

Figure 1.-The St. Joseph River watershed.

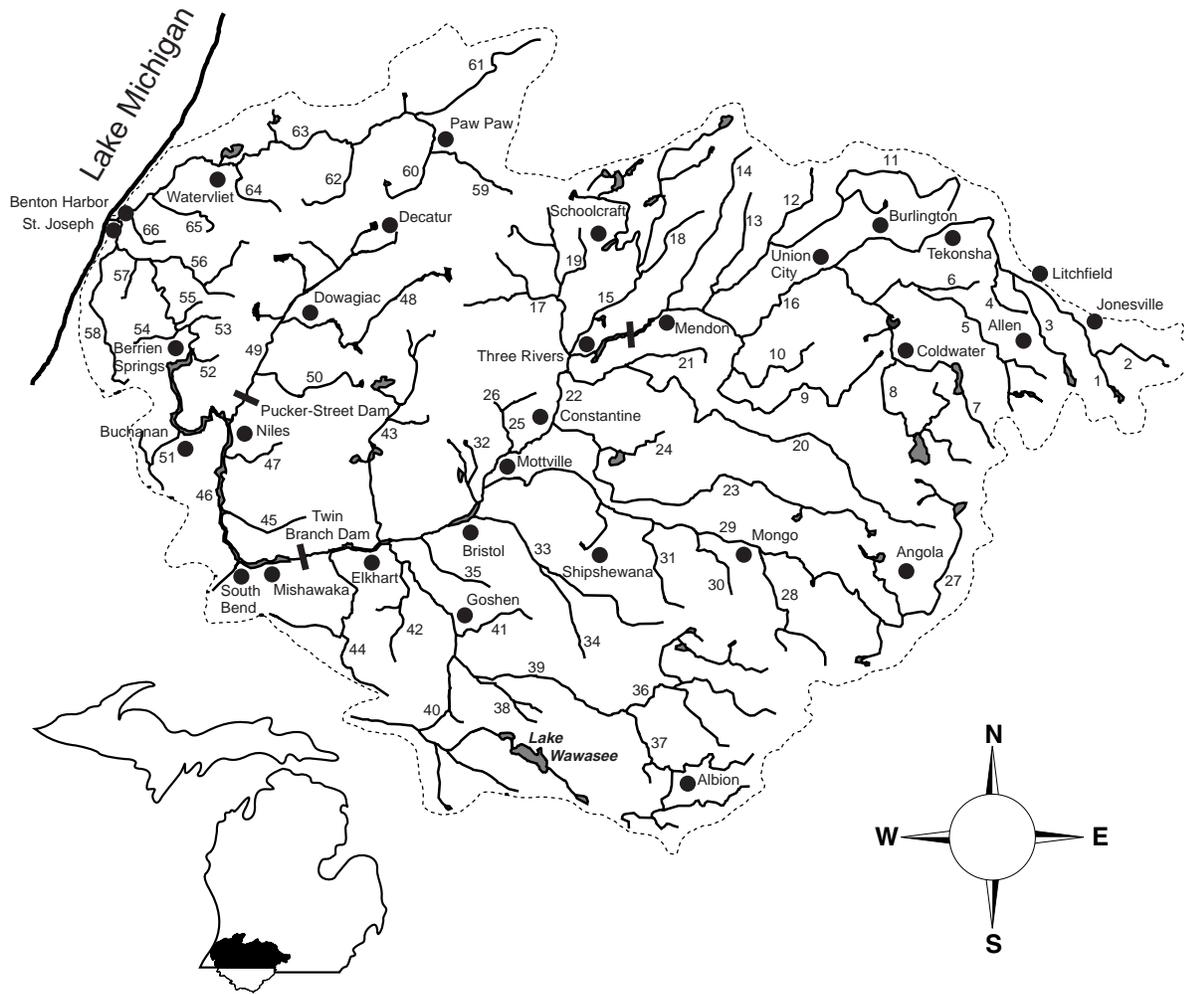


Figure 2.—Major tributaries in St. Joseph River watershed.

1. St. Joseph River (Headwaters)
2. Beebe Creek
3. Sand Creek
4. Soap Creek
5. Hog Creek
6. N. Br. Hog Creek
7. Fisher Creek
8. Coldwater River
9. Swan Creek
10. Little Swan Creek
11. Nottawa Creek
12. Pine Creek
13. Bear Creek
14. Little Portage Creek
15. Portage River
16. St. Joseph River (Upper)
17. Rocky River
18. Little Portage Creek
19. Flowerfield Creek
20. Prairie River
21. Spring Creek
22. St. Joseph River (Middle)
23. Fawn River
24. Sherman Mill Creek
25. Mill Creek
26. Curtis Creek
27. Pigeon Creek
28. Turkey Creek
29. Pigeon River
30. Fly Creek
31. Buck Creek
32. Trout Creek
33. Little Elkhart River
34. Rowe Eden Ditch
35. Pine Creek
36. N. Br. Elkhart River
37. S. Br. Elkhart River (Rimmell Branch)
38. Solomon Creek
39. Elkhart River
40. Turkey Creek
41. Rock Creek
42. Yellow Creek
43. Christiana Creek
44. Baugo Creek
45. Juday Creek
46. St. Joseph River (Lower)
47. Brandywine Creek
48. Dowagiac Creek
49. Dowagiac River
50. Pokagon Creek
51. McCoy Creek
52. Lover Creek
53. Farmers Creek
54. Lemon Creek
55. Love Creek
56. Pipestone Creek
57. Yellow Creek
58. Hickory Creek
59. E. Br. Paw Paw River
60. S. Br. Paw Paw River
61. N. Br. Paw Paw River (Campbell Creek)
62. Brush Creek
63. Paw Paw River
64. Mill Creek
65. Blue Creek
66. Ox Creek

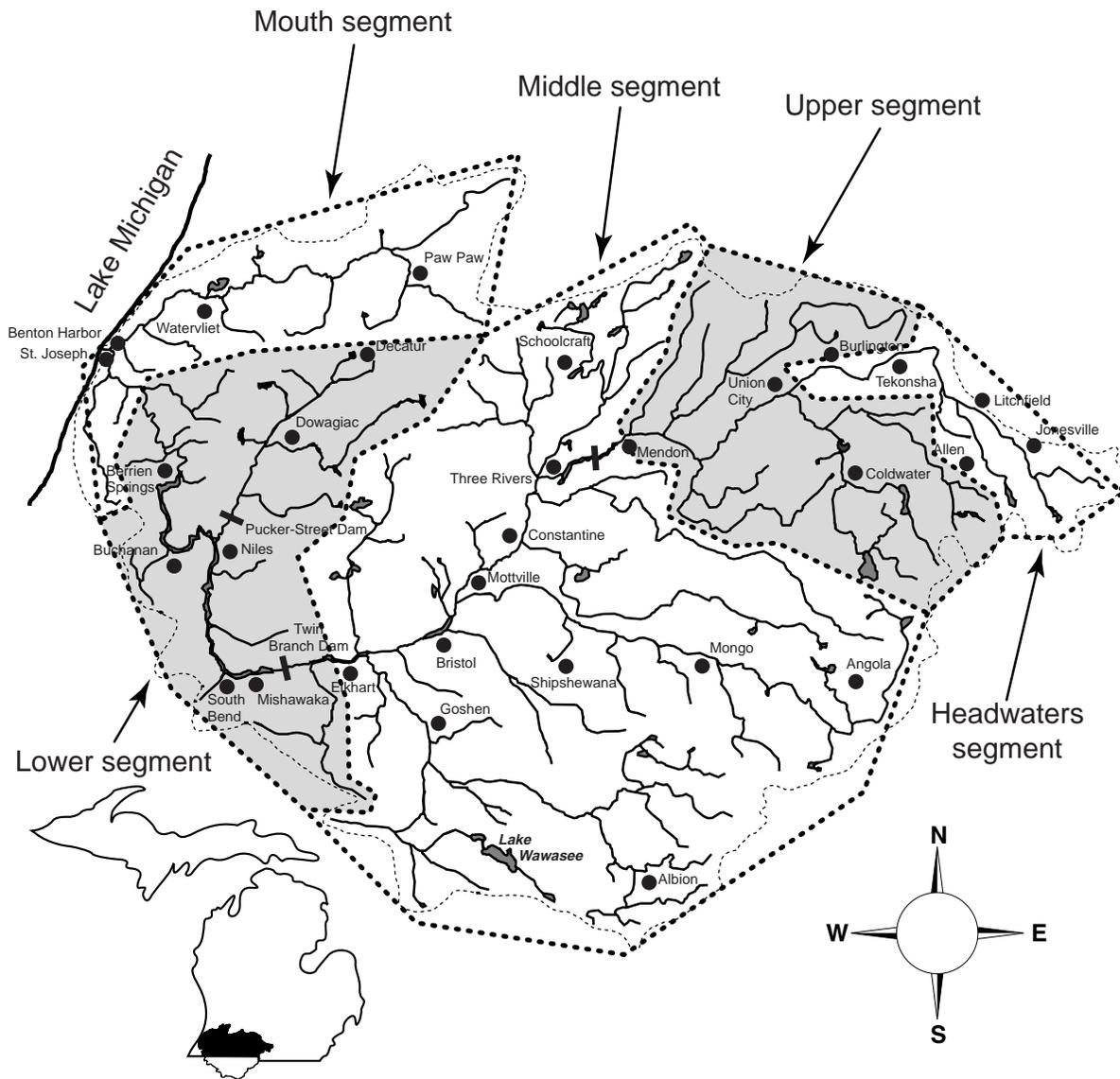


Figure 3.–Valley segments of St. Joseph River mainstem.

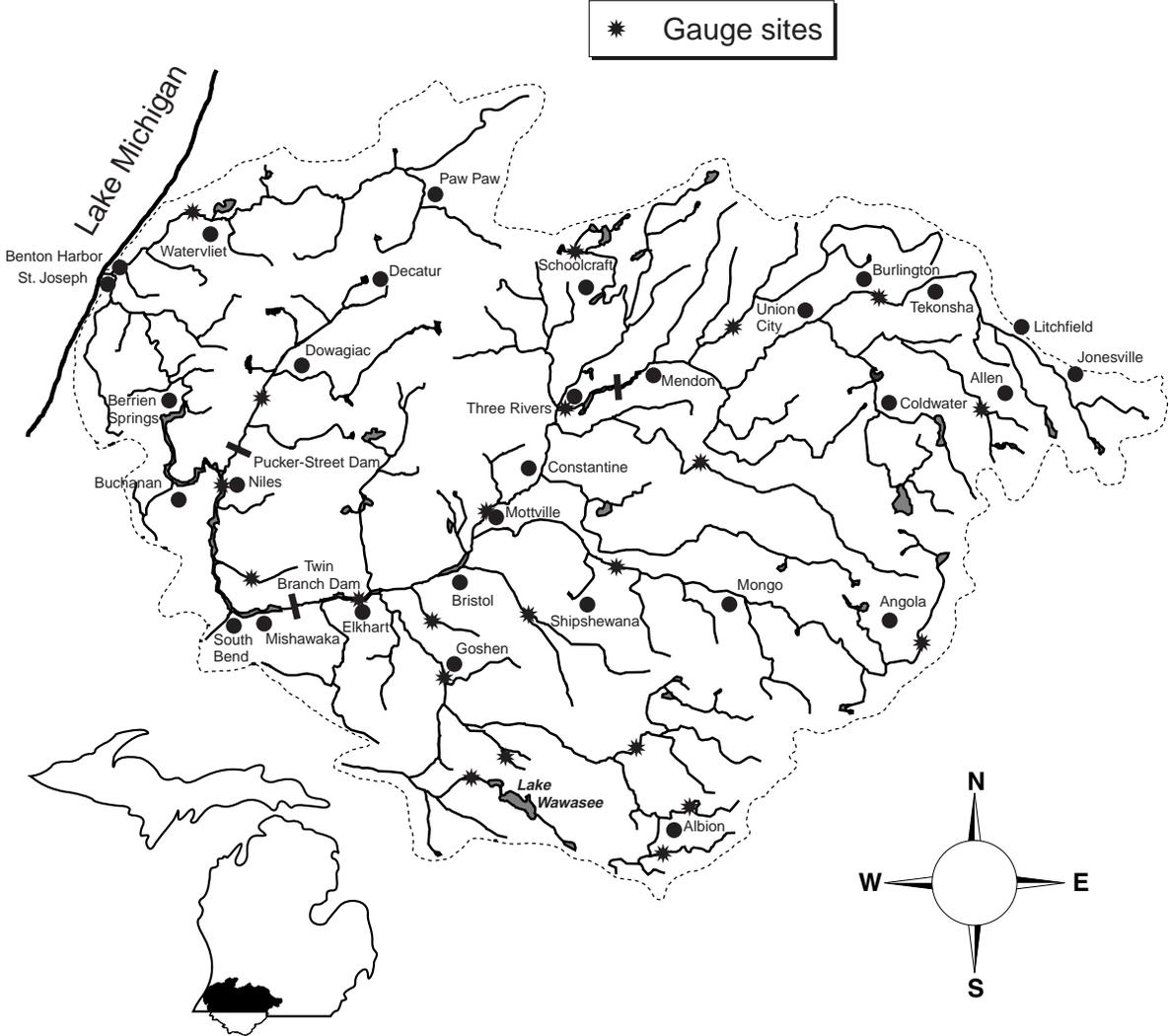


Figure 4.—Location of United States Geological Survey continuous gauges in St. Joseph River watershed.

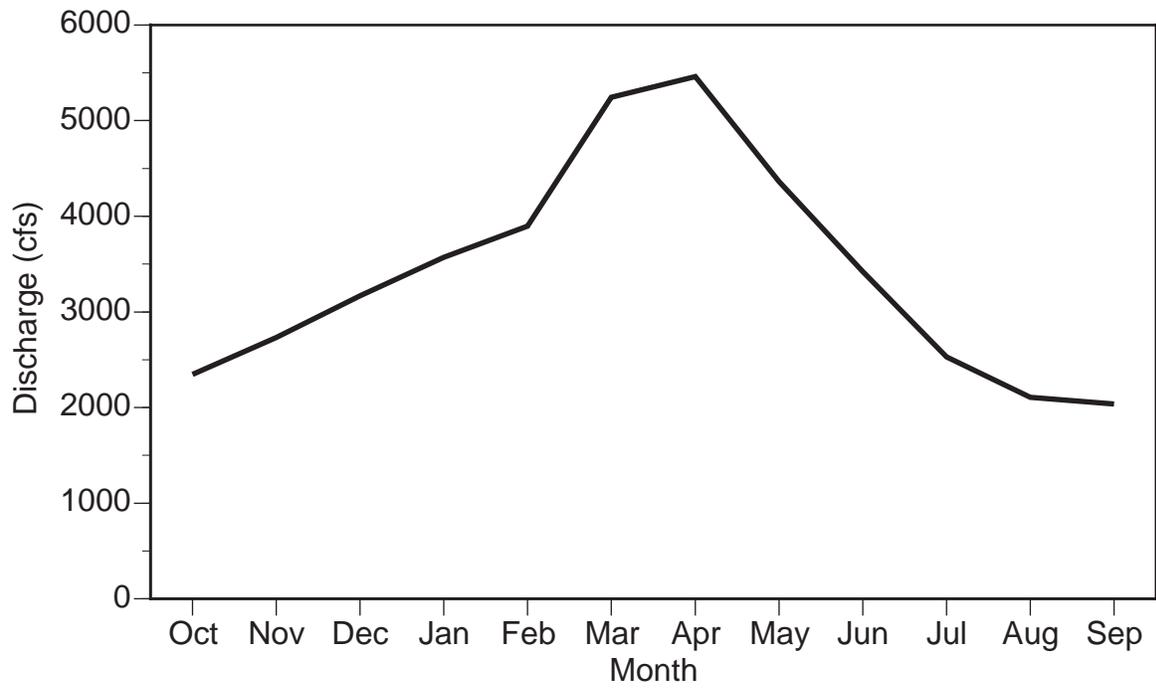


Figure 5.—Mean monthly discharge for St. Joseph River at Niles for period of record (1931-95). Data are shown from October through September, a traditional water year. Data from United States Geological Survey.

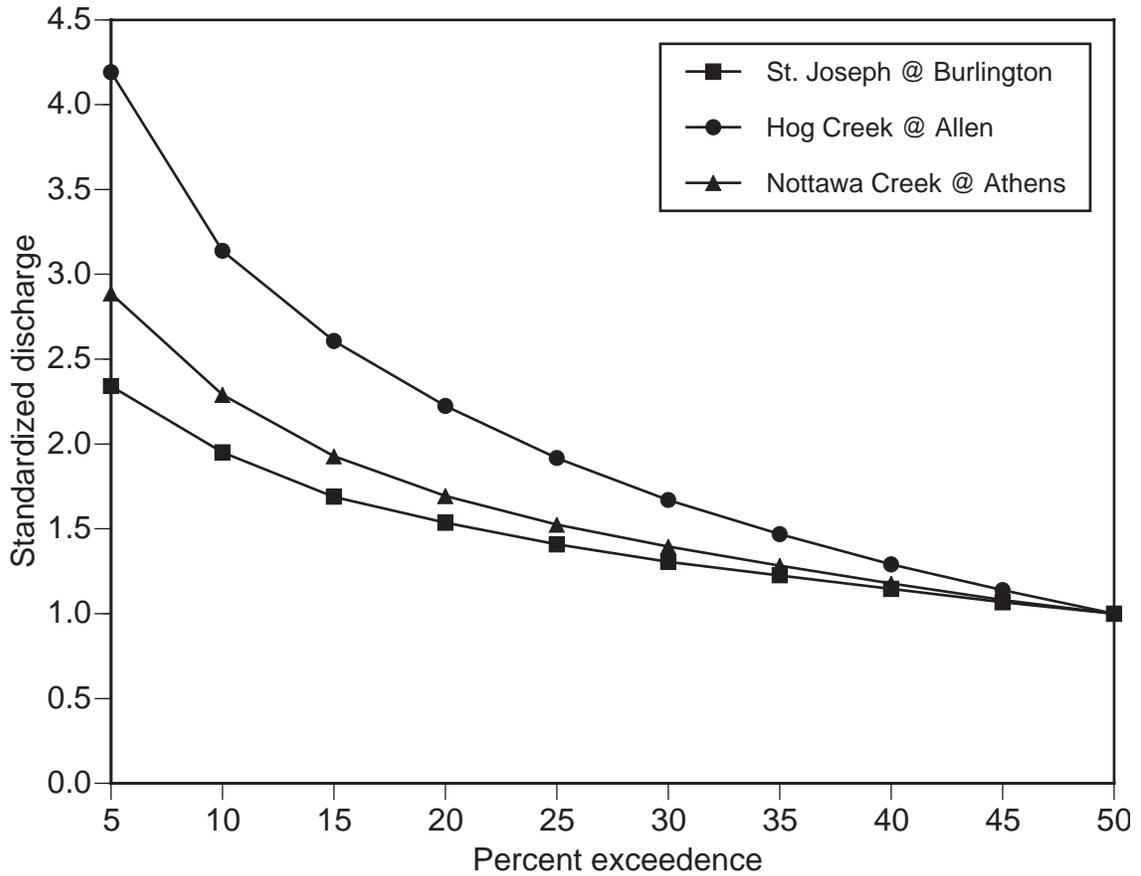


Figure 6.—Standardized high flow exceedence curves for St. Joseph River and tributaries in the headwaters and upper valley segments. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

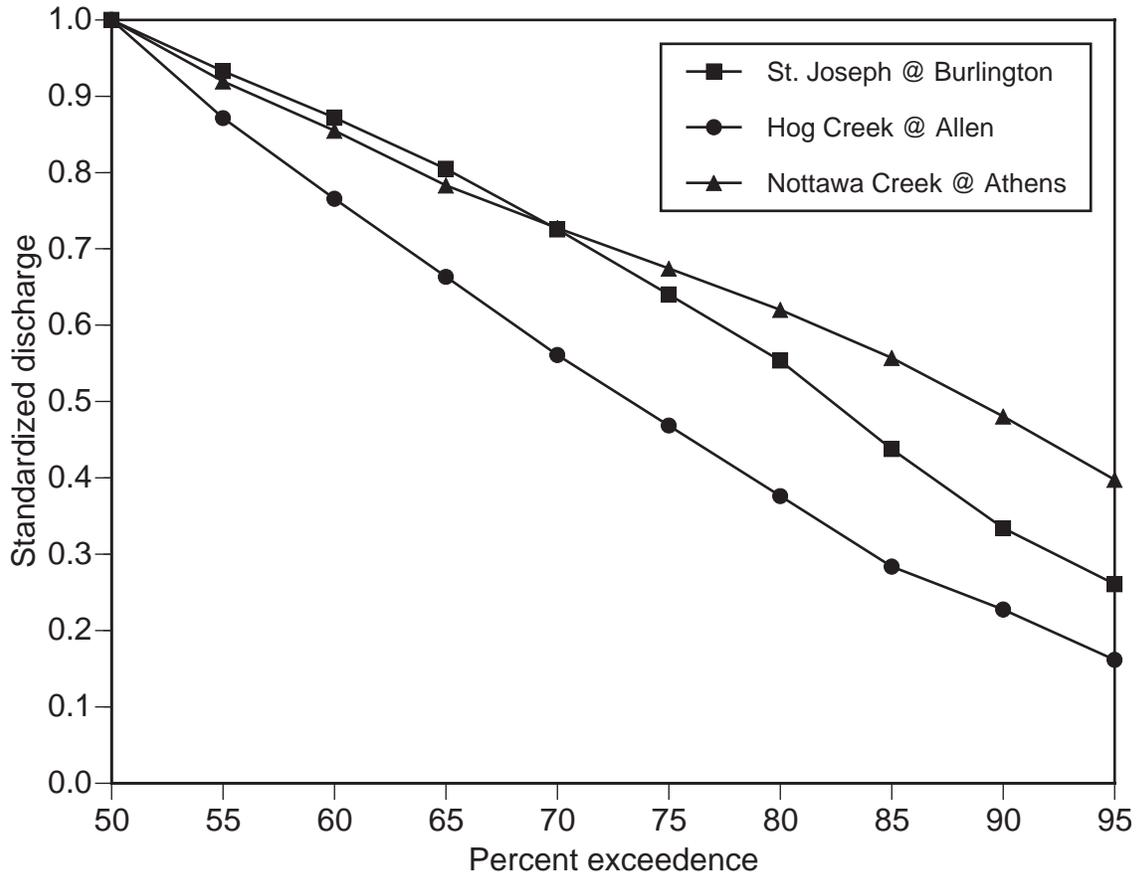


Figure 7.—Standardized low flow exceedence curves for St. Joseph River and tributaries in headwaters and upper valley segments. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

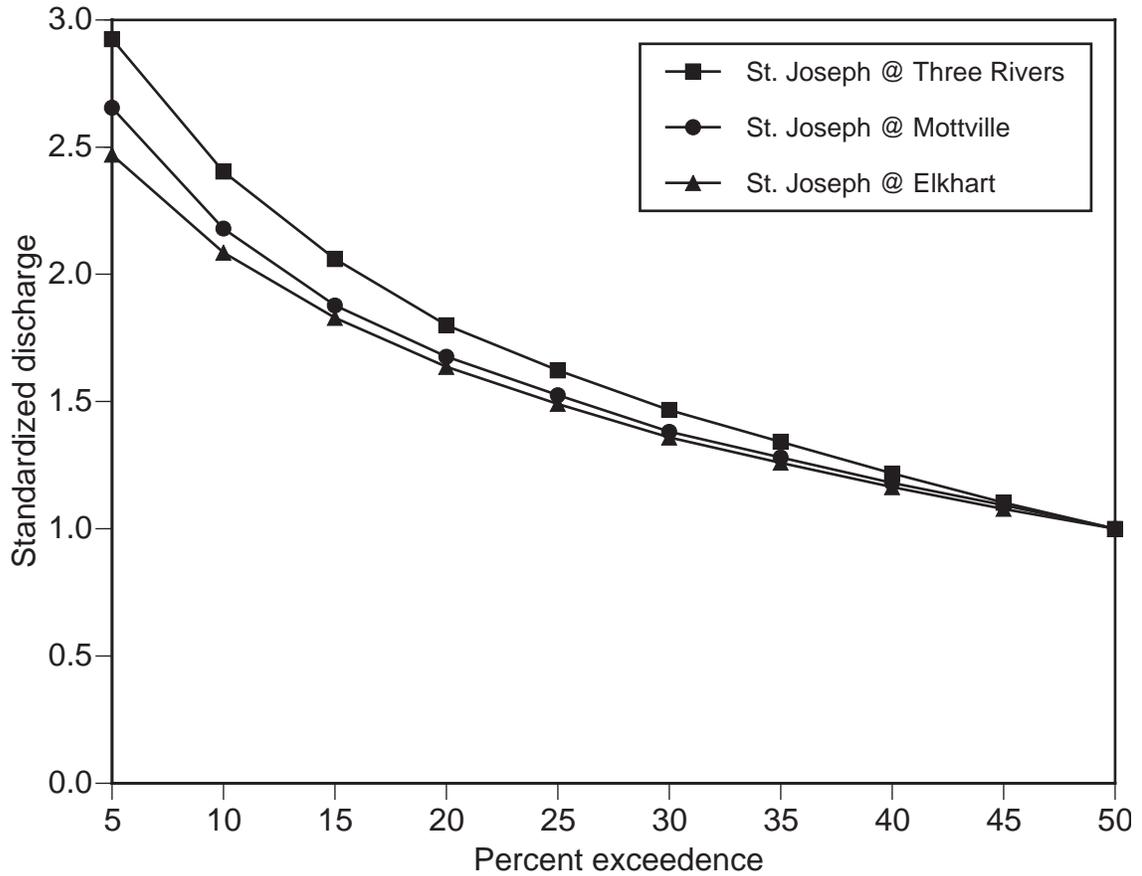


Figure 8.—Standardized high flow exceedence curves for mainstem of St. Joseph River within the middle valley segment. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

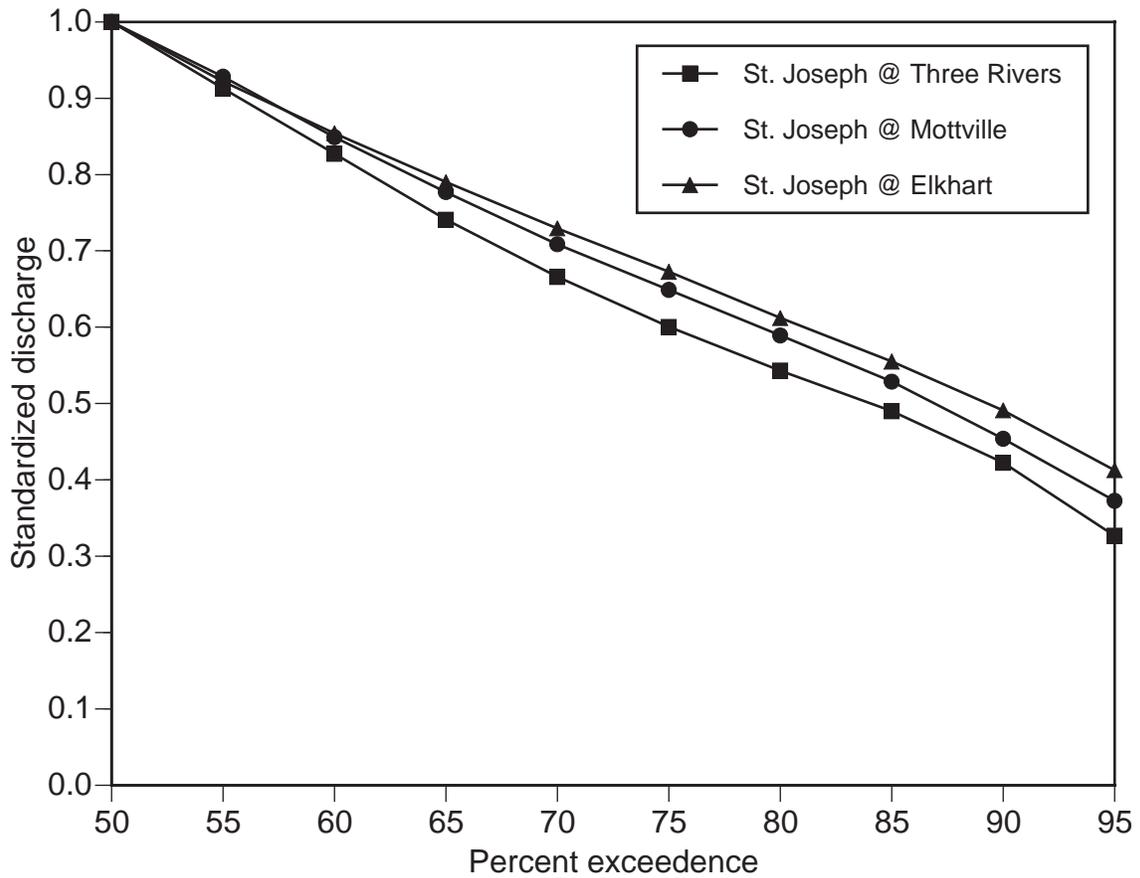


Figure 9.—Standardized low flow exceedence curves for mainstem of St. Joseph River within the middle valley segment. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

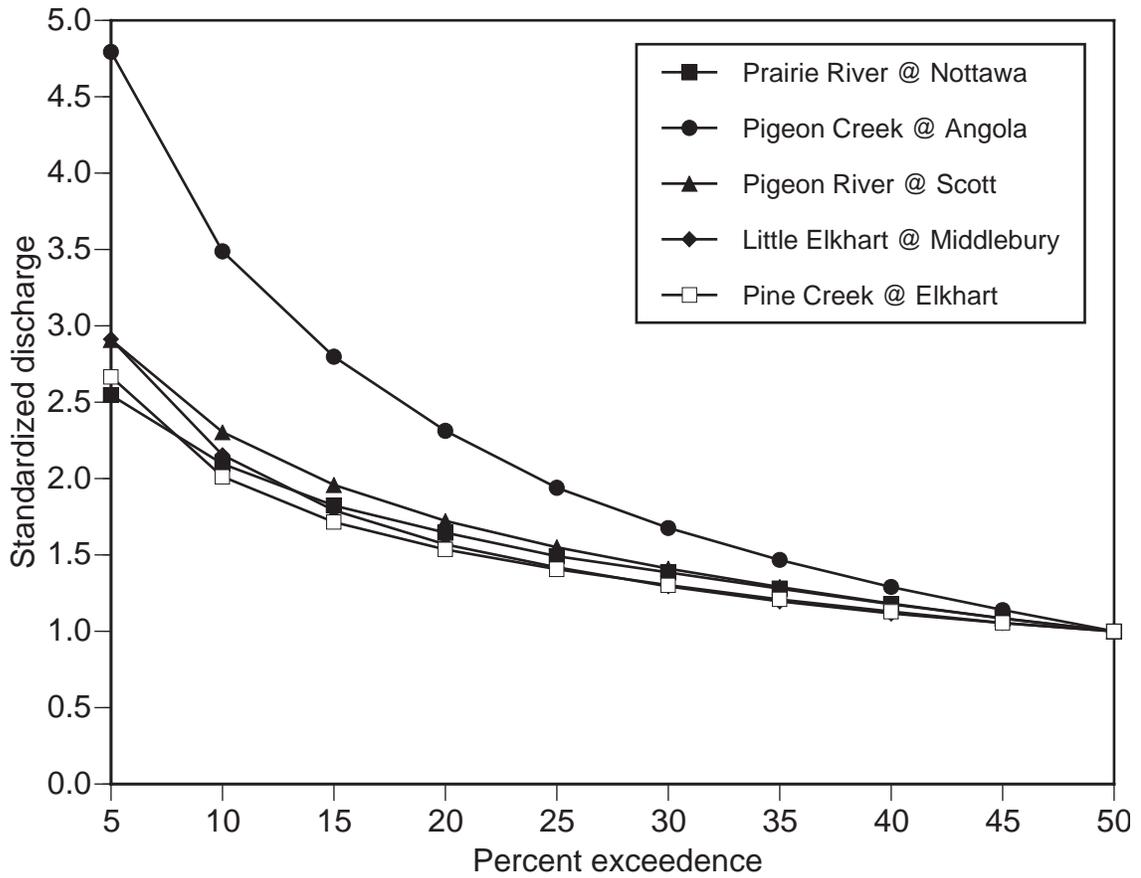


Figure 10.—Standardized high flow exceedence curves for major tributaries within the middle valley segment of St. Joseph River. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

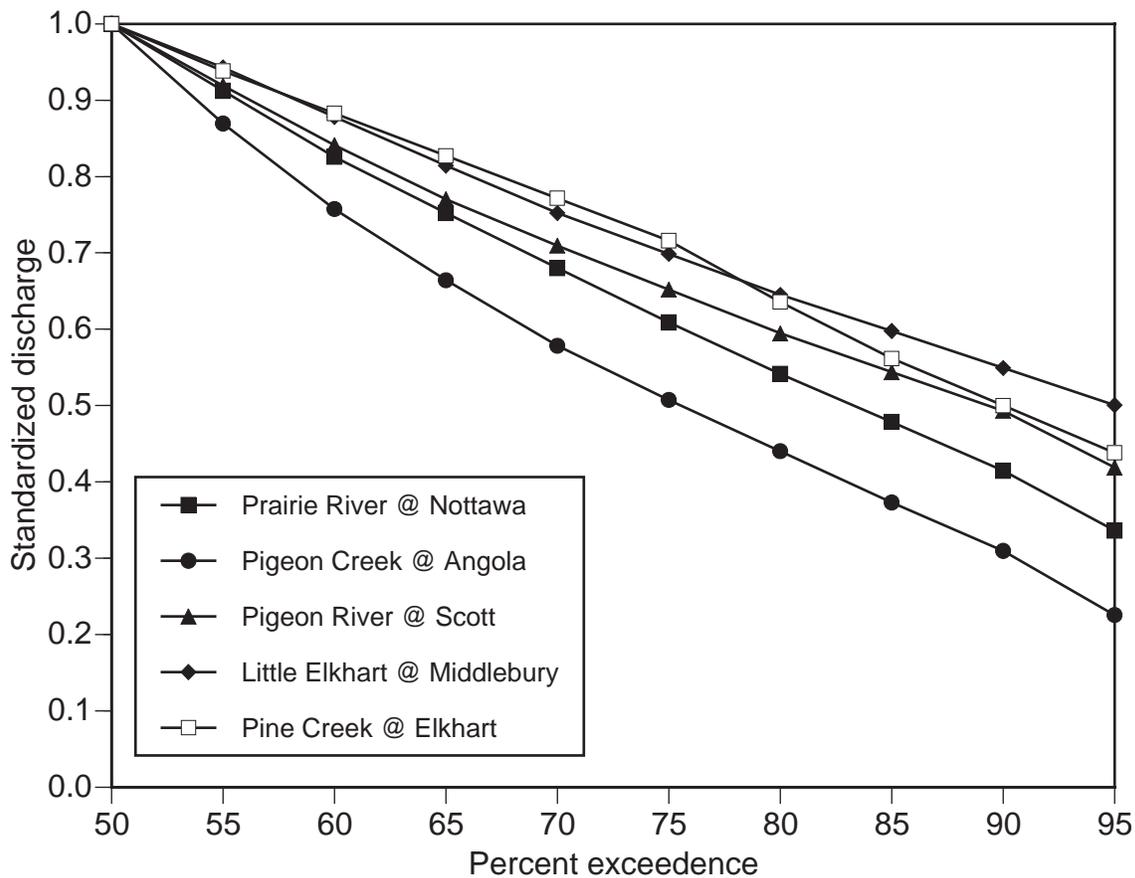


Figure 11.—Standardized low flow exceedence curves for major tributaries within the middle valley segment of St. Joseph River. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

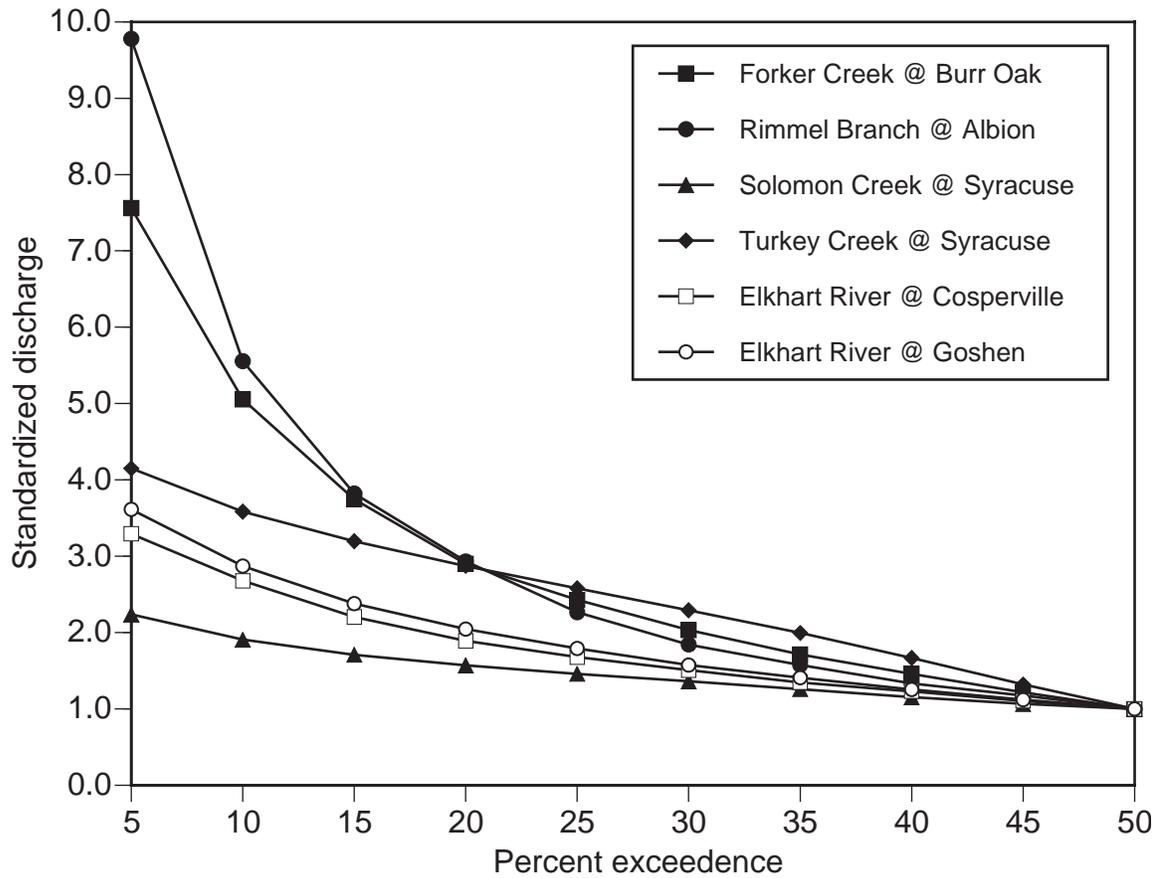


Figure 12.—Standardized high flow exceedence curves for Elkhart River and major tributaries. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

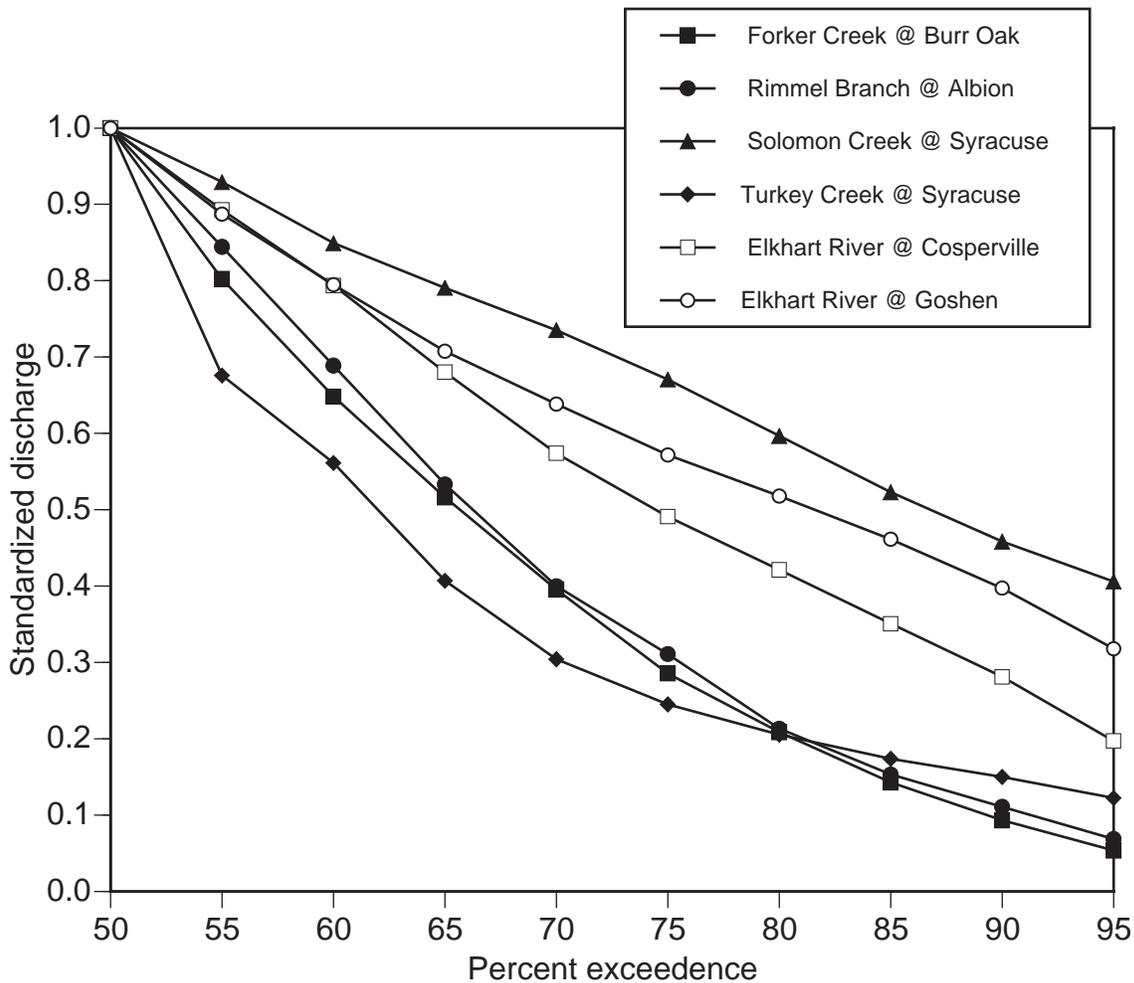


Figure 13.—Standardized low flow exceedence curves for Elkhart River and major tributaries. Standardized discharge is the discharge (Q)/ median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

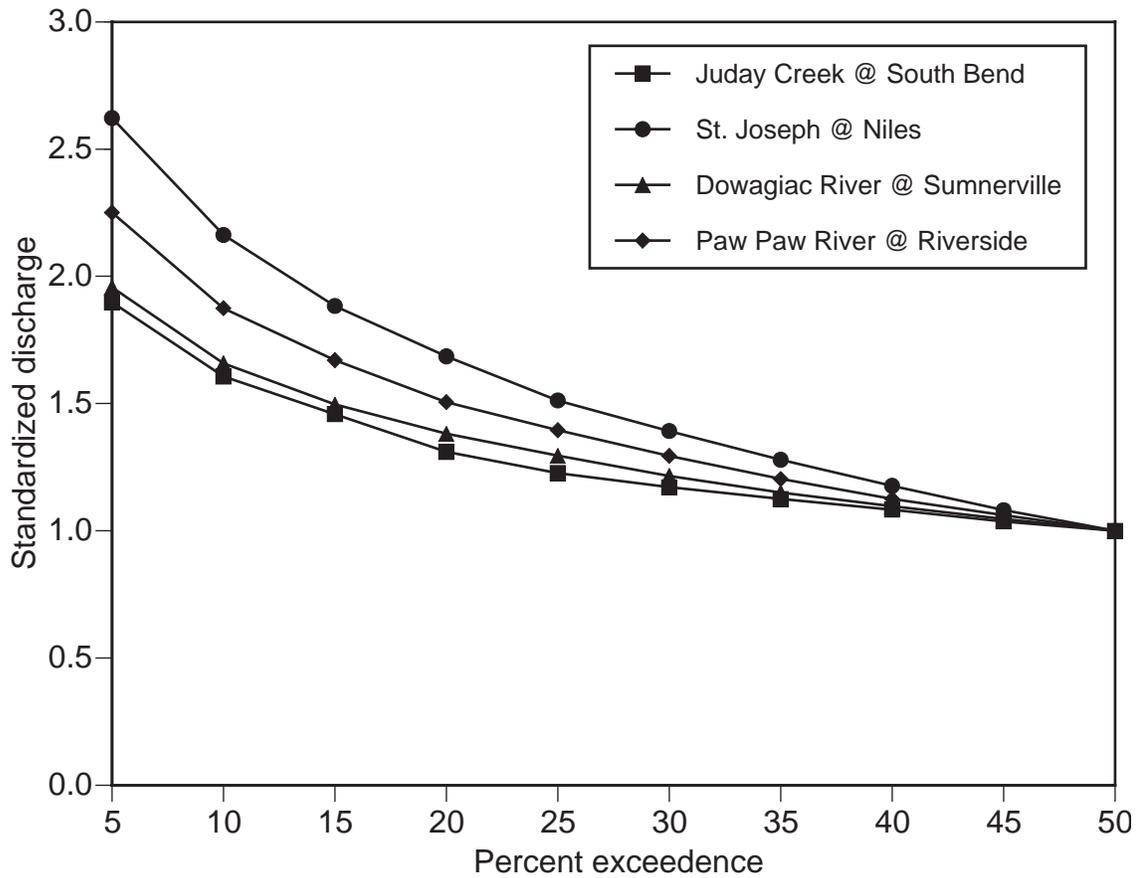


Figure 14.—Standardized high flow exceedence curves for mainstem and major tributaries within lower and mouth valley segments of St. Joseph River. Standardized discharge is the discharge (Q)/median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

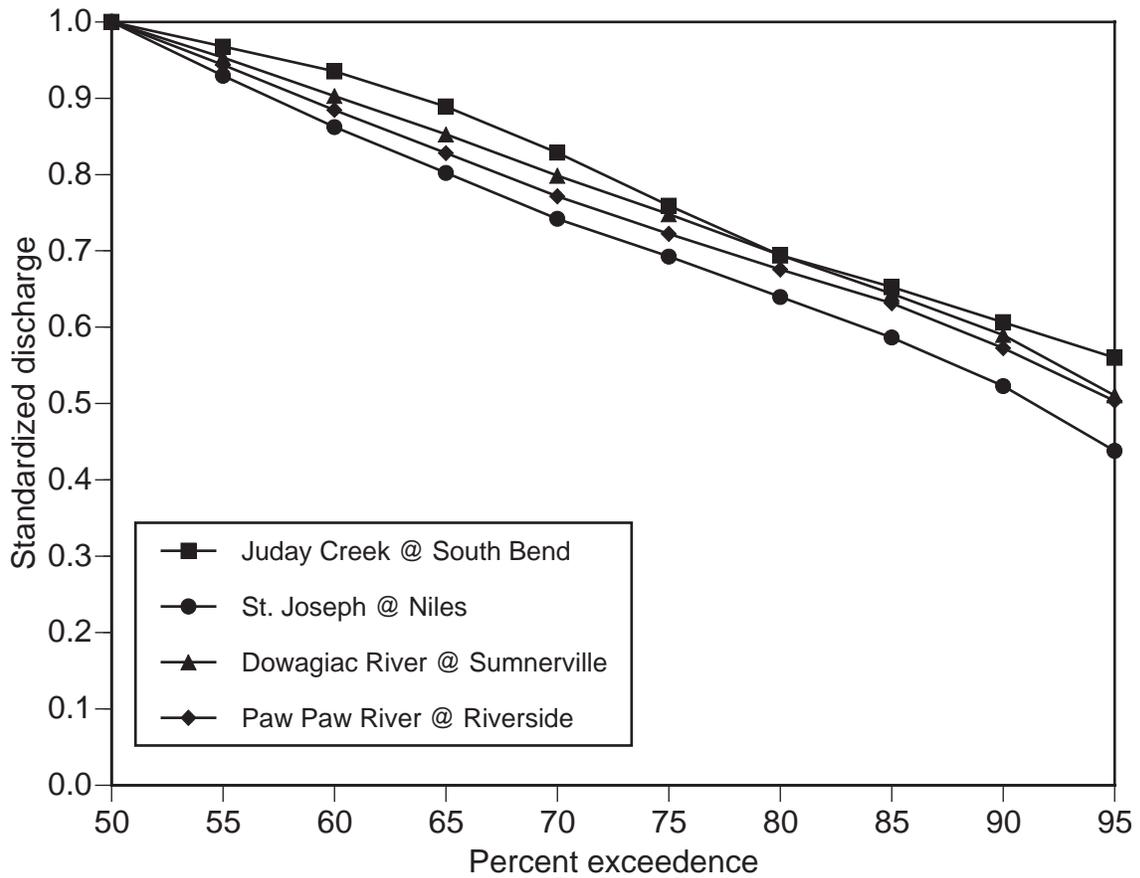


Figure 15.—Standardized low flow exceedence curves for mainstem and major tributaries within lower and mouth valley segments of St. Joseph River. Standardized discharge is the discharge (Q)/median (50% Q) discharge. Exceedence curves represent the probability of a discharge exceeding a given value. Data from United States Geological Survey gauge stations for period of record.

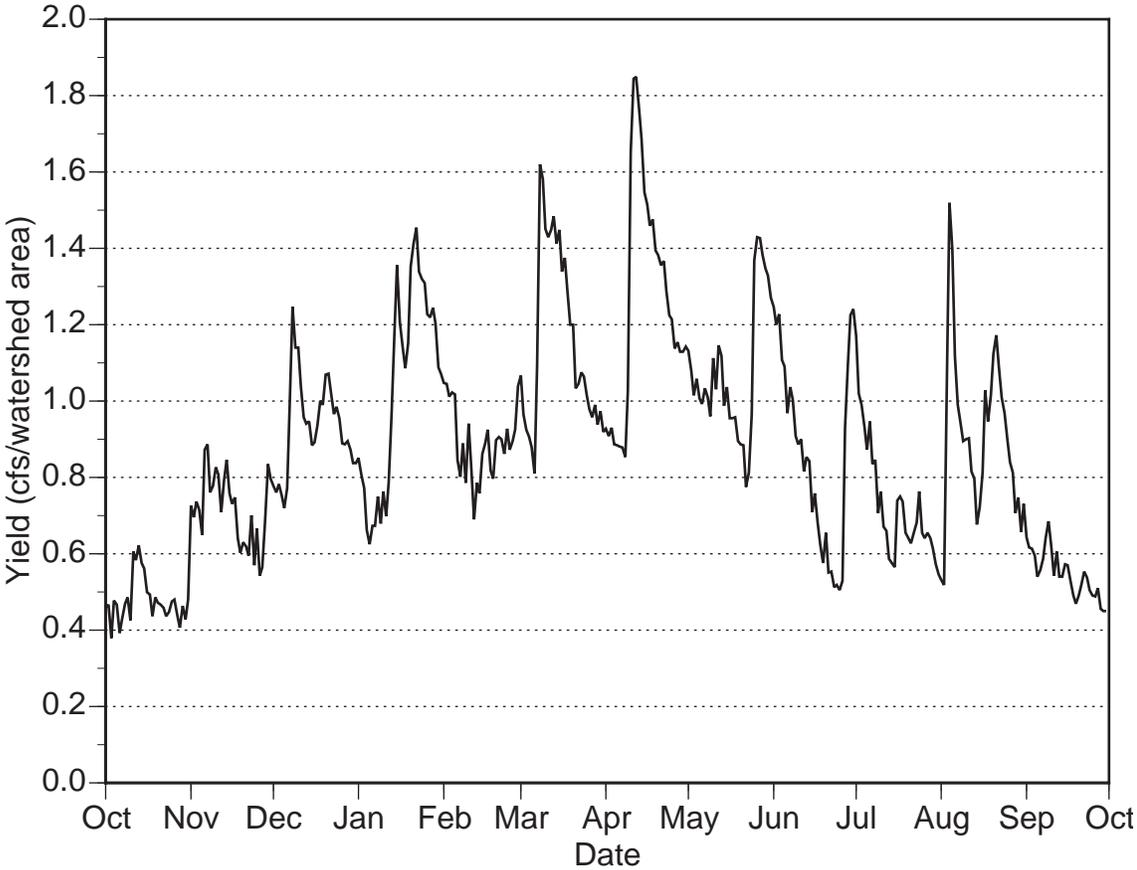


Figure 16.—St. Joseph River yield at Niles for water year 1995. Data from United States Geological Survey.

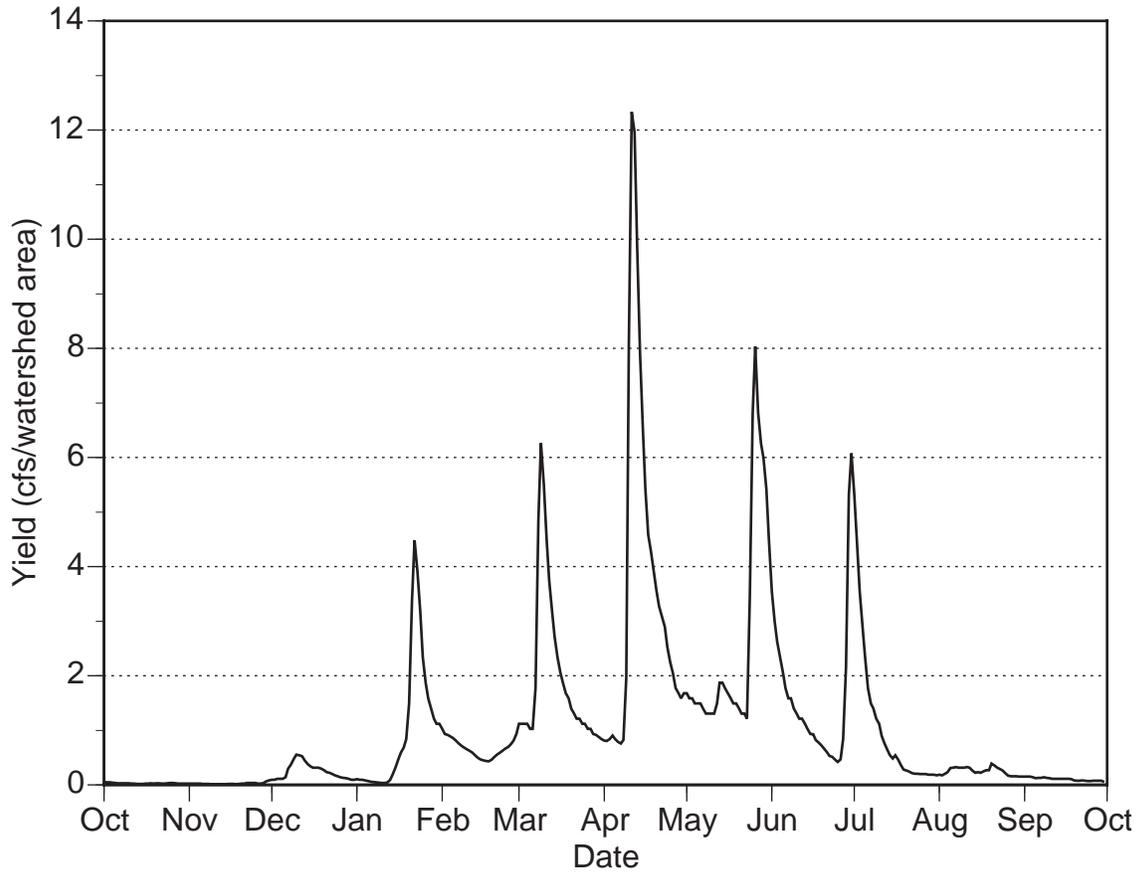


Figure 17.—Rimmell Branch yield for water year 1995. Data from United States Geological Survey.

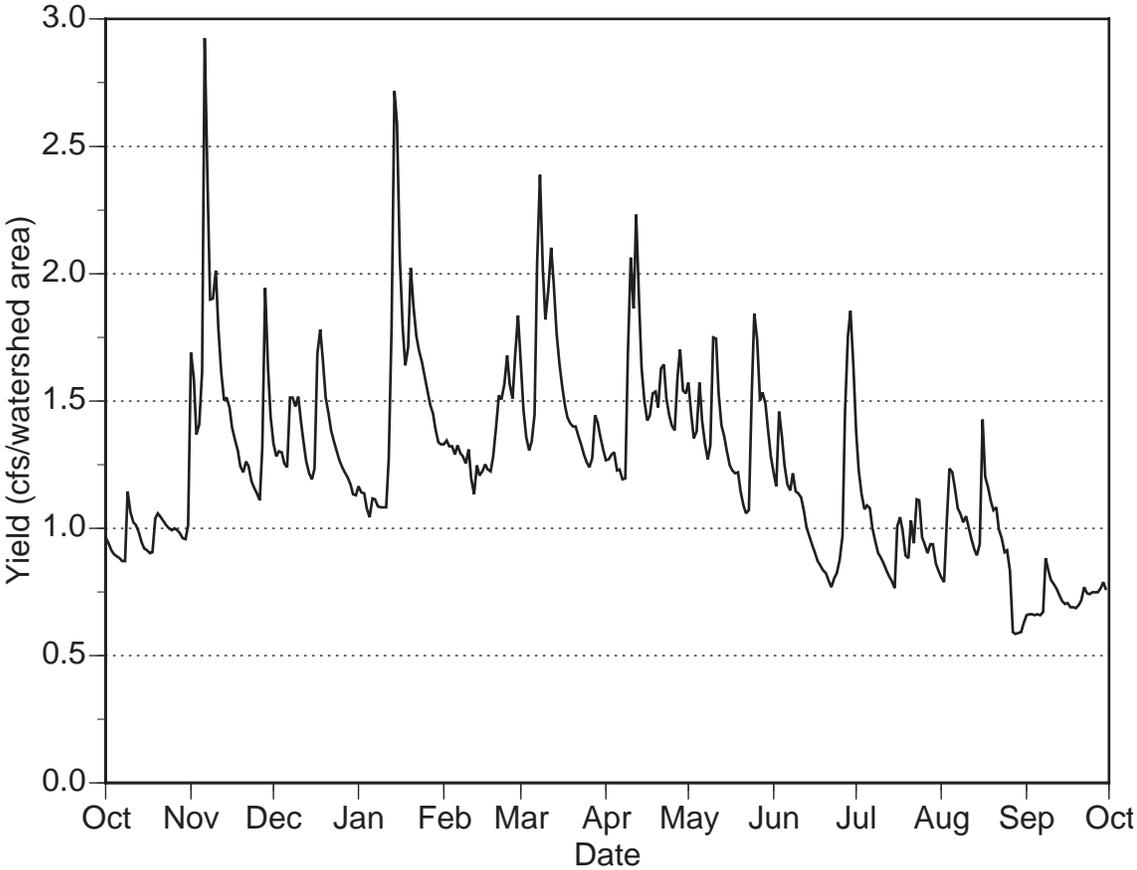


Figure 18.—Dowagiac River yield in Sumnerville for water year 1995. Data from United States Geological Survey.

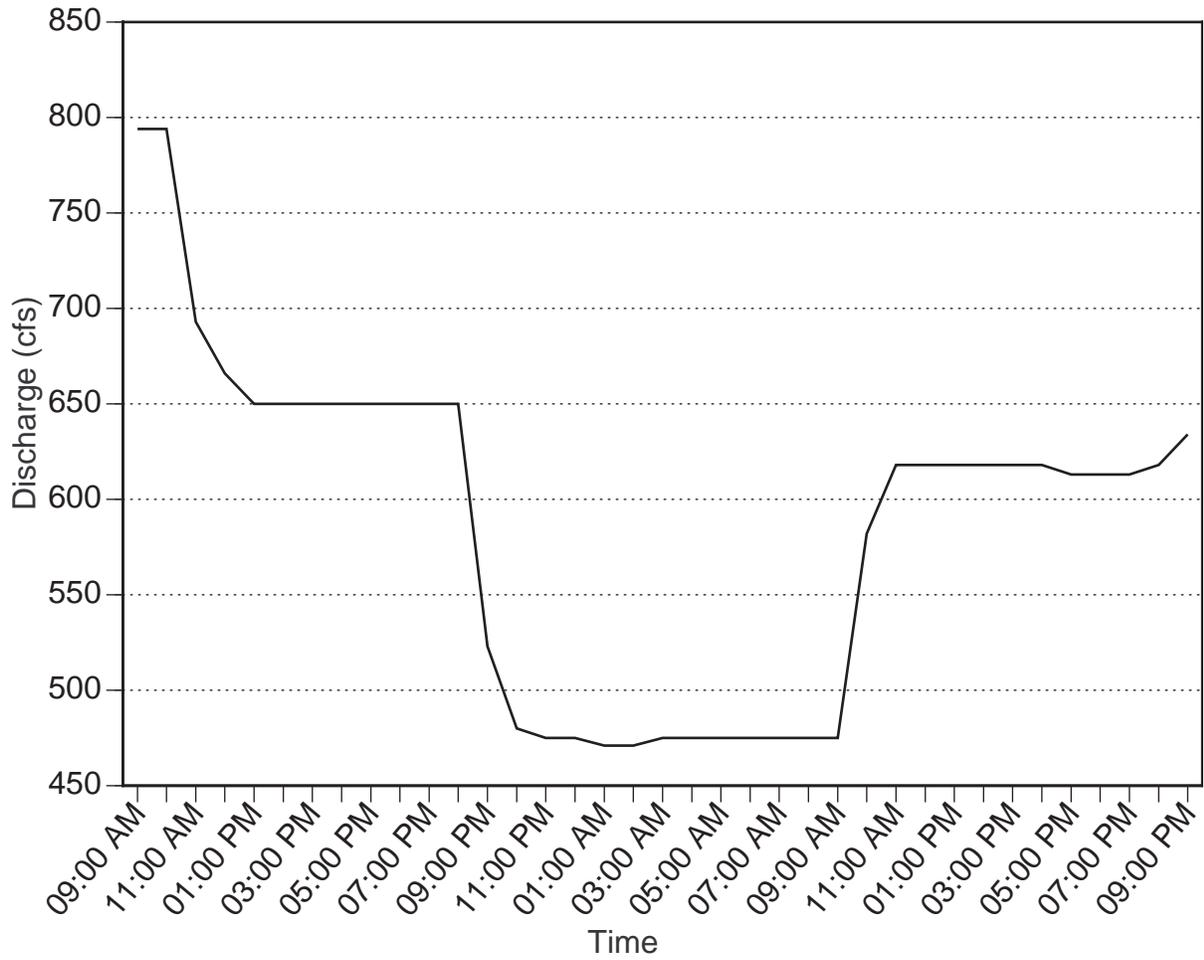


Figure 19.—Instantaneous discharge of St. Joseph River at Three Rivers from June 20 to June 21, 1999. Fish habitat ranking in parenthesis. Data from United States Geological Survey.

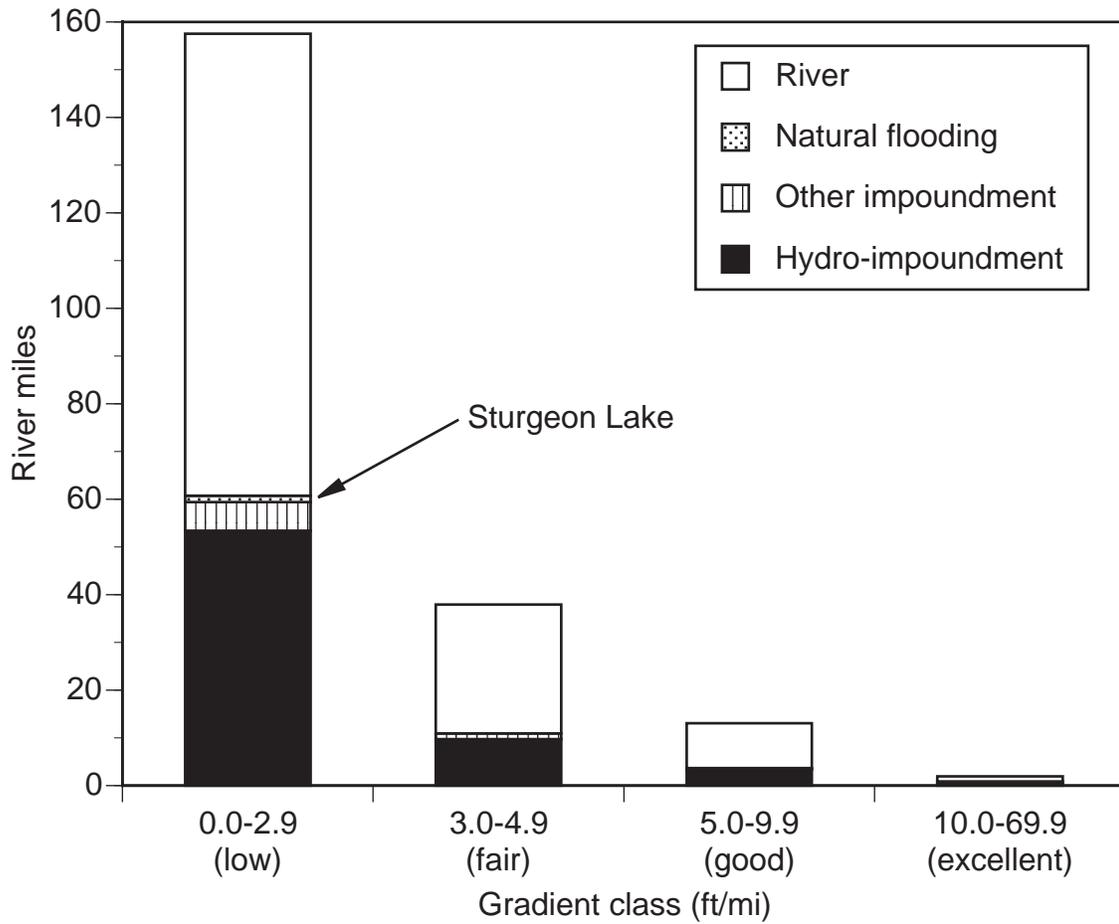


Figure 20.—Gradient class and length of river in each, separated by water type, for St. Joseph River. Fish habitat ranking in parenthesis. Data from Michigan Department of Natural Resources, Fisheries Division.

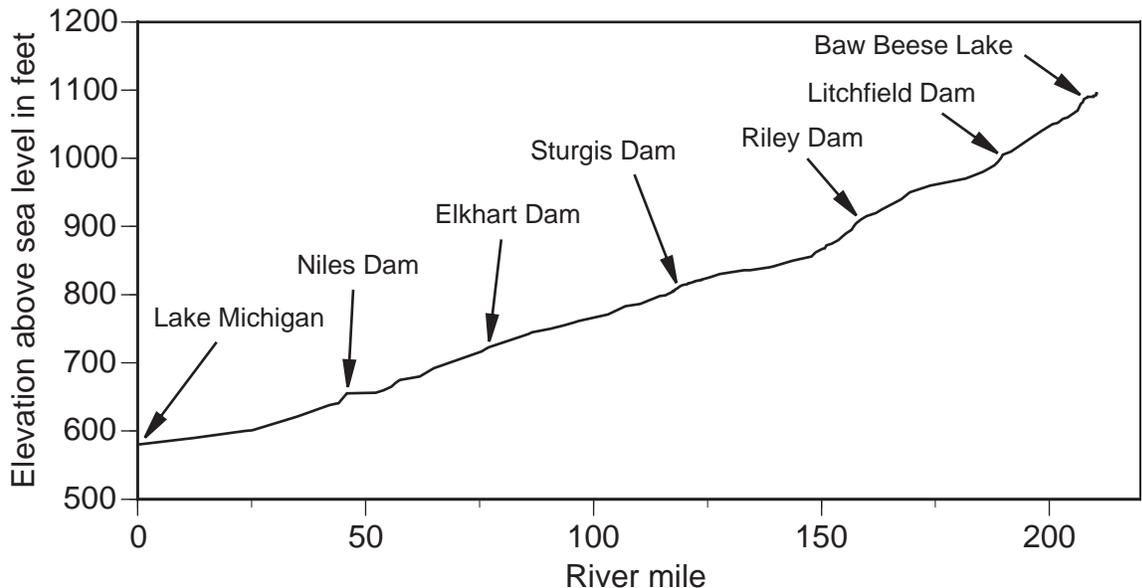


Figure 21a.—Elevation changes, by river mile, from headwaters to mouth of St. Joseph River. Data from Michigan Department of Natural Resources, Fisheries Division.

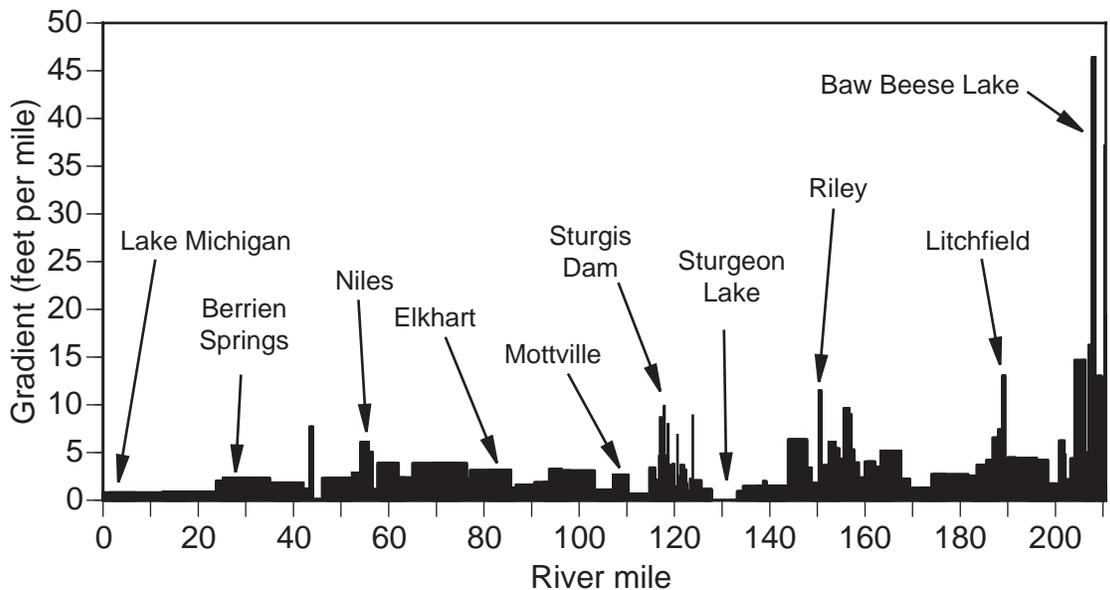


Figure 21b.—Gradient (elevation change in feet per mile) of St. Joseph River. Gradient is shown without existing dams. Data from Michigan Department of Natural Resources, Fisheries Division.

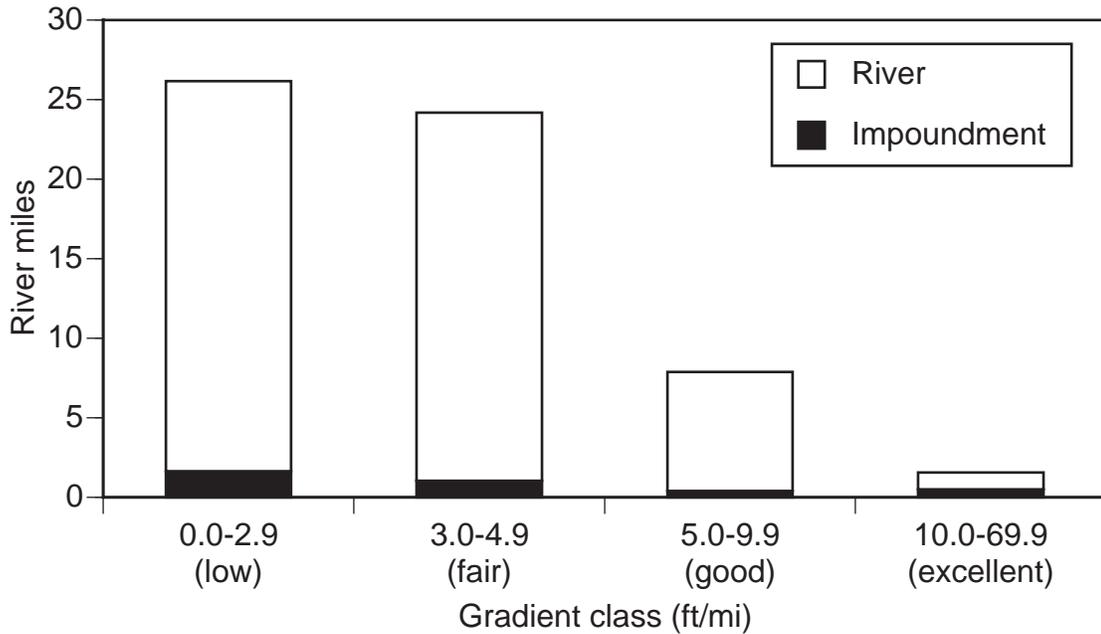


Figure 22a.—Gradient class and length of river in each, separated by water type, for headwater segment of the St. Joseph River. Fish habitat rankings in parenthesis. Data from Michigan Department of Natural Resources, Fisheries Division.

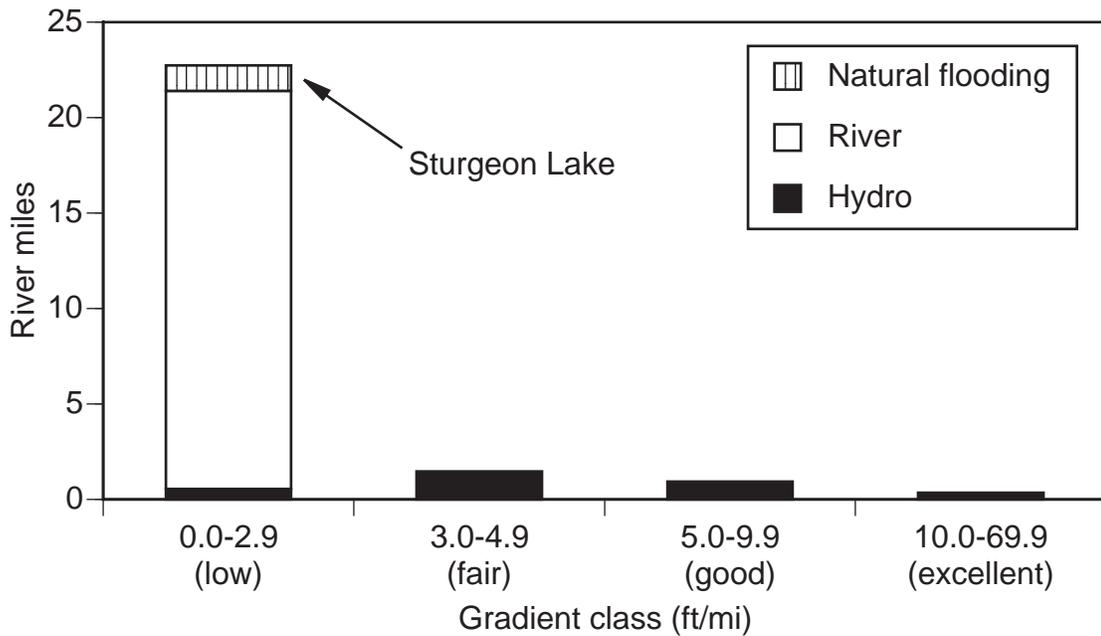


Figure 22b.—Gradient class and length of river in each, separated by water type, for upper segment of the St. Joseph River. Fish habitat rankings in parenthesis. Data from Michigan Department of Natural Resources, Fisheries Division.

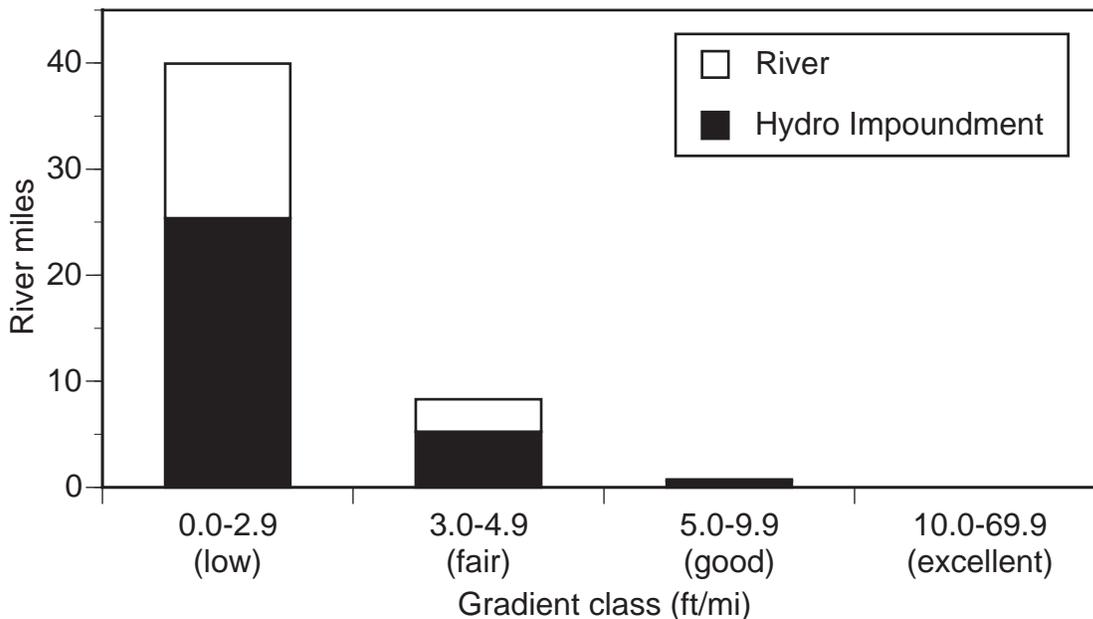


Figure 23a.—Gradient class and length of river in each, separated by water type, for middle segment of the St. Joseph River. Fish habitat rankings in parenthesis. Data from Michigan Department of Natural Resources, Fisheries Division.

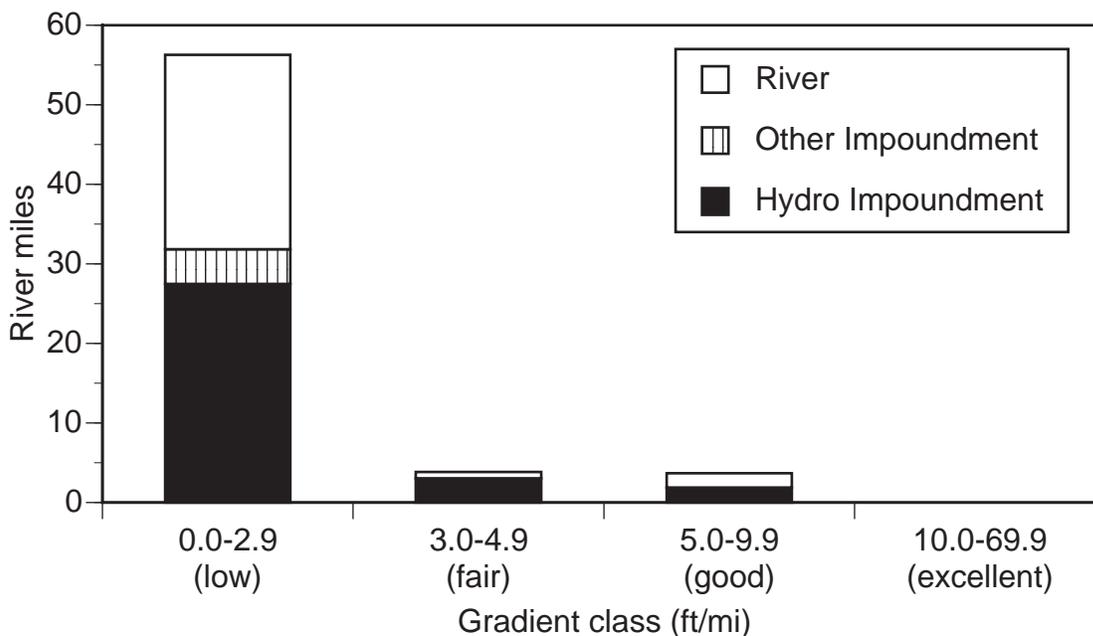


Figure 23b.—Gradient class and length of river in each, separated by water type, for lower segment of the St. Joseph River. Fish habitat rankings in parenthesis. Data from Michigan Department of Natural Resources, Fisheries Division.

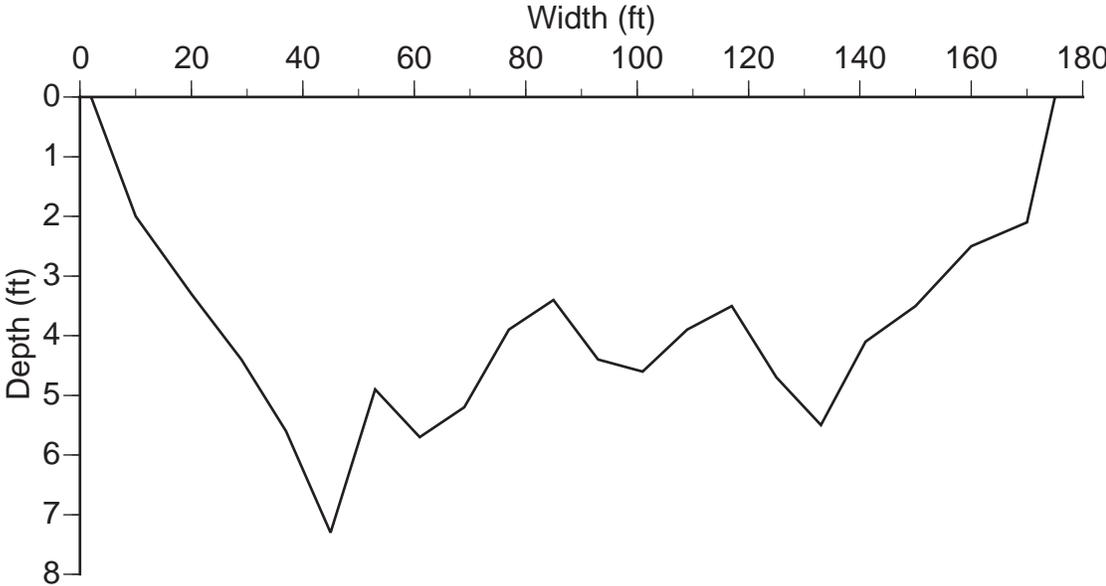


Figure 24a.—Stream channel cross-section of St. Joseph River at Three Rivers. Data from United States Geological Survey.

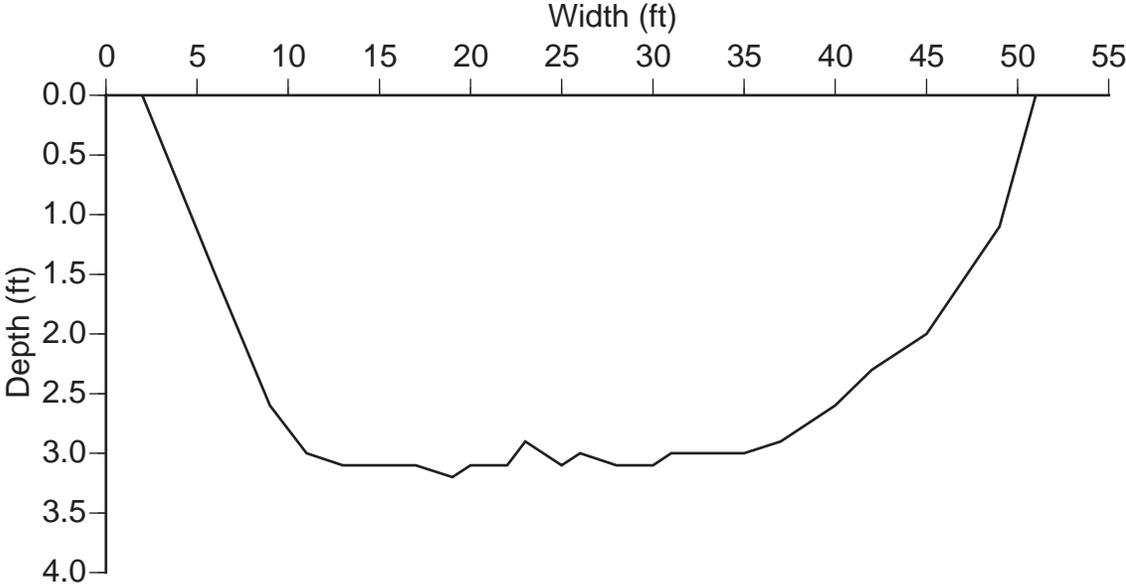


Figure 24b.—Stream channel cross-section of Dowagiac River at Sumnerville. Data from United States Geological Survey.

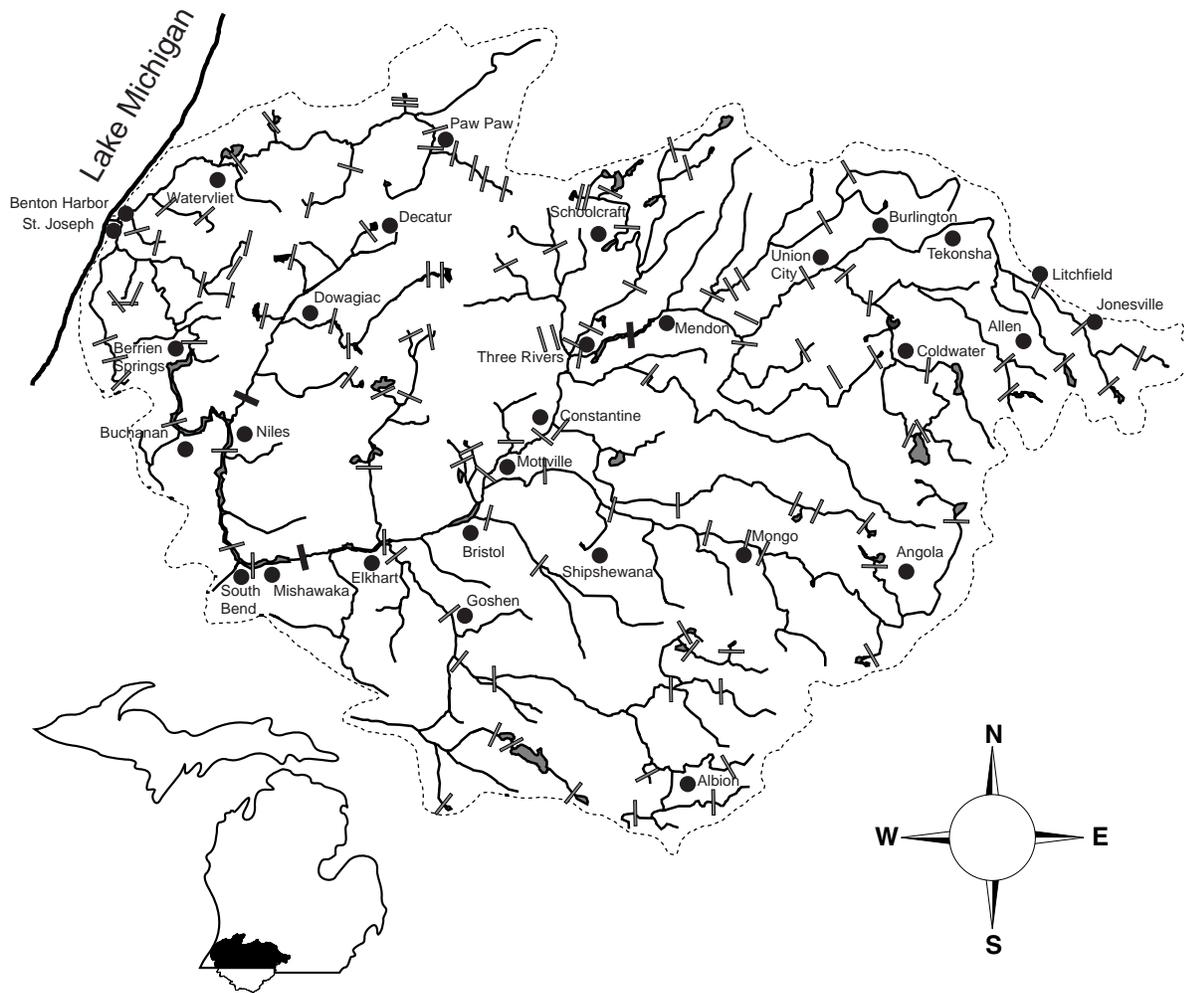


Figure 25.—Approximate locations of major dams (192) in St. Joseph River watershed.

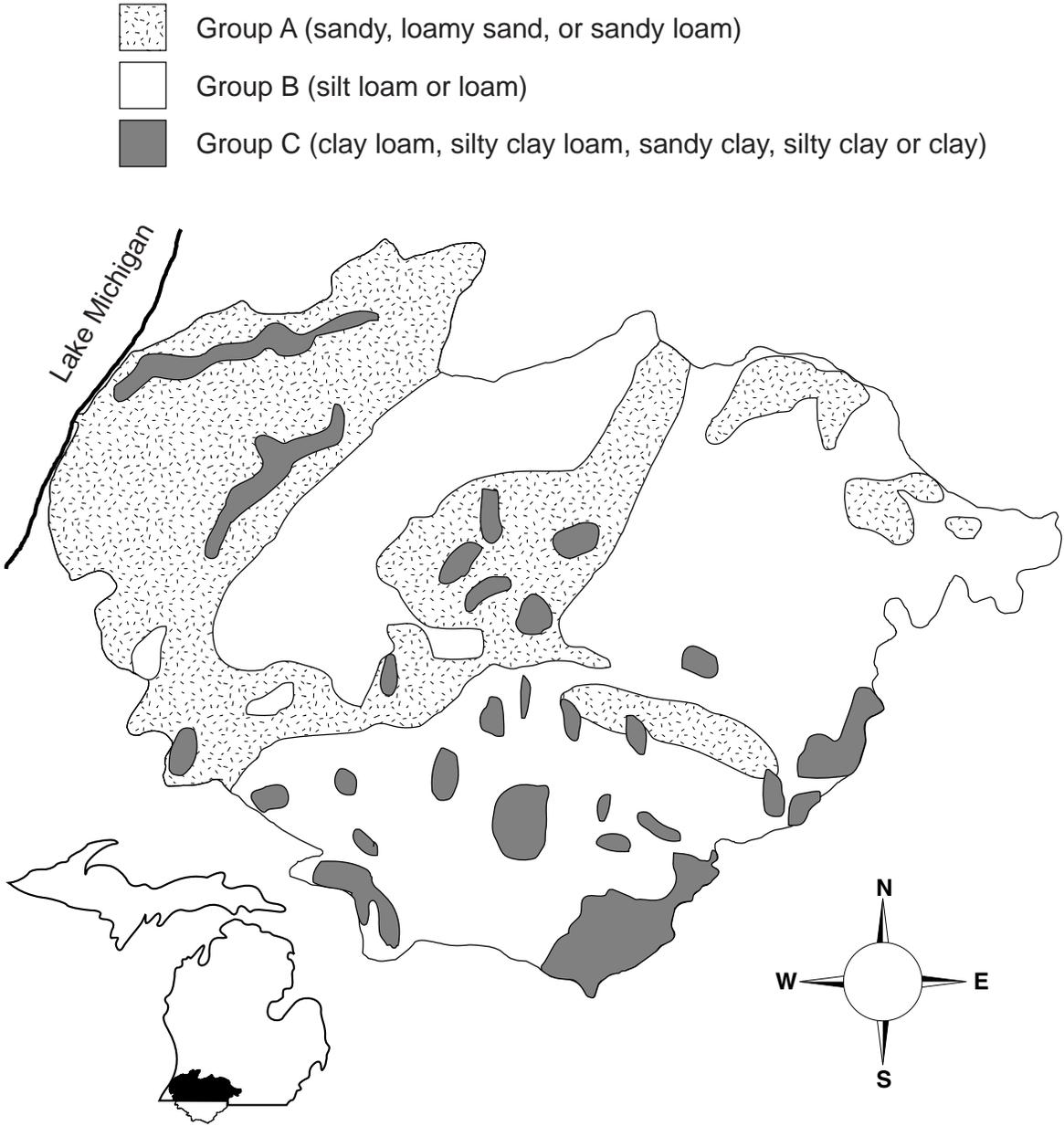


Figure 26.–Soil groups in St. Joseph River basin. Data from State Soil Geographic Database (Michigan); IDNR 1987.

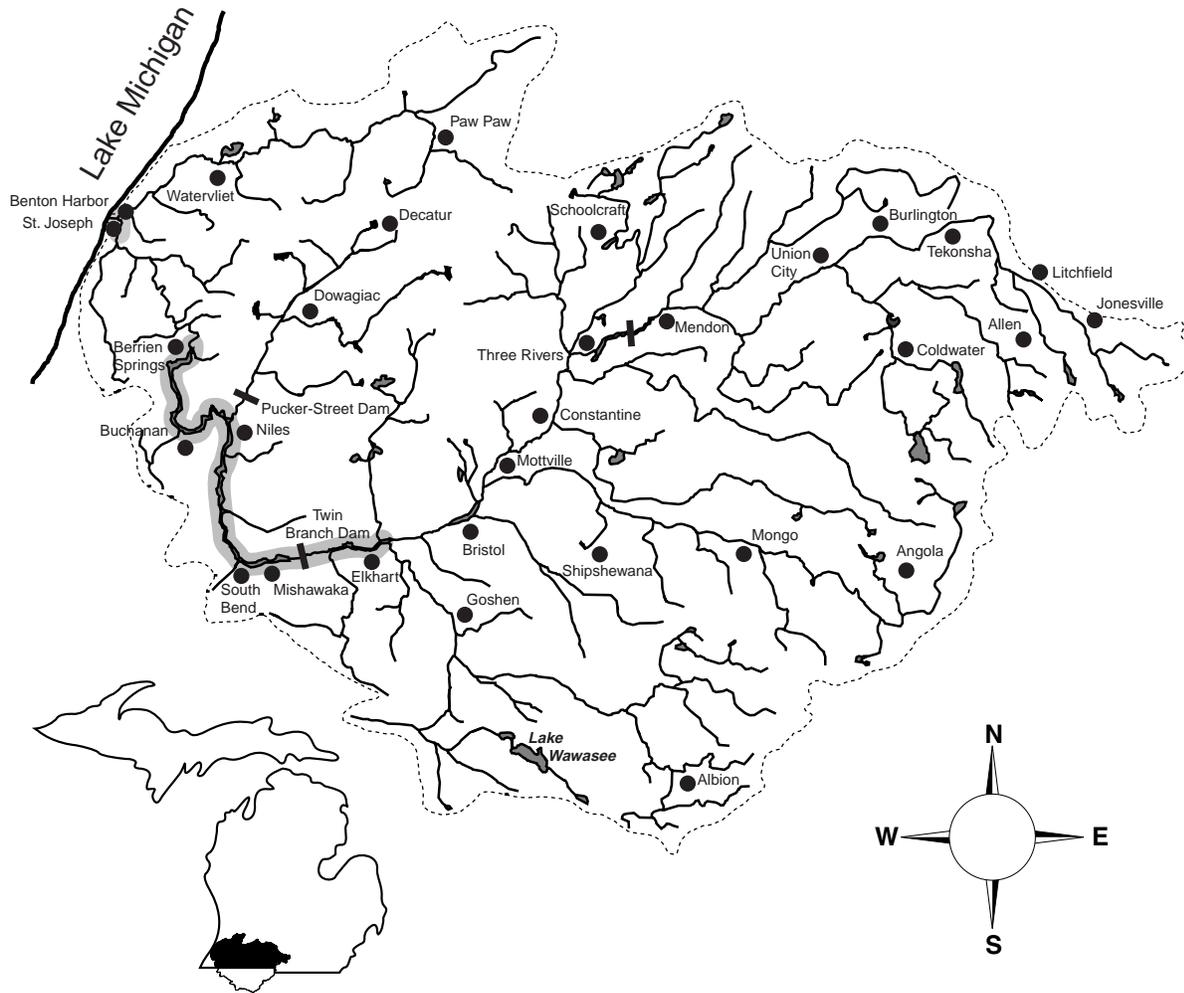


Figure 27.—Sections of St. Joseph River included in advisories against whole body contact. Data from Michigan Department of Community Health.

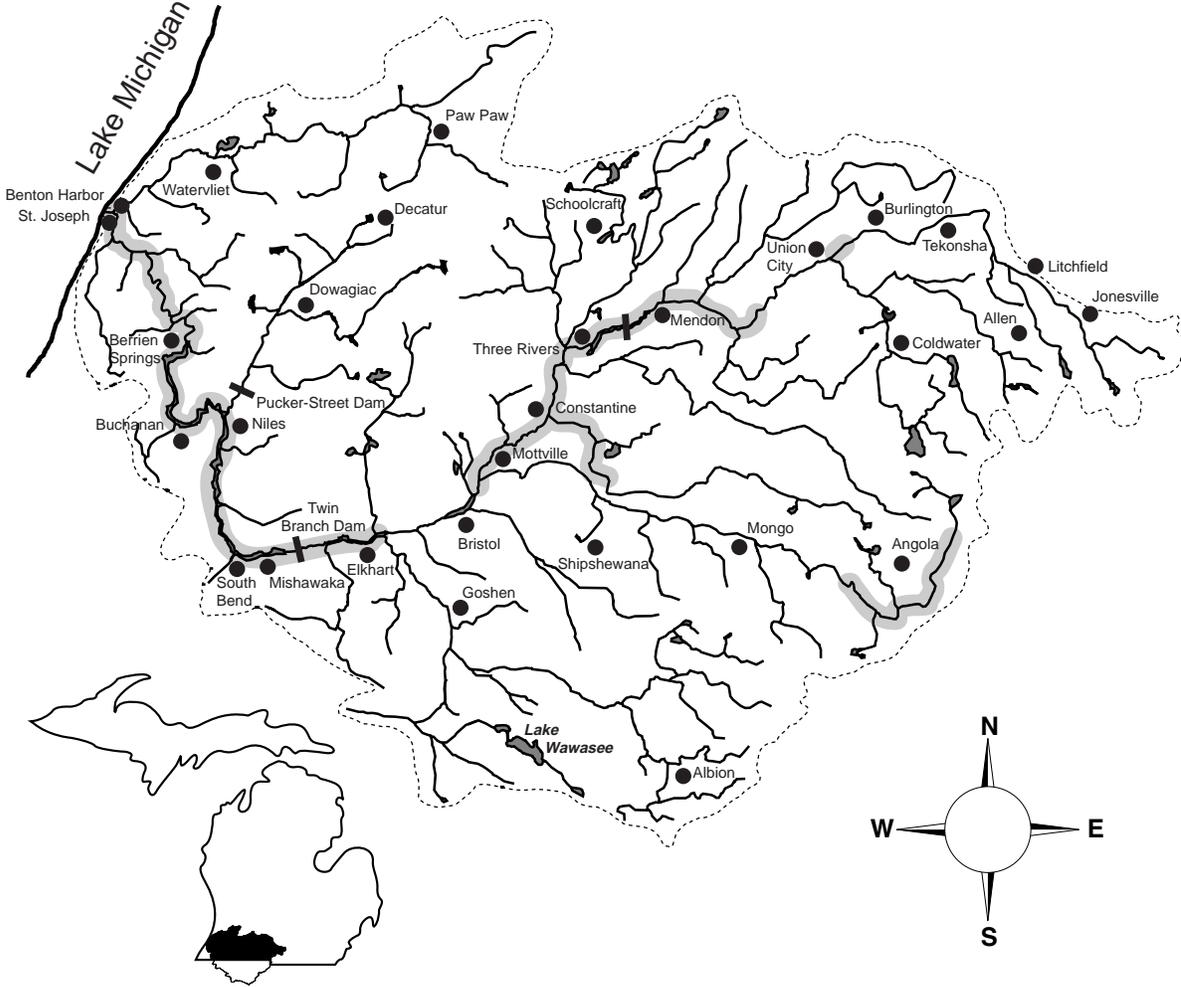


Figure 28.—Reaches in St. Joseph River with fish consumption advisories. Data from Michigan Department of Community Health and Indiana Department of Health.

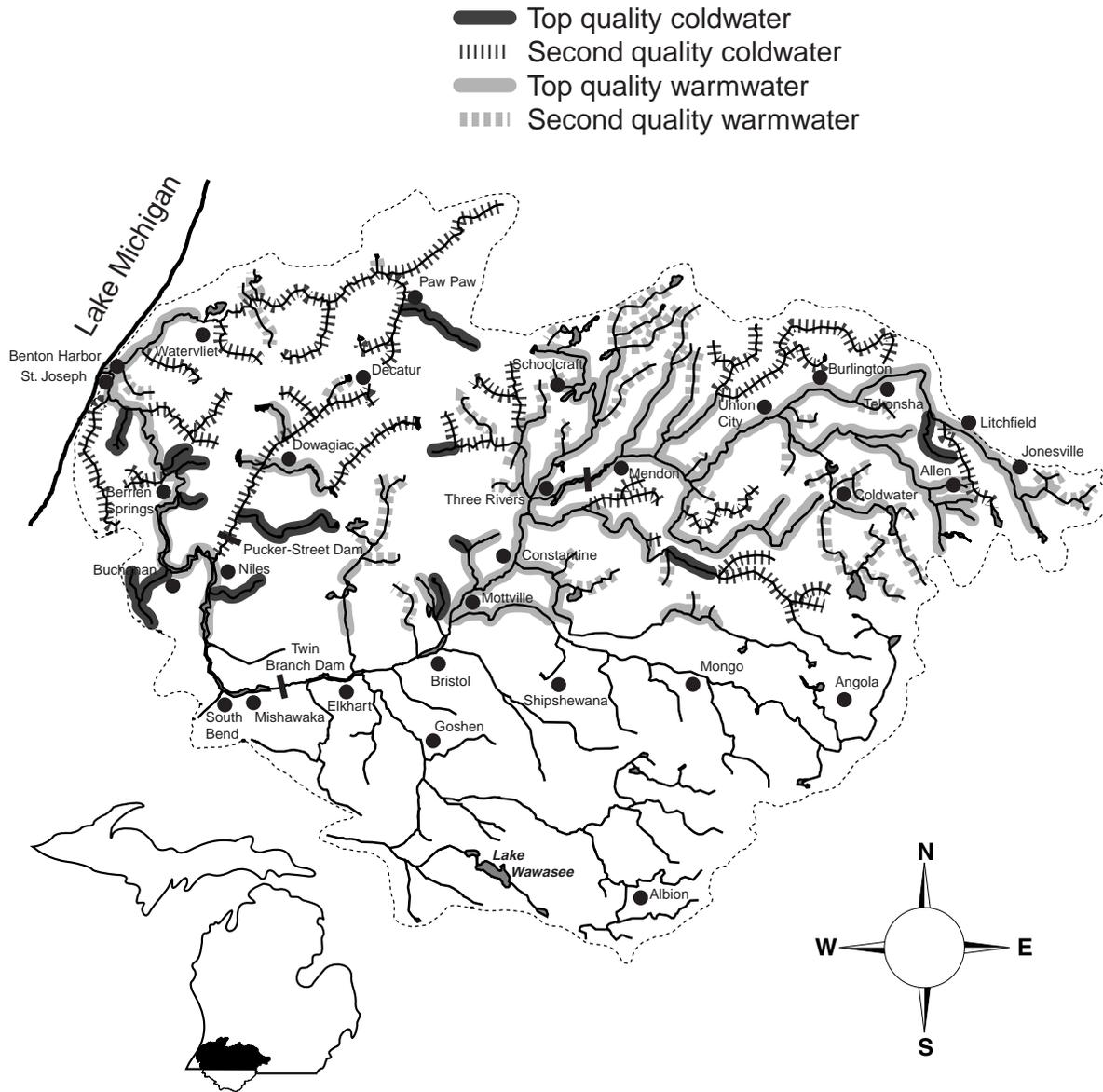


Figure 29.—Michigan Department of Natural Resources, Fisheries Division, stream classifications, 1964. Indiana did not classify streams in this way.

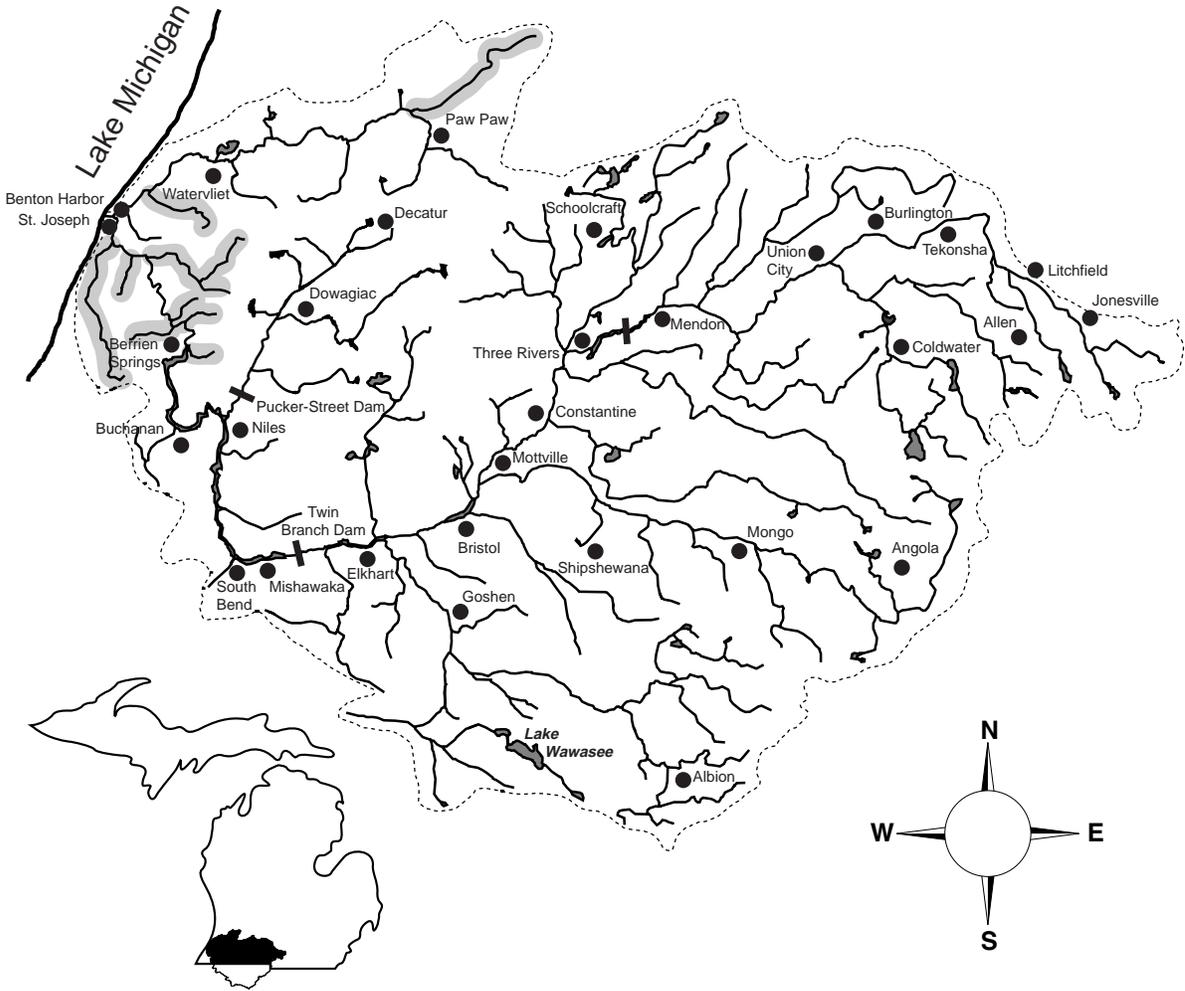


Figure 30.—Streams with natural reproduction of salmon and steelhead in St. Joseph River watershed. Data from Michigan Department of Natural Resources, Fisheries Division.

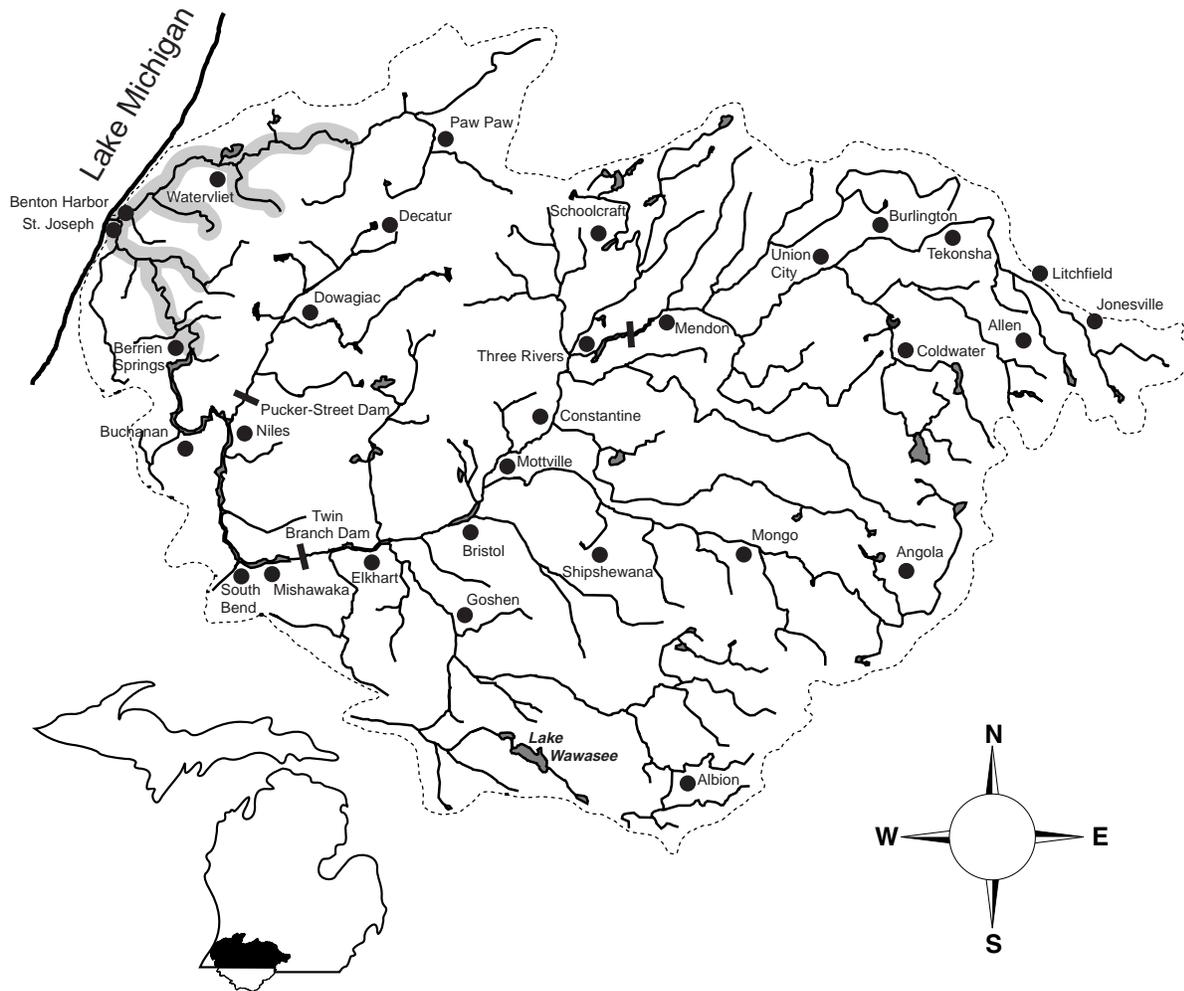


Figure 31.—Streams that sea lampreys have been found in St. Joseph River watershed. Data from United States Fish and Wildlife Service.

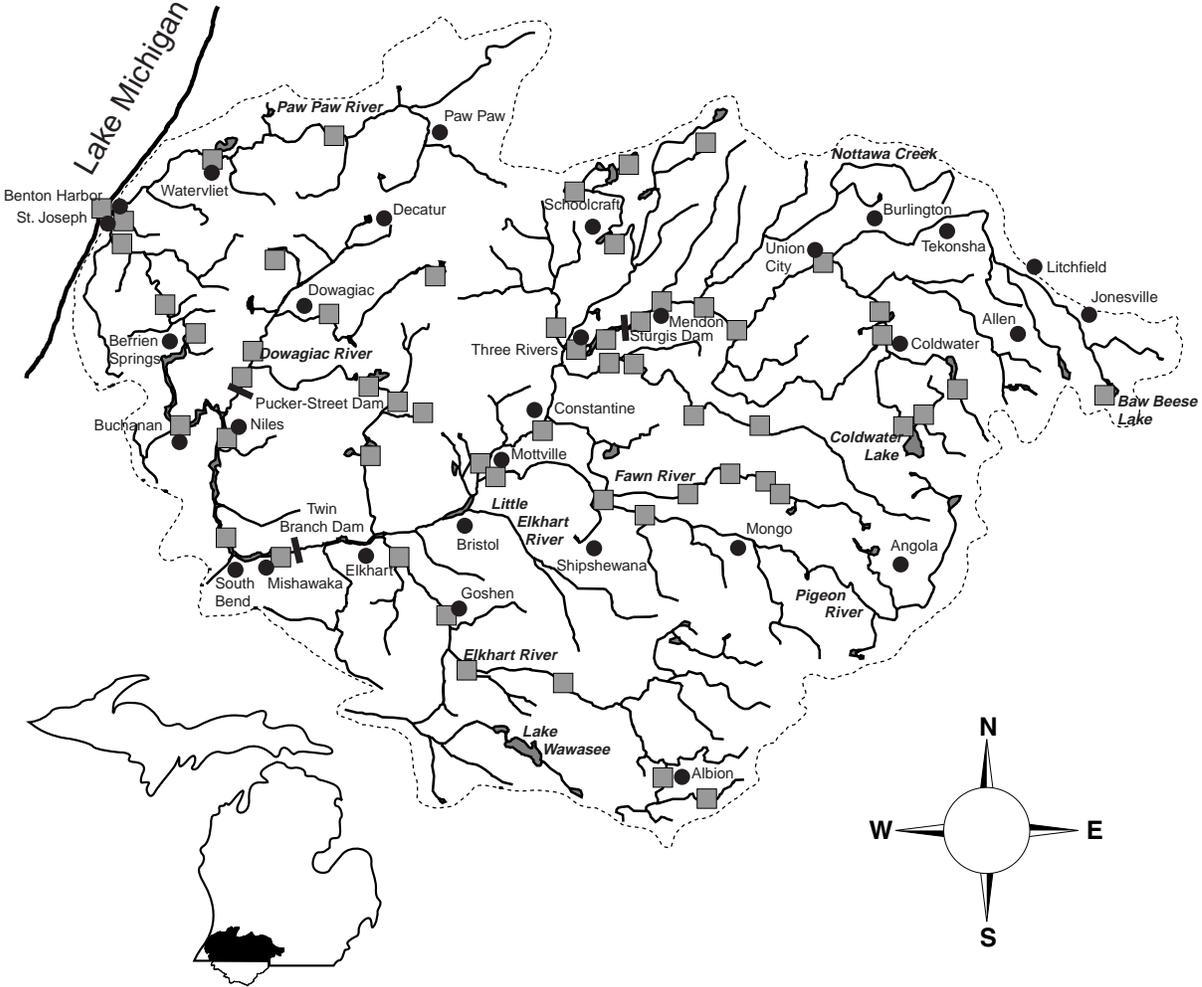


Figure 32.—Canoe and boat launches in St. Joseph River watershed.

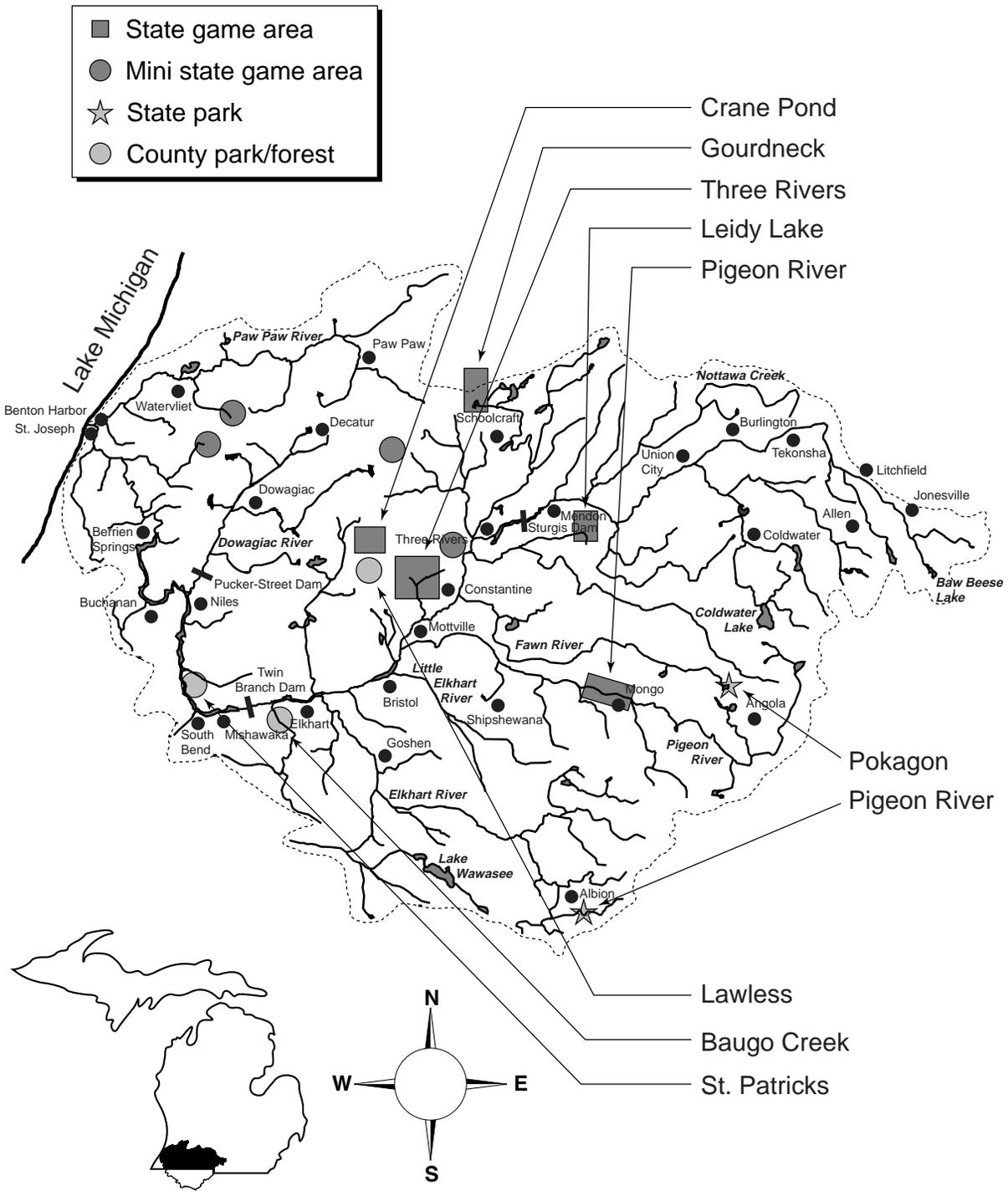


Figure 33.—Large public lands in St. Joseph River watershed.

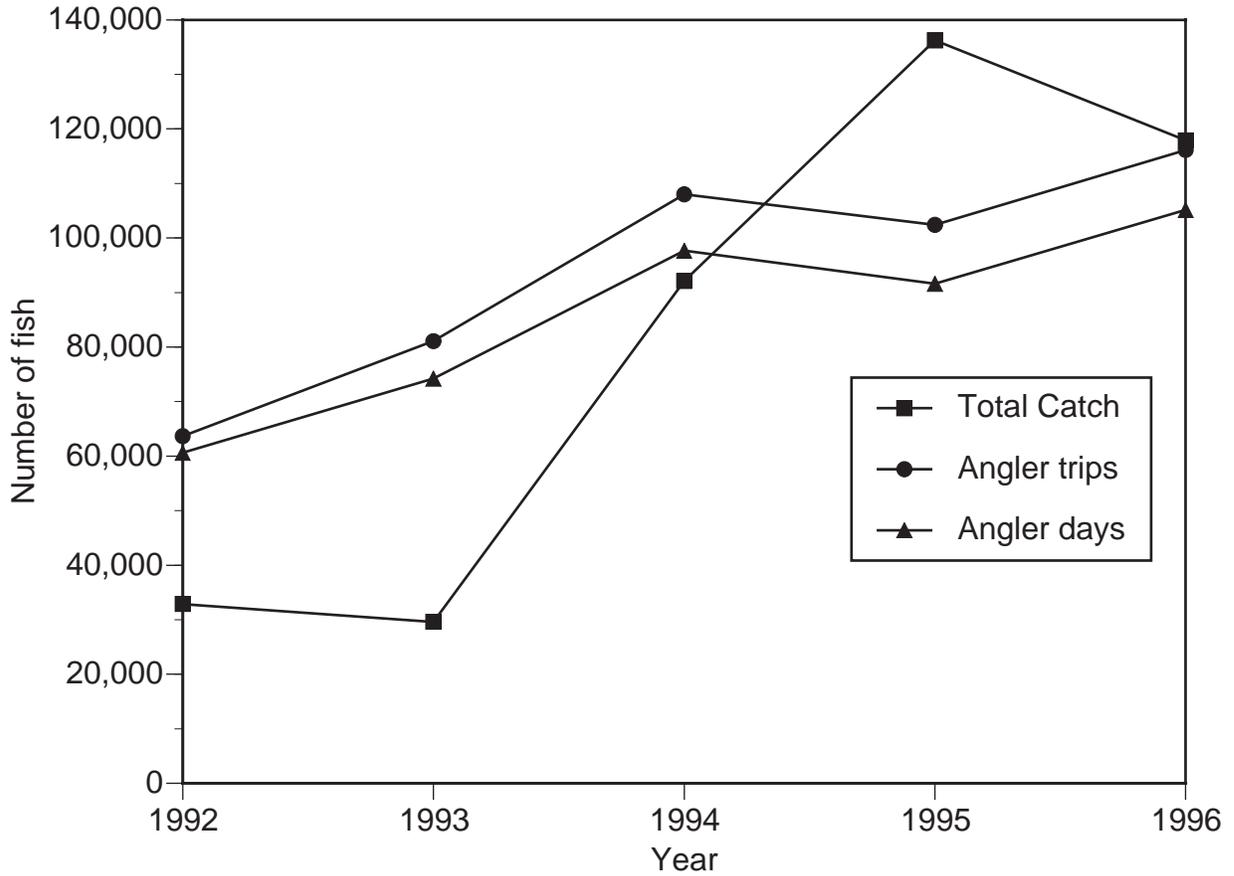


Figure 34.—Estimated total catch and effort (angler hours, trips, and days) for lower St. Joseph River, 1992-96. Data from Michigan Department of Natural Resources, Fisheries Division and Indiana Department of Natural Resources, Fisheries Section.