

PROGRESS REPORT

October 1, 1959 to September 30, 1960

Iowa Highway Research Board Project HR-3 Determination of Flood Discharge Characteristics of Small Drainage Areas

Conducted by the Water Resources Division
U. S. Geological Survey, Iowa City, Iowa

Project HR-3 of the Iowa Highway Research Board has been active since October 1, 1950. The project objective is the determination of flood discharge characteristics of small drainage areas. Funds for the project amount to \$10,000 per year of which, by cooperative agreement, the Highway Commission and the U. S. Geological Survey each furnish \$5,000. Previous reports have explained the set-up of the project and these explanations will not be repeated in this report.

Several periods of flooding occurred during the year. At the end of March the heavy snow cover melted and together with accompanying light rain produced floods on practically every stream in the State. The floods, though of considerable magnitude, were generally less than record breaking particularly on the larger streams on which relatively long stream-flow records are available. Local rains in January and again during the spring and summer months also produced flooding of some proportion at various locations within the State.

As a result of the floods, current meter and indirect measurements were obtained to aid in rating the crest-stage gages and to determine peak

flows at miscellaneous locations. The measurements obtained this year and the total obtained to date under the project are listed in the attached table. It was necessary to abandon the field installation at one site in the Perry Creek basin because bridge and channel remodeling made it impractical to define a rating curve for the site.

Inspection and maintenance of the field installations have required a considerable amount of time. In addition, considerable amounts of office time have been spent in computing indirect measurements and in keeping the rating curves at the various stations up-to-date.

The cooperative funds allotted to the project for the 1960 contract year have been completely expended.

H. H. Schwob
Engineer-in-Charge
11/2/60

HR-3 PROJECT MEASUREMENT SUMMARY

Index Area	Crest Stage Gages	Recorders	Current Meter Measurements		Indirect Measurements	
			1960	to date	1960	to date
E. Fk. Iowa River, Hancock County	4		0	37	0	1
English River, Poweshiek County	5		7	25	4	5
Fox & Wyaconda Rivers, Davis County	3	1**	0	9	0	2
Hardin Creek, Greene County	3	1**	8	38	0	2
L. Maquoketa River, Dubuque County	5	1**	0	19	0	8
L. Wapsipinicon River, Howard County	5		0	16	0	0
Mosquito & Silver Creeks, Pottawattamie County	5		5	23	0	5
Otter Creek, Osceola County	6	1*	2	33	0	8
Paint Creek, Allamakee County	4	1* 1**	0	7	0	1
Perry Creek, Plymouth County	3	1**	0	2	0	5
Pine & Buffalo Creeks, Buchanan Co.	5		3	30	0	6
Tarkio Creek, Montgomery County	3	1**	0	4	0	3
Whitebreast Creek, Clarke & Lucas Co.	4		2	21	0	0
Miscellaneous sites	0	0	2	36	6	80
Totals	55	-	29	300	10	126

* Movable recorder installed at crest-stage gage site in the area.

** Permanent recorder at a regular stream-gaging station to be used as a station of the index area. Measurements not included in tabulation.