

Water Shortage Task Force topic- desired baseline flow maintenance for in-stream uses

Associated Regulations/Statutes

IC 14-25-7-14

Minimum flows of streams; minimum levels of ground water

Sec. 14. (a) Subject to subsection (c), the commission may determine and establish the minimum flows of streams, taking into account the varying low flow characteristics of the streams of Indiana and the importance of instream and withdrawal uses, including established water quality standards and public water supply needs.

(b) The established minimum flows of streams:

- (1) are those naturally occurring, as determined by the commission; and
- (2) may be calculated to reflect seasonal and regional variations.

(c) For boundary water, the commission may develop mutually agreeable minimum flows of streams in cooperation with the boundary state.

(d) The commission may determine and establish the minimum level of ground water in aquifers below which further withdrawals would be significantly harmful to the water resource of the area.

As added by P.L.1-1995, SEC.18.

IC 14-25-14-2

Task force established; purposes; reports

Sec. 2. (a) The water shortage task force is established for the following purposes:

- (1) To implement the 1994 water shortage plan when necessary.
- (2) With the involvement of affected parties, to update, expand, and revise the 1994 water shortage plan to include a low flow and drought priority use schedule.
- (3) To accomplish the following:
 - (A) Establish procedures to monitor, assess, and inform the public about the status of surface and ground water shortages for all uses in all watersheds, especially shortages due to drought.
 - (B) Recommend a state policy on desired baseline flow maintenance for in-stream uses.

Definitions

7Q10 The 7Q10 refers to the lowest consecutive 7 day streamflow that is likely to occur in a ten year period.

61Qmed (May-October) The median flow estimated by using the lowest 61-day flows occurring over the May to October period of each year.

Q80 The Q80 refers to the percent of time streamflow was equaled or exceeded during a given period. The Purdue University 1990 report stated that a preliminary analysis indicated a relationship between 61Qmed (May-October) and 80% exceedance flows.

Water Shortage Task Force topic- desired baseline flow maintenance for in-stream uses

Indiana Instream Flow Analysis Examples of Four Streams (Kankakee River at Dunn's Bridge; Maumee River at New Haven; Trail Creek at Michigan City, a salmonid stream; and Blue River at Fredericksburg). The tables below show the 50% exceedance values, the 75% exceedance values, the 61Qmed (May-October), the 80% exceedance values, the 90% exceedance values, the 95% exceedance values, and the 7Q10. All of the data is from the U.S. Geological Survey (USGS) except for the Purdue University (1990) calculation of 61Qmed (May-October).

Kankakee Basin: Kankakee River at Dunn's Bridge (all flows in cubic feet per second)
(1948-2006 USGS calculation period; 1948-1988 Purdue University calculation period)

50%	75%	61Qmed (May- October)	80%	90%	95%	7Q10
1131	719	611	659	532	456	348

Great Lakes Basin: Maumee River at New Haven (all flows in cubic feet per second)
(1956-2006 USGS calculation period; 1956-1988 Purdue University calculation period)

50%	75%	61Qmed (May- October)	80%	90%	95%	7Q10
789	309	196	251	160	126	78

Great Lakes Basin: Trail Creek at Michigan City (all flows in cubic feet per second)
(1969-1994 USGS calculation period; 1969-1988 Purdue University calculation period)

50%	75%	61Qmed (May- October)	80%	90%	95%	7Q10
56	41	35	39	34	31	24

Ohio River Basin: Blue River at Fredericksburg (all flows in cubic feet per second)
(1968-2006 USGS calculation period; 1968-1988 Purdue University calculation period)

50%	75%	61Qmed (May- October)	80%	90%	95%	7Q10
120.1	36.7	26	27.8	14.6	9.4	3.4