case study: Ground Water, v. 19, no. 2, p. 214-226.

³U.S. Bureau of Reclamation, 1960s, Status and inventory report, Granada project and Arkansas River Basin below John Martin Reservoir, Colorado and Kansas: U.S. Bureau of Reclamation Status and Inventory Report, Region VII, Denver.

Prairie Dog Creek

²Beck, H.V., and McCormack, R.K., 1951, Geologic construction material resources in Sheridan County, Kansas: U.S. Geological Survey Circular 118, 13 p.

²Berry, D.W., 1948, Groundwater collected in Kansas on the Almena, Bostwick, Cedar Bluffs, Glen Elder, Kanopolis, Webster, and Wilson units in the Missouri River Basin: Kansas Geological Survey Open-File Report 48-1 (preliminary draft of proposed report, for official review only, subject to revision - U.S. Geological Survey).

²Byrne, F.E., Beck, H.V., and Bearman, C.H., 1949, Construction materials in Norton County, Kansas: U.S. Geological Survey Circular 24, 16 p.

²Byrne, F.E., Beck, H.V., Bearman, C.H., and Matthews, C.W., 1950, Construction materials in Decatur County, Kansas: U.S. Geological Survey Circular 40, 11 p.

²Byrne, F.E., Beck, H.V., and Houston, H.V., 1948, Construction materials in Phillips County, Kansas: U.S. Geological Survey Circular 21, 12 p.

- ²Elias, M.K., 1937, Geology of Rawlins and Decatur counties, with special reference to water resources: Kansas Geological Survey Mineral Resources Circular 7, 25 p.
- ²Frye, J.C. and Leonard, A.R., 1949, Geology and groundwater resources of Norton County and northwestern Phillips County, Kansas: Kansas Geological Survey Bulletin 81, 144 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1979, Chemical quality of irrigation waters in northwestern Kansas: Kansas Geological Survey Chemical Quality Series 8, 45 p.
- ²Hodson, W.G., 1969, Geology and groundwater resources of Decatur County, Kansas: Kansas Geological Survey Bulletin 196, 41 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ¹Johnson, C.R., 1956, The groundwater resources of the Prairie Dog Valley area in Kansas: Kansas Geological Survey Open-File Report 56-4, 176 p.
- ⁴Kansas Water Resources Board, 1960, Preliminary appraisal of Kansas water problems, section 6, upper Republican unit: Kansas Water Resources Board, State Water Plan Studies, Part A.
- ⁴Kansas Water Resources Board, 1961, Preliminary appraisal of Kansas water problems, section 9, lower Republican unit: Kansas Water Resources Board, State Water Plan Studies, part A, 99 p.

- ²Keene, K.M., Pearl, R.H., and Pabst, M.E., 1969, Hydrogeologic data from Cheyenne, Decatur, Rawlins, Sheridan, Sherman and Thomas counties, Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 1, 113 p.
- ²Landes, K.K., and Keroher, R.P., 1942, Mineral resources of Phillips County [Kansas]: Kansas Geological Survey Bulletin 41, pt. 8, p. 277-312.
- ²Leonard, R.B. and Burns, C.V., 1969, Review of seepage-salinity investigations in the South Fork Solomon River and Prairie Dog Creek, Kansas: U.S. Geological Survey Administrative Report, 23 p.
- ²Pearl, R.H., Roberts, R.S., Keene, K.M., and McClain, T.J., 1972, Water resources of northwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-429.
- ²Stullken, L.E., 1980, Hydrogeologic data from north-central Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 7, 46 p.
- ¹Stullken, L.E., 1982, Hydrology and model of Prairie Dog Creek Valley, Norton Dam to Stateline, north-central Kansas: Kansas Geological Survey Irrigation Series (in preparation), 46 p.
- ²U.S. Bureau of Reclamation, late 1950s and 1960s, Hydrologic investigation of Prairie Dog Creek for the Norton Dam and Reservoir and the Almena Diversion Dam: U.S. Bureau of Reclamation (Region VII), Denver.

Republican River

- ²Bayne, C.K. and Walters, K.L., 1959, Geology and groundwater resources of Cloud County, Kansas: Kansas Geological Survey Bulletin 139, 144 p.
- ²Buck, L.P., Van Horn, R., and Young, R.G., 1951, Construction materials in Cloud County, Kansas: U.S. Geological Survey Circular 88, 20 p.
- ²Byrne, F.E., Beck, H.V., Coombs, N.B., and Johnson, W.B., 1950, Geologic and construction materials resources in Republic County, Kansas: U.S. Geological Survey Circular 79, 20 p.
- ²Byrne, F.E., Houston, M.S., and Mudge, M.R., 1950, Construction materials in Jewell County, Kansas: U.S. Geological Survey Circular 38, 21 p.
- ¹Fader, S.W., 1968, Groundwater in the Republican River area: Cloud, Jewell, and Republic counties, Kansas: Kansas Geological Survey Bulletin 188, 27 p.
- ²Fishel, V.C., 1948, Geology and groundwater resources of Republic County and northern Cloud County, Kansas: Kansas Geological Survey Bulletin 73, 194 p.
- ²Fishel, V.C. and Leonard, A.R., 1955, Geology and groundwater resources of Jewell County, Kansas: Kansas Geological Survey Bulletin 115, 152 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1979, Chemical quality of irrigation waters in northwestern Kansas: Kansas Geological Survey Chemical Quality Series 8, 45 p.

- ⁴Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ⁴Kansas Water Resources Board, 1961, Preliminary appraisal of Kansas water problems, section 6, upper Republican unit: Kansas Water Resources Board, State Water Plan Studies, Part A.
- ⁴Kansas Water Resources Board, 1961, Preliminary appraisal of Kansas water problems, section 9, lower Republican unit: Kansas Water Resources Board, State Water Plan Studies, part A, 99 p.
- ²Keene, K.M., Pearl, R.H., and Pabst, M.E., 1969, Hydrogeologic data from Cheyenne, Decatur, Rawlins, Sheridan, Sherman and Thomas counties, Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 1, 113 p.
- ¹Latta, B.F., 1949, Groundwater conditions in the Smoky Hill Valley in Saline, Dickinson, and Geary counties, Kansas: Kansas Geological Survey Bulletin 84, 152 p.
- ²Mack, L.E., 1959, Geology and groundwater resources of Ottawa County, Kansas: Unpublished Ph.D. Dissertation, Department of Geology, The University of Kansas, 164 p.

- ²Pearl, R.H., Roberts, R.S., Keene, K.M., and McClain, T.J., 1972, Water resources of northwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-429.
- ²Prescott, G.C., Jr., 1953, Groundwater resources of Cheyenne County, Kansas: Kansas Geological Survey Bulletin 100, 106 p.
- ³U.S. Bureau of Reclamation, 1970, Scandia Unit [a feasibility investigation of the water needs in Republic County, Kansas near the town of Bellvue (Republican River)]: U.S. Bureau of Reclamation, Denver.
- ²U.S. Department of Agriculture, 1941, Water facilities area plan for upper Republican Basin in Nebraska, Kansas and Colorado: Division of Agricultural Economics, 315 p.
- ¹Walters, K.L. and Bayne, C.K., 1956, Groundwater resources of the Republican River Valley between Concordia and Clay Center, Kansas: Kansas Geological Survey Open-File Report 56-10 (Missouri River Basin Project).
- ²Walters, K.L. and Bayne, C.K., 1959, Geology and groundwater resources of Clay County, Kansas: Kansas Geological Survey Bulletin 136, 106 p.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.
- ²Wing, Monta E., 1930, The geology of Cloud and Republic counties, Kansas: Kansas Geological Survey Bulletin 15, 49 p.
- ¹Wolfe, H.C., 1911, Utilization of underflow near St. Francis, Kansas: U.S. Geological Survey Water Supply Paper 258, p. 98-119.

Saline River

- ²Beck, H.V., and McCormack, R.K., 1951, Geologic construction materials resources in Sheridan County, Kansas: U.S. Geological Survey Circular 118, 13 p.
- ²Berry, D.W., 1948, Groundwater collected in Kansas on the Almena, Bostwick, Cedar Bluffs, Glen Elder, Kanopolis, Webster, and Wilson units in the Missouri River Basin: Kansas Geological Survey Open-File Report 48-1 (preliminary draft of proposed report, for official review only, subject to revision - U.S. Geological Survey).
- ²Berry, D.W., 1952, Geology and groundwater resources of Lincoln County, Kansas: Kansas Geological Survey Bulletin 95, 96 p.
- ²Byrne, F.E., Coombs, V.B., and Bearman, C.H., 1949, Construction materials in Ellis County, Kansas: U.S. Geological Survey Circular 30, 18 p.
- ²Dunlap, L.E., 1977, Hydrogeology in the adjacent uplands of the Saline, Smoky Hill and Solomon Rivers in Saline and Dickinson counties: Manhattan, Kansas, Kansas State University, M.S. thesis, 93 p.
- ²Durum, W.H., 1953, Relationship of the mineral constituents in solution to streamflow, Saline River near Russell, Kansas: Transactions of the American Geophysical Union, v. 34, no. 3, p. 435-442, illus.
- ²Durum, W.H., 1955, Progress report, chemical quality of surface waters in the Saline River Basin: U.S. Geological Survey Open-File Report, Kansas District.
- ²Frye, J.C. and Brazil, J.J., 1943, Groundwater in the oil field areas of Ellis and Russell counties, Kansas: Kansas Geological Survey Bulletin 50, 104 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.

- ²Gogel, T., 1981, Discharge of saltwater from Permian rocks to major stream-aquifer systems in central Kansas: Kansas Geological Survey Chemical Quality Series 9, 60 p.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1979, Chemical quality of irrigation waters in northwestern Kansas: Kansas Geological Survey Chemical Quality Series 8, 45 p.
- ²Hodson, W.G., 1965, Geology and groundwater resources of Trego County, Kansas: Kansas Geological Survey Bulletin 174, 80 p.
- ⁴Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ²Jordan, P.R., Jones, B.F., and Petri, L.R., 1964, Chemical quality of surface waters and sedimentation in the Saline River Basin, Kansas: U.S. Geological Survey Water Supply Paper 1651, 90 p.
- ⁴Kansas Water Resources Board, 1961, State water plan studies series, part A, preliminary appraisal of Kansas water problems, section 8, Solomon-Saline unit: Kansas Water Resources Board.

- ¹Latta, B.F., 1949, Groundwater conditions in the Smoky Hill Valley in Saline, Dickinson, and Geary counties, Kansas: Kansas Geological Survey Bulletin 84, 152 p.
- ²Mack, L.E., 1959, Geology and groundwater resources of Ottawa County, Kansas: Unpublished Ph.D. Dissertation, Department of Geology, The University of Kansas, 164 p.
- ²Mack, L.E., 1962, Geology and groundwater resources of Ottawa County, Kansas: Kansas Geological Survey Bulletin 154, 144 p.
- ²Merriam, D.F., 1967, Geology of Saline County [Kansas]: Kansas Geological Survey Open-File Report 67-4.
- ²Stullken, L.E., 1980, Hydrogeologic data from north-central Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 7, 46 p.
- ¹U.S. Corps of Engineers, 1964, Investigation of water quality, Wilson Reservoir, 1964 - June 1966: Corps of Engineers, Kansas City District.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

Smoky Hill River

- ²Bayne, C.K. and Fent, O.S., 1963, Drainage history of the upper Kansas River Basin: Kansas Academy of Science Transactions, v. 66, no. 3, p. 363-377.
- ²Bayne, C.K., Franks, P.C., and Ives, W., 1971, Geology and groundwater resources of Ellsworth County, central Kansas: Kansas Geological Survey Bulletin 201, 84 p.
- ¹Bell, T.C., 1974, Ground-water quality of the Abilene area, Kansas: Manhattan, Kansas, Kansas State University, M.S. thesis, 93 p.
- ²Berry, D.W., 1948, Groundwater collected in Kansas on the Almena, Bostwick, Cedar Bluffs, Glen Elder, Kanopolis, Webster, and Wilson units in the Missouri River Basin: Kansas Geological Survey Open-File Report 48-1 (preliminary draft of proposed report, for official review only, subject to revision - U.S. Geological Survey).
- ²Bradley, E. and Johnson, C.R., 1957, Ground-water resources of Ladder Creek area in Kansas: Kansas Geological Survey Bulletin 126, 194 p.
- ²Byrne, F.E., Coombs, V.B., and Bearman, C.H., 1947, Construction materials in the Cedar Bluff area, Trego County, Kansas: U.S. Geological Survey Circular 15, 21 p.
- ²Byrne, F.E., Coombs, V.B., and Bearman, C.H., 1949, Construction materials in Ellis County, Kansas: U.S. Geological Survey Circular 30, 18 p.
- ²Dunlap, L.E., 1977, Hydrogeology in the adjacent uplands of the Saline, Smoky Hill and Solomon Rivers in Saline and Dickinson counties: Manhattan, Kansas, Kansas State University, M.S. thesis, 93 p.
- ¹Durum, W.H., 1951, Chemical quality of groundwater in the Cedar Bluff Unit, Kansas, a progress report: U.S. Geological Survey Administrative Report, 33 p.

- ²Elias, M.K., 1931, The geology of Wallace County, Kansas: Kansas Geological Survey Bulletin 18, 254 p.
- ²Frye, J.C. and Brazil, J.J., 1943, Groundwater in the oil field areas of Ellis and Russell counties, Kansas: Kansas Geological Survey Bulletin 50, 104 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ¹Gillespie, J.B. and Hargadine, G.D., 1981, Saline ground-water discharge to the Smoky Hill River between Salina and Abilene, central Kansas: U.S. Geological Survey Water Resources Investigations 81-43, 71 p.
- ²Gogel, T., 1981, Discharge of saltwater from Permian rocks to major stream-aquifer systems in central Kansas: Kansas Geological Survey Chemical Quality Series 9, 60 p.
- ²Gray, M. and Shaw, 1964, Water quality in Tuttle Creek and Kanopolis Reservoirs, interim report: Kansas State Department of Health Bulletin 1-1.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1979, Chemical quality of irrigation waters in northwestern Kansas: Kansas Geological Survey Chemical Quality Series 8, 45 p.
- ²Hay, R., 1896, The geology of the Fort Riley Military Reservation and vicinity, Kansas: U.S. Geological Survey Bulletin 137, 35 p.
- ²Hodson, W.G., 1963, Geology and groundwater resources of Wallace County, Kansas: Kansas Geological Survey Bulletin 161, 108 p.

- ²Hodson, W.G., 1965, Geology and groundwater resources of Trego County, Kansas: Kansas Geological Survey Bulletin 174, 80 p.
- ²Hodson, W.G. and Wahl, K.D., 1960, Geology and groundwater resources of Gove County, Kansas: Kansas Geological Survey Bulletin 145, 126 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ²Jewett, J.M., 1941, The geology of Riley and Geary counties, Kansas: Kansas Geological Survey Bulletin 39, 164 p.
- ²Johnson, C.R., 1958, Geology and groundwater resources of Logan County, Kansas: Kansas Geological Survey Bulletin 129, 178 p.
- ⁴Kansas Water Resources Board, 1962, Preliminary appraisal of Kansas water problems, section 12, Smoky Hill unit: Kansas Water Resources Board, State Water Plan Studies, pt. A, 125 p.
- ²Keene, K.M. and Pabst, M.E., 1971, Hydrogeologic data from Gove, Logan, and Wallace counties, Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 2, 76 p.
- ²Keene, K.M., Pearl, R.H., and Pabst, M.E., 1969, Hydrogeologic data from Cheyenne, Decatur, Rawlins, Sheridan, Sherman and Thomas counties, Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 1, 113 p.
- ²Latta, B.F., 1948, Groundwater supplies at Hays, Victoria, Walker, Gorham, and Russell, Kansas, with special reference to future needs: Kansas Geological Survey Bulletin 76, pt. 6, p. 125-196.

- ¹Latta, B.F., 1949, Groundwater conditions in Smoky Hill Valley in Saline, Dickinson, and Geary counties, Kansas: Kansas Geological Survey Bulletin 84, 152 p.
- ²Leonard, A.R. and Berry, D.W., 1961, Geology and groundwater resources of southern Ellis County and parts of Trego and Rush counties, Kansas: Kansas Geological Survey Bulletin 149, 156 p.
- ¹Leonard, R.B., 1969, Effect of irrigation on the chemical quality of low streamflow adjacent to Cedar Bluff Irrigation District, Kansas - a progress report: Kansas State Department of Health Bulletin 1-10, 17 p.
- ¹Leonard, R.B., 1969, Variations in the chemical quality of groundwater beneath an irrigation field, Cedar Bluff Irrigation District, Kansas - an interim report: Kansas State Department of Health Bulletin 1-11, 20 p.
- ¹Leonard, R.B., 1970, Effect of irrigation on the chemical quality of ground and surface water, Cedar Bluff Irrigation District, Kansas, in Relations of agriculture to soil and water pollution: Cornell University Agricultural Waste Management Conference, Rochester, New York, January, p. 147-163.
- ¹Leonard, R.B., 1974, Changes in chemical quality of water, Cedar Bluff Irrigation District area, west-central Kansas: Kansas Geological Survey Chemical Quality Series 1, 72 p.
- ²Leonard, R.B. and Morgan, C.O., 1970, Application of computer techniques to seepage-salinity surveys in Kansas: Kansas Geological Survey Special Distribution Publication 47, 44 p.
- ¹Leonard, R.B. and Stoltenberg, G.A., 1972, Compilation of data for water quality investigation, Cedar Bluff Irrigation District, Kansas: Kansas State Department of Health Bulletin 1-12, 14 p.

- ¹Macfarlane, P.A., Hydrogeology of the Smoky Hill River Valley between Cedar Bluff and Kanopolis reservoirs: Kansas Geological Survey, report in preparation.
- ²McClain, T.J., Jenkins, E.D., Keene, K.M., and Pabst, M.E., 1975, Water resources of Gove, Logan, and Wallace counties, west-central Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-521, 2 maps.
- ¹McElwee, C.D., 1981, A study of the saltwater intrusion problem between Salina, Kansas and Solomon, Kansas in the Smoky Hill River Valley, addendum: Kansas Geological Survey Open-File Report 81-7.
- ¹McElwee, C.D., Severini, T., Cobb, P., Fleming, A., Paschetto, J., Butt, M., and Watson, P., 1981, A study of the saltwater intrusion problem between Salina, Kansas and Solomon, Kansas, Smoky Hill River Valley: Kansas Geological Survey Open-File Report 81-3.
- ²McNellis, J.M., 1973, Geology and groundwater resources of Rush County, central Kansas: Kansas Geological Survey Bulletin 207, 45 p.
- ²Moore, R.C., 1918, The environment of Camp Funston: Kansas Geological Survey Bulletin 4, 81 p.
- ²Pearl, R.H., Roberts, R.S., Keene, K.M., and McClain, T.J., 1972, Water resources of northwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-429.
- ²Stullken, L.E., 1980, Hydrogeologic data from north-central Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 7, 46 p.
- ¹U.S. Bureau of Reclamation, 1950s, Hydrologic investigation for Cedar Bluff Dam and Reservoir (Smoky Hill River): U.S. Bureau of Reclamation (Region VII), Denver.

- ²U.S. Bureau of Reclamation, Region 7, 1958 (revised, 1960), Definite plan report, Cedar Bluff Unit, Kansas: general plan of development, Kansas River projects, v. 1: U.S. Bureau of Reclamation, open-file report, 112 p.
- ¹U.S. Bureau of Reclamation, 1960, Methods of estimating possible depletion flows in the Smoky Hill and North Solomon Rivers in Kansas resulting from well pumping, in Studies of groundwater movement: U.S. Bureau of Reclamation Technical Memo 657, p. 88-97.
- ¹U.S. Bureau of Reclamation, c.1960, Investigation of irrigation potential of the Kanopolis Dam and Reservoir (Smoky Hill River): U.S. Bureau of Reclamation (Region VII), Denver.
- ¹U.S. Bureau of Reclamation, 1963, Reservoir management plan, Cedar Bluff Reservoir, Kansas: Kansas River Projects, McCook, Nebraska, Open-File Report, 175 p.
- ¹U.S. Bureau of Reclamation, 1963-71, Monthly water distribution report for the Cedar Bluff Irrigation District: Form 7-322: U.S. Department of the Interior, v. 3, 422 p.
- ¹U.S. Bureau of Reclamation, 1969, Kanopolis unit, a feasibility investigation of the water needs for irrigation use and M and I use downstream from Kanopolis Reservoir [Smoky Hill River]: U.S. Bureau of Reclamation, Region VII, Denver.
- ¹U.S. Bureau of Reclamation, 1970, Abilene unit, a reconnaissance investigation on the possibility of developing an irrigation project for the Smoky Hill River Valley from the mouth of the Saline River to Junction City: U.S. Bureau of Reclamation, Region VII, Denver.

- ¹Waterman, W.D., c.1952, Geology and hydrology of the Kanopolis Unit in Ellsworth, McPherson, and Saline counties, Kansas: Kansas Geological Survey Open-File Report, ND-27, 186 p.
- ¹Weskamp, D.P., 1961, Cedar Bluff Canal - third section, Missouri River Basin projection, Bureau of Reclamation (Kansas River Projects): Kansas Geological Survey Open-file Report 61-4.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigator's Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.
- ²Whittemore, D.O., Basel, C.L., Galle, O.K., and Waugh, T.C., 1981, Geochemical identification of saltwater source in the Smoky Hill Valley, McPherson, Saline, and Dickinson counties, Kansas: Kansas Geological Survey Open-File Report 81-6.

Solomon River - Main Stem

- ²Buck, L.P., Van Horn, R., and Young, R.G., 1951, Construction materials in Cloud County, Kansas: U.S. Geological Survey Circular 88, 20 p.
- ²Byrne, F.E., Johnson, W.B., and Bergman, D.W., 1951, Geology and construction materials in Mitchell County, Kansas: U.S. Geological Survey Circular, 21 p.
- ²Dunlap, L.E., 1977, Hydrogeology in the adjacent uplands of the Saline, Smoky Hill and Solomon Rivers in Saline and Dickinson counties: Manhattan, Kansas, Kansas State University, M.S. thesis, 93 p.

- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ¹Hodson, W.G., 1956, Geology and groundwater resources of Solomon River Valley in Mitchell County, Kansas: Unpublished M.S. thesis, Department of Geology, The University of Kansas, 172 p.
- ²Hodson, W.G., 1959, Geology and groundwater resources of Mitchell County, Kansas: Kansas Geological Survey Bulletin 140, 132 p.
- ⁴Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ⁴Kansas Water Resources Board, 1961, Preliminary appraisal of Kansas water problems, section 8, Solomon-Saline unit: Kansas Water Resources Board, State water plan studies series, part A.
- ⁴Kansas Water Resources Board, Status report of water resources development activities - Solomon Basin: Study is scheduled for completion in fiscal year 1983.
- ²Mack, L.E., 1962, Geology and groundwater resources of Ottawa County, Kansas: Kansas Geological Survey Bulletin 154, 145 p.

- ²Phillips, M.A., 1982, Working Paper, Groundwater reconnaissance of the Solomon River Basin below Glen Elder Dam, north-central Kansas: U.S. Bureau of Reclamation, Lower Missouri Region, Denver, 59 p.
- ²U.S. Bureau of Reclamation, 1960s, Detailed hydrologic investigation for the Glen Elder Dam and Waconda Lake (Solomon River): U.S. Bureau of Reclamation (Region VII), Denver.
- ²U.S. Bureau of Reclamation, 1970, Glen Elder Unit, a feasibility investigation for the irrigation phase of the Glen Elder Dam: Solomon River from Glen Elder to near Minneapolis: U.S. Bureau of Reclamation, Denver.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigator's Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

Solomon River - North Fork

- ²Beck, H.V., and McCormack, R.K., 1951, Geologic construction materials resources in Sheridan County, Kansas: U.S. Geological Survey Circular 118, 13 p.
- ²Bedinger, M.S. and Tanaka, H.H., 1962, Effect of the Kirwin Reservoir, Kansas on groundwater levels: U.S. Geological Survey Open-File Report, 11 p.
- ²Berry, D.W., 1948, Groundwater collected in Kansas on the Almena, Bostwick, Cedar Bluffs, Glen Elder, Kanopolis, Webster and Wilson units in the Missouri River Basin: Kansas Geological Survey Open-File Report 48-1 (preliminary draft of proposed report, for official review only, subject to revision - U.S. Geological Survey).
- ²Byrne, F.E., Beck, H.V., and Houston, M.S., 1948, Construction materials in Phillips County, Kansas: U.S. Geological Survey Circular 21, 12 p.
- ²Byrne, F.E., Johnson, W.B., and Bergman, D.W., 1951, Geology and construction materials in Mitchell County, Kansas: U.S. Geological Survey Circular, 21 p.
- ¹Dingman, R.J., 1969, Evaluation of the effects of the U.S. Bureau of Reclamation ring dike on the groundwater flow and water quality in the Downs area, Kansas: U.S. Geological Survey Open-File Report, 19 p.
- ²Frye, J.C. and Leonard, A.R., 1949, Geology and groundwater resources of Norton County and northwestern Phillips County, Kansas: Kansas Geological Survey Bulletin 81, 144 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.

- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1979, Chemical quality of irrigation waters in northwestern Kansas: Kansas Geological Survey Chemical Quality Series 8, 45 p.
- ¹Hodson, W.G., 1956, Geology and groundwater resources of Solomon River Valley in Mitchell County, Kansas: Unpublished M.S. thesis, Department of Geology, The University of Kansas, 172 p.
- ²Hodson, W.G., 1959, Geology and groundwater resources of Mitchell County, Kansas: Kansas Geological Survey Bulletin 140, 132 p.
- ⁴Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ¹Jorgensen, D.G. and Stullken, L.E., 1981, Hydrology and model of North Fork Solomon River Valley, Kirwin Dam to Waconda Lake, north-central Kansas: Kansas Geological Survey Irrigation Series 6, 34 p.
- ⁴Kansas Water Resources Board, 1961, Preliminary appraisal of Kansas water problems, section 8, Solomon-Saline unit: Kansas Water Resources Board, State water plan studies series, part A.
- ⁴Kansas Water Resources Board, Status report of water resources development activities - Solomon Basin: Study is scheduled for completion in fiscal year 1983.

- ¹Leonard, A.R., 1952, Geology and groundwater resources of the North Fork Solomon River in Mitchell, Osborne, Smith, and Phillips counties, Kansas: Kansas Geological Survey Bulletin 98, 150 p.
- ²Pearl, R.H., Roberts, R.S., Keene, K.M., and McClain, T.J., 1972, Water resources of northwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-429.
- ²Phillips, M.A., 1980, Working Paper, Groundwater reconnaissance of the North Fork Solomon River Basin above Kirwin Dam, northwest Kansas: Water and Power Resources Service [U.S. Bureau of Reclamation, Region 7 Denver], Lower Missouri Region, 52 p.
- ²Stullken, L.E., 1980, Hydrogeologic data from north-central Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 7, 46 p.
- ¹Stullken, L.E., 1981, Hydrology and model of Prairie Dog Creek Valley, Norton Dam to state line, north-central Kansas: Kansas Geological Survey Irrigation Series (in preparation).
- ²U.S. Bureau of Reclamation, 1950s, Hydrologic investigation for the Kirwin Dam and Reservoir (Solomon River): U.S. Bureau of Reclamation (Region VII), Denver.
- ²U.S. Bureau of Reclamation, 1960s, Detailed hydrologic investigation for the Glen Elder Dam and Waconda Lake (Solomon River): U.S. Bureau of Reclamation (Region VII), Denver.
- ¹U.S. Bureau of Reclamation, 1960, Methods of estimating possible depletion flows in the Smoky Hill and North Solomon Rivers in Kansas resulting from well pumping, in Studies of groundwater movement: U.S. Bureau of Reclamation Technical Memo 657, p. 88-97.

- ²Walters, C.P. and Drake, L.Y., 1952, Geologic construction materials resources in Osborne County, Kansas: U.S. Geological Survey Circular 179, 21 p.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigator's Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

Solomon River - South Fork

- ²Beck, H.V., and McCormack, R.K., 1951, Geologic construction materials resources in Sheridan County, Kansas: U.S. Geological Survey Circular 118, 13 p.
- ²Berry, D.W., 1948, Groundwater collected in Kansas on the Almena, Bostwick, Cedar Bluffs, Glen Elder, Kanopolis, Webster and Wilson units in the Missouri River Basin: Kansas Geological Survey Open-File Report 48-1 (preliminary draft of proposed report, for official review only, subject to revision - U.S. Geological Survey).
- ¹Burnett, R.D., 1982, Availability of water for irrigation in the South Fork Solomon River Valley, Webster Reservoir to Waconda Lake, north-central Kansas: U.S. Geological Survey Open-File Report 82-171.
- ²Byrne, F.E., Beck, H.V., and Houston, M.S., 1949, Construction materials in Rooks County, Kansas: U.S. Geological Survey Circular 27, 15 p.
- ²Byrne, F.E., Coombs, V.B., and Matthews, C.W., 1951, Construction materials in Graham County, Kansas: U.S. Geological Survey Circular 51, 15 p.

- ²Byrne, F.E., Houston, M.S., and Mudge, M.R., 1948, Construction materials in Smith County, Kansas: U.S. Geological Survey Circular 25, 17 p.
- ²Byrne, F.E., Johnson, W.B., and Bergman, D.W., 1951, Geology and construction materials in Mitchell County, Kansas: U.S. Geological Survey Circular, 21 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.
- ²Hathaway, L.R., Waugh, T.C., Galle, O.K., and Dickey, H.P., 1979, Chemical quality of irrigation waters in northwestern Kansas: Kansas Geological Survey Chemical Quality Series 8, 45 p.
- ¹Hodson, W.G., 1956, Geology and groundwater resources of Solomon River Valley in Mitchell County, Kansas: Unpublished M.S. thesis, Department of Geology, The University of Kansas, 172 p.
- ²Hodson, W.G., 1959, Geology and groundwater resources of Mitchell County, Kansas: Kansas Geological Survey Bulletin 140, 132 p.
- ⁴Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.

- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ⁴Kansas Water Resources Board, 1961, Preliminary appraisal of Kansas water problems, section 8, Solomon-Saline unit: Kansas Water Resources Board, State water plan studies series, part A.
- ⁴Kansas Water Resources Board, Status report of water resources development activities - Solomon Basin: Study is scheduled for completion in fiscal year 1983.
- ²Leonard, R.B. and Burns, C.V., 1969, Review of seepage-salinity investigations in the South Fork Solomon River and Prairie Dog Creek, Kansas: U.S. Geological Survey Administrative Report, 23 p.
- ²Pearl, R.H., Roberts, R.S., Keene, K.M., and McClain, T.J., 1972, Water resources of northwestern Kansas: U.S. Geological Survey Hydrologic Investigations Atlas HA-429.
- ²Prescott, G.C., Jr., 1955, Geology and groundwater resources of Graham County, Kansas: Kansas Geological Survey Bulletin 110, 98 p.
- ²Schmidt, G.W. and Marsi, K.L., 1961, Chemical analysis of groundwater resources of Rooks County, Kansas: Kansas Academy of Science Transactions, v. 64, no. 1, p. 49-62.
- ²Stullken, L.E., 1980, Hydrogeologic data from north-central Kansas: Kansas Geological Survey Basic Data Series Groundwater Release 7, 46 p.
- ²U.S. Bureau of Reclamation, 1950s, Hydrologic investigation for Webster Dam and Reservoir (Solomon River): U.S. Bureau of Reclamation (Region VII), Denver.

- ²U.S. Bureau of Reclamation, 1960s, Detailed hydrologic investigation for the Glen Elder Dam and Waconda Lake (Solomon River): U.S. Bureau of Reclamation (Region VII), Denver.
- ²Walters, C.P. and Drake, L.Y., 1952, Geologic construction materials resources in Osborne County, Kansas: U.S. Geological Survey Circular 179, 21 p.
- ²Weston, L.K., 1980, Working Paper, Groundwater reconnaissance of the South Fork Solomon River Basin above Webster Reservoir, northwest Kansas: Water and Power Resources Service [U.S. Bureau of Reclamation, Denver], Lower Missouri Region, 39 p.
- ⁴Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigator's Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

Verdigris River

- ²Fader, S.W. and Morton, R.B., 1975, Groundwater in the Verdigris River Basin, Kansas and Oklahoma: U.S. Geological Survey Open-File Report 75-365, 26 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ⁴Kansas State Board of Health, 1961, Chemical quality of surface waters in the Verdigris River basin, 1906-1960: Kansas State Board of Health.
- ⁴Kansas Water Resources Board, 1960, State water plan studies series, part A, preliminary appraisal of Kansas water problems, section 5, the Walnut-Verdigris Unit: Kansas Water Resources Board, State Water Plan Series.
- ²Schroder, F.C., 1908, Description of the Independence Quadrangle, Kansas: U.S. Geological Survey Atlas Folio 159, 7 p.
- ²Schroder, F.C. and Haworth, Erasmus, 1906, Economic geology of the Independence Quadrangle, Kansas: U.S. Geological Survey Bulletin 296, 74 p.
- ²U.S. Corps of Engineers, c.1970, A survey investigation for development of water resources of the Verdigris River Basin: U.S. Corps of Engineers, Tulsa(?) district.

²Wagner, H.C., 1961, Geology of the Altoona Quadrangle, Kansas: U.S. Geological Survey Map CQ-149.

²Wagner, H.C., 1967, Wilson County report: Kansas Geological Survey Open-File Report 67-6.

Walnut Creek

³Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.

⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.

¹Gillespie, J.B., Green, D.W., and Slagle, S.E., 1970, Artificial groundwater recharge, Wet Walnut Creek, central Kansas - progress report #2: Kansas Water Resources Board, 28 p.

¹Gillespie, J.B., Lindskov, K.L., and Slagle, S.E., 1969, Artificial groundwater recharge, Wet Walnut Creek - progress report #1: Kansas Water Resources Board, 22 p.

¹Gillespie, J.B. and Slagle, S.E., 1972, Natural and artificial groundwater recharge, Wet Walnut Creek, central Kansas: Kansas Water Resources Board Technical Report 17, 94 p.

²Hathaway, L.R., Galle, O.K., Waugh, T.C., and Dickey, H.P., 1978, Chemical quality of irrigation waters in Ford County and the Great Bend Prairie of Kansas: Kansas Geological Survey Chemical Quality Series No. 7, 41 p.

²Jenkins, E.D. and Pabst, M.E., 1977, Water resources reconnaissance of Ness County, west-central Kansas: Kansas Geological Survey Irrigation Series 3, 26 p.

- ⁴Kansas Water Resources Board, 1962, State water plan studies, part A, section 11, upper Arkansas unit: Kansas Water Resources Board, State Water Plan Studies, Part A, 99 p.
- ²Latta, B.F., 1950, Geology and groundwater resources of Barton and Stafford counties, Kansas: Kansas Geological Survey Bulletin 88, 228 p.
- ³Lohman, S.W. and Burtis, V.M., 1953, General availability of groundwater and depth to water level in the Arkansas, White and Red River basins: U.S. Geological Survey Hydrologic Investigations Atlas HA-3, Map.
- ¹McClain, T.J., in preparation, Hydrology of Walnut Creek Valley in west-central Kansas: Kansas Geological Survey.
- ²McNellis, J.M., 1973, Geology and groundwater resources of Rush County, central Kansas: Kansas Geological Survey Bulletin 207, 45 p.
- ²Moss, R.G., 1932, Geology of Ness and Hodgeman counties, Kansas: Kansas Geological Survey Bulletin 19, 48 p.
- ²Pogge, E.C. and Chaing, W., 1977, Further development and testing of a stream-aquifer system model: Kansas Water Resources Research Institute Contribution No. 185, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, January 1977, 185 p.
- ²U.S. Bureau of Reclamation, 1960s, Status and inventory report, Granada project and Arkansas River Basin below John Martin Reservoir, Colorado and Kansas: U.S. Bureau of Reclamation Status and Inventory Report, Region VII, Denver.
- ³U.S. Corps of Engineers, 1955, Domestic and industrial water supply: Report of the Arkansas, White, Red Basins Inter-Agency Committee, pt. 2, sec. 8, 126 p.

Walnut River

- ²Bass, N.W., 1927, The geology of Cowley County, Kansas: Kansas Geological Survey Volume 12, 203 p.
- ²Bayne, C.K., 1962, Geology and groundwater resources of Cowley County, Kansas: Kansas Geological Survey Bulletin 158, 219 p.
- ⁴Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.
- ²Hargadine, G.D., 1969, Materials inventory of Butler County, Kansas: State Highway Commission of Kansas, Materials Inventory Report 21, 148 p.
- ⁴Hargadine, G.D., Balsters, R.G., and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a technical report: Kansas Water Resources Board, Cooperative Planning Studies, Item 13, 211 p.
- ⁴Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- ⁴Kansas State Board of Health, 1952, Water pollution report, Walnut River Basin: Kansas State Board of Health (2 vols).
- ⁴Kansas State Board of Health, 1960, Chemical quality of surface waters in the Walnut River Basin, 1906-1960: Kansas State Board of Health.
- ⁴Kansas State Department of Health, 1963, Water quality survey of the Walnut River Basin: unpublished report by the Kansas State Department of Health.
- ⁴Kansas Water Resources Board, 1960, State water plan studies series, part A, preliminary appraisal of Kansas water problems, section 5, the Walnut-Verdigris Unit: Kansas Water Resources Board, State Water Plan Series.

- ²Leonard, R.B., 1964, A method for evaluating oil field brine pollution of the Walnut River in Kansas: U.S. Geological Survey Professional Paper, 501-B, p. B173-176.
- ²Leonard, R.B., 1964, Results of four chemical-quality surveys of the Walnut River Basin, Kansas (December, 1961 - October, 1963): Kansas Department of Health, Environmental Health Services Bulletin 1-3, 38 p.
- ²Leonard, R.B., 1972, Chemical quality of water in the Walnut River Basin, south-central Kansas: U.S. Geological Survey Water Supply Paper No. 1982, 113 p.
- ²Leonard, R.B. and Shah, K.L., 1964, The relation of the chemical quality of the Whitewater River at Towanda to that of the Walnut River at Winfield, Kansas, during the 1963 water year: Kansas State Department of Health Bulletin No. 1-2, 18 p.
- ²U.S. Corps of Engineers, c.1973, Detailed planning (pre-construction) studies for the El Dorado Reservoir (Walnut River): U.S. Corps of Engineers, Tulsa, Oklahoma District.
- ³U.S. Corps of Engineers, 1955, Domestic and industrial water supply: Report of the Arkansas, White, Red Basins Inter-Agency Committee, part 2, section 8, 126 p.
- ¹U.S. Corps of Engineers, c.1965, Planning study for the El Dorado, Douglas, and Towanda reservoirs on the Walnut River: U.S. Corps of Engineers, Tulsa(?) District.

General Publications That Apply to Many of the Stream Valleys in Kansas

- Angino, E.E., 1976, Mineralogical and chemical composition of suspended sediments in certain Kansas rivers: Kansas Water Resources Research Institute Contribution No. 169, Principal Investigator's Report to the Office of Water Research and Technology, Department of the Interior, Washington, D.C.
- Bayne, C.K., 1975, General availability of groundwater and normal annual precipitation in Kansas: Kansas Geological Survey Map M-4A, scale 1:500,000.
- Bayne, C.K. and Ward, J.R. (compilers), 1969, Saturated thickness and specific [water] yield of Cenozoic deposits in Kansas: Kansas Geological Survey Map M-5, scale 1:500,000.
- Busby, M.W. and Diaz, A.M., 1965, Review of the seepage investigations programs in Kansas: U.S. Geological Survey Administrative Report, 35 p.
- Fishel, V.C., 1947, Groundwater resources of Kansas: Kansas Academy of Science Transactions, v. 50, no. 2, p. 105-114.
- Fishel, V.C., 1956, Long term trends of groundwater levels in the United States: Transactions of the American Geophysical Union, v. 37, no. 4, p. 429-435.
- Frye, J.C., 1942, Water resources, in Jewett, J.M. and Schoewe, W.H., Kansas mineral resources for wartime industries: Kansas Geological Survey Bulletin 41, pt. 3, p. 177-179.
- Frye, J.C., 1951, Mineral resources and groundwater supplies in the Arkansas Basin in Kansas: Kansas Geological Survey Open-File Report 51-2.
- Frye, J.C. and Leonard, A.B., 1952, Pleistocene geology of Kansas: Kansas Geological Survey Bulletin 99, 230 p.

- Gottlieb, Selma, 1928, Mineral analyses of municipal water supplies in Kansas: University of Kansas Engineering and Architecture Bulletin 17, 22 p.
- Hargadine, G. and Leuhring, J., 1978, Mineral intrusion in Kansas surface waters, a summary and management report: Prepared by the Kansas Water Resources Board for the Kansas Department of Health and Environment, 44 p.
- Haskins, C.A. and Young, C.C., 1915, Water supplies of Kansas, part 1 - groundwater supplies: University of Kansas Engineering and Architecture Bulletin 5, 187 p.
- Huang, T. and Pogge, E.C., 1978, Problems associated with maintenance of channel capacity below federal reservoirs in Kansas: Kansas Water Resources Research Institute Contribution No. 195, Project Completion Report, Principal Investigators' Report to the Office of Water Research and Technology, Department of the Interior, February 1978, 108 p.
- Hulen, P.L. and Angino, E.E., 1976, Nitrate and phosphate: time trend concentrations in selected Kansas streams: Kansas Water Resources Research Institute Contribution No. 176, Principal Investigators Report to the Office of Water Research and Technology, Department of the Interior, July 1976, Washington, D.C., 56 p.
- Jewett, J.M., 1939, Shallow aquifers in eastern Kansas: Kansas Academy of Science Transactions, v. 42, p. 339.
- Jones, O.S., 1936, Groundwater in Kansas, in Jones, J.O., Notes on the hydrology of Kansas: University of Kansas Engineering and Architecture Bulletin 20, p. 142-146.
- Kansas Fish and Game Commission, 1981, Hydrological projection model of water levels in northwestern Kansas reservoirs: Kansas Fish and Game Commission, in-house report, 20 p.

Kansas State Board of Health, 1940, Municipal water supplies on Kansas federal highways: Division of Sanitation, 133 p.

Kansas State Board of Health, 1945, Chemical analyses, Kansas municipal water supplies: Division of Sanitation, 8 p.

Kansas State Board of Health, 1950, Chemical analyses, Kansas municipal water supplies: Division of Sanitation, 17 p.

Kansas State Board of Health, 1956, Chemical analyses, Kansas municipal water supplies: Division of Sanitation, 20 p.

Kansas State Board of Health, 1957, Report and recommendations to the State Corporation Commission: Kansas State Board of Health, State Water Resources Board, and State Geological Survey, 5 p.

Kansas Water Resources Board, 1957, Development of a balanced stream-gaging program for Kansas, by Furness, L.W., U.S. Geological Survey: Kansas Water Office Bulletin 4.

Kansas Water Resources Board, 1959, Flow duration: Kansas Water Office Technical Report 1.

Kansas Water Resources Board, 1960, Low-flow frequency: Kansas Water Office Technical Report 2.

Kansas Water Resources Board, 1960, Flood frequency: Kansas Water Office Technical Report 3.

Kansas Water Resources Board, 1961, A program of fluvial sediment investigations in Kansas, July 1961; by Mundorff, J.C., U.S. Geological Survey: Kansas Water Office Bulletin 6.

Kansas Water Resources Board, 1962, Storage requirements to sustain gross reservoir outflow: Kansas Water Office Technical Report 4.

Kansas Water Resources Board, 1964, Fluvial sediment in the lower Kansas River Basin, a progress report, 1957-1960; by Mundorff, J.C., Scott, C.H., U.S. Geological Survey: Kansas Water Office Bulletin 7.

Kansas Water Resources Board, 1964, Storage requirements to control high flow: Kansas Water Office Technical Report 5.

Kansas Water Resources Board, 1965, A general classification of surface areas of fluvial sediment in Kansas, by Collins, D.L., U.S. Geological Survey: Kansas Water Office Bulletin 8.

Kansas Water Resources Board, 1965, Base flow data: Kansas Water Office Technical Report 6A.

Kansas Water Resources Board, 1966, Base flow distribution: Kansas Water Office Technical Report 6B.

Kansas Water Resources Board, 1967, Annual streamflow summary tables: Kansas Water Office Technical Report 7.

Kansas Water Resources Board, 1968, Total sediment discharge of selected streams in Kansas, 1957-1965, a compilation, by Albert, C.D., U.S. Geological Survey: Kansas Water Office Bulletin 10.

Kansas Water Resources Board, 1970, Evaluation of the surface-water data program in Kansas, by Jordan, P.R., Hedman, E.R., U.S. Geological Survey: Kansas Water Office Bulletin 12.

Kansas Water Resources Board, 1971, In channel hydraulic geometry of streams in Kansas: Kansas Water Office Technical Report 8.

Kansas Water Resources Board, 1972, Mean annual runoff as related to channel geometry: Kansas Water Office Technical Report 9.

Kansas Water Resources Board, 1974, Selected streamflow characteristics as related to active channel geometry of streams in Kansas: Kansas Water Office Technical Report 10.

Kansas Water Resources Board, 1975, Magnitude and frequency of floods in Kansas: Kansas Water Office Technical Report 11.

Kansas Water Resources Board, 1975, Temperature of Kansas streams: Kansas Water Office Technical Report 12

Kansas Water Resources Board, 1976, Physical and climatic characteristics along Kansas streams: Kansas Water Office Technical Report 13.

Kansas Water Resources Board, 1977, Fluvial sediment in the Arkansas River Basin, by Osterkamp, W.R., U.S. Geological Survey: Kansas Water Office Bulletin 19.

Kansas Water Resources Board, 1977, Effect of channel sediment on width-discharge relations, with emphasis on streams in Kansas, by Osterkamp, W.R., U.S. Geological Survey: Kansas Water Office Bulletin 21.

Kansas Water Resources Board, 1978, Fiscal year 1980 Kansas Water Resources Programs: Kansas Water Office Reports to the Governor/Legislature, Item 13.

Kansas Water Resources Board, 1978, Final report of the Governor's Task Force on Water Resources: Kansas Water Office Reports to the Governor/Legislature, Item 14.

Kansas Water Resources Board, 1978, Statistical summary of streamflow data for Kansas streams in the Arkansas River Basin: Kansas Water Office Technical Report 14A.

Kansas Water Resources Board, 1979, Statistical summary of streamflow data for Kansas streams in the Missouri River Basin: Kansas Water Office Technical Report 14B.

Kansas Water Resources Board, 1981, Channel geometry of regulated streams in Kansas as related to mean discharge, 1970-80: Kansas Water Office Technical Report 15.

- Landes, K.K., 1934, Groundwater supplies of Kansas: Kansas Geological Survey Circular 9, 4 p.
- Landes, K.K., 1935, Mapping the aquifers of Kansas: Kansas Geological Survey Circular 10, 3 p.
- Lohman, S.W., 1942, Groundwater supplies available for national defense industries in south-central Kansas: Kansas Geological Survey Bulletin 41, pt. 1, 19 p.
- Lohman, S.W., Frye, J.C., Waite, H.A., Fishel, V.C., McLaughlin, T.G., Latta, B.F., and Abernathy, G.E., 1942, Groundwater supplies in Kansas available for national defense industries: Kansas Geological Survey Bulletin 41, pt. 2, p. 21-68.
- Mayes, J.L., Stoltenberg, H.A., and Burriss, N.J., 1965, Chemical quality of public water supplies in Kansas: Kansas State Department of Health, Environmental Health Services, Bulletin 1-7, 39 p.
- Miller, G.H., Jr., 1959, Economic development in south-central Kansas, part 6, mineral and water resources: University of Kansas Center for Research in Business, 142 p.
- Moore, R.C., 1940, Groundwater resources of Kansas: Kansas Geological Survey Bulletin 27, 112 p.
- Moore, R.C. and Landes, K.K., 1927, Underground resources of Kansas: Kansas Geological Survey Bulletin 13, 154 p.
- O'Connor, H.G., Bayne, C.K., Yukler, A., and Foley, F.C., 1979, Public water supplies during droughts in eastern Kansas: Kansas Geological Survey Open-File Report 79-4.
- Parker, H.N., 1911, Quality of water supplies in Kansas: U.S. Geological Survey Water Supply Paper 273, 375 p.

- St. John, O., 1887, Notes on the geology of southwestern Kansas: Kansas State Board of Agriculture, 5th Biennial Report 1885-86, pt. 2, p. 132-152.
- Schoewe, W.H., 1949, The geography of Kansas, part 2, physical geography: Kansas Academy of Science Transactions, v. 52, no. 3, p. 261-333.
- Schoewe, W.H., 1951, The geography of Kansas, part 3, hydrogeography: Kansas Academy of Science Transactions, v. 54, no. 3, p. 263-329.
- Schoewe, W.H., 1953, The geography of Kansas, part 3, concluded, hydrogeography: Kansas Academy of Science Transactions, v. 56, no. 2, p. 131-190.
- Sutton, W.B., 1897, Introduction: Report Board of Irrigation Survey and Experiment for 1895 and 1896 to the Legislature of Kansas, 48 p., 6 Figs.
- U.S. Bureau of Reclamation, 1968, Water for the future of Kansas, Kansas basins project interim report no. 1, a bibliography and inventory of available data: U.S. Bureau of Reclamation (Regions V and VII) in cooperation with the Kansas Water Resources Board, 178 p.
- U.S. Bureau of Reclamation, 1971, Kansas basins project, a reconnaissance study which will embrace the entire State, including those portions of the drainage basins of the Missouri and Arkansas rivers that lie within the State: U.S. Bureau of Reclamation, Denver.
- U.S. Geological Survey, "County Files" for Kansas: District Office, Lawrence.
- U.S. Geological Survey, Miscellaneous stream measurements file (seepage runs, miscellaneous measurements, etc.): District Office, Lawrence.
- U.S. Public Health Service and Kansas State Department of Health, 1949, Kansas River Basin water pollution investigation: Public Health Service and Kansas State Department of Health.

U.S. Public Health Service and Kansas State Board of Health, 1953 (revised 1959), Kansas River drainage basin: Public Health Service and Kansas State Board of Health (water pollution study).

Whittemore, D.O., 1978, Factors controlling variations in river water quality in Kansas: Kansas Water Resources Research Institute (Kansas State University) Contribution No. 197, Principal Investigator's Report to the Office of Water Research and Technology, Department of the Interior, August 1978, Washington, D.C., 46 p.

Kansas Department of Health & Environment Chemical Quality Reports -

Surface Water

In the late 1950s and early 1960s, the State Board of Health compiled and published all known records concerning the chemical quality of surface waters for most areas of Kansas. This compilation of historic data from local, state, federal, and private sources covered material dating back as far as 1892. This series of publications is categorized by drainage basins to coincide with units being planned by the Kansas Water Resources Board. Compilations were not accomplished for the upper and lower Republican, Solomon-Saline, and Smoky Hill units. A list of these publications follows:

Kansas State Board of Health, 1957, Chemical quality of surface waters in the Marais des Cygnes River Basin, 1899-1957: Kansas State Board of Health.
Kansas State Board of Health, 1958, Chemical quality of surface waters in the Kansas River unit, 1892-1958: Kansas State Board of Health.

Kansas State Board of Health, 1960, Chemical quality of surface waters in the Neosho River Basin, 1892-1960: Kansas State Board of Health.

Kansas State Board of Health, 1960, Chemical quality of surface waters in Kansas, 1957-1960: Kansas State Board of Health.

Kansas State Board of Health, 1960, Chemical quality of surface waters in the Walnut River Basin, 1906-1960: Kansas State Board of Health.

Kansas State Board of Health, 1961, Chemical quality of surface waters in the Verdigris River Basin, 1906-1960: Kansas State Board of Health.

Kansas State Board of Health, 1961, Chemical quality of surface waters in southwest Kansas, 1898-1961: Kansas State Board of Health.

Other compilations of basic data include:

Kansas State Department of Health, 1958, Chemical quality of surface waters in Kansas, 1957: Kansas State Board of Health.

Kansas State Department of Health, 1960, Chemical quality of surface waters in Kansas, 1957-1960: Kansas State Board of Health.

Kansas State Department of Health, 1964, Chemical quality of surface waters in Kansas, 1962 water year: Kansas State Board of Health Bulletin 1-4.

Kansas State Department of Health, 1965, Chemical quality of surface waters in Kansas, 1963 water year: Kansas State Board of Health Bulletin 1-8.

Groundwater Level Measurements in Kansas

Groundwater level measurements in Kansas were started by a cooperative program between the U.S. Geological Survey and various state agencies in 1937. Water levels measured in Kansas were published by the U.S. Geological Survey as Water Supply Papers for the following years:

<u>Year</u>	<u>Water Supply Paper</u>	<u>Year</u>	<u>Water Supply Paper</u>
1935	777	1948	1128
1936	817	1949	1158
1937	840	1950	1167
1938	845	1951	1193
1939	886	1952	1223
1940	908	1953	1267
1941	938	1954	1323
1942	946	1955	1406
1943	988	1956	1456
1944	1018	1957-1961	1781
1945	1025	1962-1966	1976
1946	1073	1967-1971	2090
1947	1098		

From 1956 until 1965 groundwater-level measurements in Kansas were published as part of the Kansas Geological Survey's Bulletin series:

<u>Year</u>	<u>Bulletin</u>	<u>Year</u>	<u>Bulletin</u>
1956	125	1961	159
1957	131	1962	167
1958	141	1963	173
1959	146	1964	177
1960	153	1965	184

In addition to the publications listed above, records of annual water-level measurements in Kansas are presented in the following publications:

Broeker, M.E., McIntyre, H.J., Jr., and McNellis, J.M., 1977, Ground-water levels in observation wells in Kansas, 1971-75: Kansas Geological Survey Basic Data Series, Ground-Water Release 6, 526 p.

Broeker, M.E. and McNellis, J.M., 1973, Ground-water levels in observation wells in Kansas, 1966-70: Kansas Geological Survey Basic Data Series, Ground-Water Release 3, 373 p.

Pabst, M.E., 1977, January 1977 water levels, and data related to water-level changes since 1950, western Kansas: U.S. Geological Survey Open-file Report 77-264, 209 p.

Pabst, M.E., 1978, January 1978 water levels, and data related to water-level changes since 1940 or 1950, western Kansas: U.S. Geological Survey Open-File Report 78-409, 179 p.

- Pabst, M.E., 1979, January 1979 water levels, and data related to water-level changes, western and south-central Kansas: U.S. Geological Survey Open-File Report 79-925, 213 p.
- Pabst, M.E., 1980, January 1980 water levels, and data related to water-level changes, western and south-central Kansas: U.S. Geological Survey Open-File Report 80-958, 166 p.
- Pabst, M.E. and Gutentag, E.E., 1977, Water-level changes in west-central Kansas, 1950-77: Kansas Geological Survey Journal, October 1977, 18 p.
- Pabst, M.E. and Gutentag, 1979, Water-level changes in southwestern Kansas, 1940-78: Kansas Geological Survey Journal, May 1979, 29 p.
- Pabst, M.E. and Jenkins, E.D., 1973, Water-level changes in northwestern Kansas, 1950-73: Kansas Geological Survey Journal, October 1973, 14 p.
- Pabst, M.E. and Jenkins, E.D., 1974, Water-level changes in west-central Kansas, 1950-74: Kansas Geological Survey Journal, October 1974, 15 p.
- Pabst, M.E. and Jenkins, E.D., 1976a, Water-level changes in southwestern Kansas, 1940-75: Kansas Geological Survey Journal, May 1976, 26 p.
- Pabst, M.E. and Jenkins, E.D., 1976b, Water-level changes in northwestern Kansas, 1950-76: Kansas Geological Survey Journal, December 1976, 20 p.