Final Federal Aid Report for trout stream classification system (1975-1980).

FINAL REPORT

State: West Virginia Project Number: F-10-R-22

Project Type: Survey

Project Title: Stream and Lake Surveys

Period Covered: July 1, 1979 to June 30, 1980

Job Number and Title: Job I-8, Trout Stream Classification

Job Objective: To rate West Virginia's trout streams in a trout stream classification system and to use these classifications for evaluating present and developing future trout management programs and policies.

(a). Activity: In this segment, as in preceding segments, major activities have involved the collection of field data necessary to classify streams. Data needed to complete most stream classifications were maximum summer temperatures. Obtaining these maximums required the placement and retrieval of maximum-minimum thermometers during late summer months. It is important that maximum readings be reliable, as they are weighted three times as much as other parameters in this classification system. Accurate standing crop data were also necessary for many stream classifications.

(b) Target date for achievement: June 30, 1980

(c) Status of progress: On schedule

(d) Significant deviations: None

(e) Recommendations: It is recommended that the project be continued in order to classify all of West Virginia trout streams.

(f) Cost: Total - $25,000 State - $8,750 Federal - $16,250

(g) Remarks: The eight parameters used for classification of West Virginia's trout streams and the numerical rating given to each parameter are presented in Table 1.

(h) Finding and Conclusions: This is a final report for the first five year phase of this project. The objective was to classify streams stocked with catchable trout, and to use these classifications to evaluate programs and policies. Classifying all potential West Virginia trout streams will remain the objective in the recommended continued phase of West Virginia's Trout Stream Classification project.

SUPPLEMENTARY MATERIAL APPENDIX 4

When the job of classifying West Virginia's trout streams was undertaken, the classification of stocked streams was decided on as a beginning point. The number of streams stocked at that time was 154. Since the project was initiated, circumstances that varied the number of streams to be classified are as follows:

1. Additions and/or deletions to the stocked stream list.
2. Necessity of rating native and/or wild trout streams as a means of protection against mining, dredging or proposed road construction.
3. Several sections in particular streams had to be classified independent of one another. Stream ratings often varied from one section to another due to effects from local springs, tributaries or specific pollution discharges.
4. Tailwaters have been deleted from the classification list. In a tailwater regime, temperature and water quality are artificial and their classification would not place them in a management class that would reflect actual trout potential.

The classification system has provided a means for evaluating West Virginia's trout stocking policy. The recent removal of five small streams from the stocking list, that were determined to have a fishable wild or native population, is an example of how this system is being utilized. Three streams, being repeatedly dredged within the stocked sections, have been removed from the stocking list based on the quality of habitat. Three streams have been added to the stocking list which were classified as management class three. Also, several streams were found to be better suited for trout than previously expected, changing the stocking status from a warmwater stream to a Coldwater stream. More trout were stocked and fishermen were allowed to creel six trout instead of four.

Table 1. Parameters used in classification of West Virginia's trout streams.

	Numerical Ratings			
Parameter	**3**	**2**	**1**	**0**
Pollution	None	Light	Moderate	Severe
Fish Species Present	3 or less	4-8	9-12	12+
Standing Crop (lbs./acre)	+100	50-100	25-50	<25
Temperature (X) °F	<70	71-75	76-80	80+
pH	+7.5	7.0-7.5	6.0-6.9	<6.0
Esthetics	Excellent	Good	Fair	Poor
Bottom Composition	Excellent	Good	Fair	Poor
Stream Cover	Excellent	Good	Fair	Poor

The numerical rating of eight parameters for each stream are totaled and the stream is classified as one of the four following management classes.

Class 1.	Rating of 22-30	A stream which would be expected to have a native or wild trout population. No trout stockings should be made in these streams. If trout are not present, consideration will be given to establishing them by stream reclamation and fingerling stockings.
Class 2.	Rating of 16-21	A stream which should have trout carryover and may have some successful trout spawning. Such streams should receive fingerling stockings and/or "put-and-take" stockings.
Class 3.	Rating of 7-15	A stream capable of supporting trout through the spring and early summer. "Put-and-take" trout stockings are necessary to provide a trout fishery.
Class 4.	Rating of 6 or less	A stream which will not support trout throughout much of the year. Such streams should either not be stocked or be stocked as a warmwater stream. Streams in this category should be reviewed closely before trout are stocked

SUPPLEMENTARY MATERIAL APPENDIX 4

A completed West Virginia trout stream classification form for North River, Hardy County, is presented in Table 2.

All streams classified during the past five years of the project along with their rating and classification are presented in Table 3. The 53 trout streams classified in this segment are indicated by an asterisk. Individual classification forms for each trout stream are on file.

Table 2.

WEST VIRGINIA TROUT STREAM CLASSIFICATION FORM

STREAM: North River TRIBUTARY OF: Cacapon River

CODE: PC-7 COUNTY: HARDY DISTRICT: II

RATED BY: GERALD LEWIS DATE: 2/13/79

	PARAMETER	RATING	DESCRIBE &/OR DATA
1.	POLLUTION	3	Field Observations
2.	NUMBER SPECIES	0	Stream Survey 10/78-14 species
3.	STANDING CROP	1	Stream Survey 10/78 42 lbs./acre
4.	TEMPERATURE (3X)	0	Maximum 92° recorded on 8/31/77 with max-min thermometer
5.	PH	2	Fish distribution reports 7.5
6.	ESTHETICS	2	Field Observations
7.	BOTTOM COMPOSITION	2	Field Observations
8.	STREAM COVER	2	
	TOTAL	**12**	

MANAGEMENT CLASS — III

PRESENT MANAGEMENT — Stocked Monthly

SUPPLEMENTARY MATERIAL APPENDIX 4

	SCALE			
	3	2	1	0
1. Pollution	None	Light	Moderate	Severe
2. Number Species Present	3 or less	4.8	9-12	12+
3. Standing Crop	+100	50-100	25-50	-25
4. Temperature (3X)	-70	71-75	76-80	80+
5. pH	+7.5	7.0-7.5	6.0-6.9	-6.0
6. Esthetics	Excellent	Good	Fair	Poor
7. Bottom Composition	Excellent	Good	Fair	Poor
8. Stream Cover	Excellent	Good	Fair	Poor

Parameter Description

1. **Pollution** – This parameter rates the amount of pollution present in a stream. Both industrial and domestic sources are considered under this heading. Heavy siltation from man-caused activities will also be considered pollution.

   A rating of severe for pollution will cause a stream to be dropped from consideration. A stream rated as moderately polluted should be investigated closely before considering it for trout stocking.

2. **Number Species Present** – This rates a stream on the number of fish species present. The coldest streams in the state generally contain only 2-3 species. The number of species tend to increase as water temperature increases.

3. **Standing Crop** – This parameter tends to measure the general productivity of a stream. The scale is based on a pounds per acre figure.

4. **Temperature** – This parameter rates a stream on the normal high temperatures that can be expected in that stream each year. The stream is not rated for the highest temperature ever noted in that stream.

   A multiplier of three (3) is used on this parameter since temperature is the single most important factor in determining if a stream has trout potential.

5. **pH** – This parameter rates the general chemical condition as reflected by the alkalinity and acid components. Few Good Trout populations exist in the state at pH of less than 5.5. Population levels tend to increase as the pH increases. Streams are not considered for trout stocking if the pH is less than 6.0.

6. **Esthetics** – This parameter rates the natural beauty of a stream. Esthetics seems top influence many fishermen when selecting a stream to fish. Esthetics has no bearing or influence on the capacity of a stream to support trout and is admittedly of judgmental nature. More than one individual will rate streams that may be in question.

7. **Bottom Composition** – This parameter rates a stream of bottom composition as it relates to aquatic insect production. Some consideration should also be given to amount of spawning area available to trout.

8. **Stream Cover** – This parameter rates a stream on the amount of escape and hiding cover present in a stream. No consideration is given to streamside shade.

Table 3. West Virginia trout streams classified during Project F-10-R-(18-22)

Stream	County	Numerical Rating	Management Class
District I			
Big Sandy Creek (lower)	Preston	15	III
Big Sandy Creek (upper)	Preston	11	III
Blackwater River	Tucker	14	III
*Blaney Hollow	Monongalia	14	III
*Brushy Fork	Barbour	19	II
*Buffalo Creek	Preston	15	III
*Clover Run	Tucker	11	III
Dry Fork (below Rt. 33)	Tucker	17	II
Elklick Run	Tucker	26	I
*Elsey Run	Preston	24	I
*Horseshoe Run	Tucker	18	II
Kings Creek	Hancock	11	III
*Laurel Run	Preston	20	II
*Mill Run	Barbour	22	I
*Morgan Run	Monongalia	19	II
*North Fork Fishing Creek	Wetzel	5	IV
Paw Paw Creek	Marion	5	IV
Red Creek	Tucker	20	II
*Rhine Creek	Preston	16	II
*Roaring Creek	Preston	23	I
*Saltlick Creek	Preston	13	III
*South Fork Fishing Creek	Wetzel	5	IV
Tomlinson Run	Hancock	13	III
Wheeling Creek	Marshall & Ohio	10	III
Whiteday Creek	Marion & Monongalia	17	II
*Wickwire Creek	Taylor	10	III
Wolfe Creek	Preston	20	II
District II			
Big Bullskin Run	Jefferson	23	I
Big Run	Pendleton	26	I
Camp Branch	Hardy	20	II
Cattail Run	Jefferson	23	I
Difficult Creek	Grant	22	I
Dillons Run	Hampshire	14	III
Dumpling Run	Hardy	28	I
Edwards Run	Hampshire	28	I
Evitts Run	Jefferson	174	II
*Flowing Spring Run	Jefferson	20	II
*Signifies streams classified during F-10-R-22			

Table 3 continued.

Stream	County	Numerical Rating	Management Class
Harland Run	Berkeley	21	II
Hawk Run	Hampshire	25	I
Horsecamp Run	Pendleton	23	I
*Laurel Fork	Pendleton	24	I
*Long Marsh Run	Jefferson	20	II
Lost River	Hardy	13	III
Lower Cove Run	Hardy	24	I
Meadow Branch	Morgan	17	II
Middle Creek	Berkeley	13	III
Mill Creek	Mineral	12	II
Mill Creek	Berkeley	13	III
Mill Creek	Hampshire	8	III
Mill Run	Berkeley	13	III
Mill Run	Hampshire	23	I
Moores Run	Hardy	19	II
New Creek	Mineral	19	II
North Fork South Branch	Pendleton & Grant	17	II
North Fork Lunice Creek	Grant	13	III
North Fork Patterson Creek	Grant	22	I
North River	Hardy	12	III
*Opequon Creek	Berkeley	16	II
Rocky Marsh Run	Jefferson & Berkeley	21	II
Seneca Creek	Mineral	23	I
*South Branch (Franklin)	Pendleton	174	II
*South Branch (Smoke Hole)	Pendleton	17	II
South Mill Creek	Grant	15	III
Spring Run	Grant	27	I
Thorne Creek	Pendleton	25	I
Tilhance Creek	Berkeley	20	II
Trout Run	Hardy	23	I
Tuscarora Creek	Berkeley	19	II
Waites Run	Hardy	19	II
*Whites Run	Pendleton	26	I
District III			
Anglins Creek	Nicholas	18	II
Back Fork of Elk River	Webster	15	III
Back Fork of Elk (fish for fun)	Webster	16	II
Big Run	Randolph	20	II
Buckhannon River	Upshur	17	II

*Signifies streams classified during F-10-R-22

Table 3 continued.

Stream	County	Numerical Rating	Management Class
*Cherry River	Nicholas	9	III
Cranberry River	Webster, Nicholas & Pocahontas	19	II
*Deer Creek	Nicholas	18	II
Deer Creek	Pocahontas	12	III
Desert Fork	Webster	19	II
Dry Fork (above Rt. 33 bridge)	Randolph	20	II
East Fork Glady	Randolph	16	II
East Fork Greenbrier	Pocahontas	20	II
Elkwater Fork	Randolph	15	III
Fall Run	Webster	23	I
Five Mile Run	Pocahontas	22	I
Gandy Creek	Randolph	14	III
Gauley River (Headwaters)	Webster & Randolph	20	II
Glady Fork	Randolph	10	III
Hills Creek	Pocahontas	18	II
Hominy Creek	Nicholas	15	III
Knapps Creek	Pocahontas	18	II
Laurel Creek	Nicholas & Greenbrier	20	II
*Laurel Fork	Randolph	196	II
*Laurel Fork	Webster	17	II
*Laurel Run	Pocahontas	18	II
*Laurel Run	Barbour & Randolph	21	II
*Left Fork of Buckhannon	Upshur	22	I
*Left Fork of Holly	Webster	14	III
Left Fork of Right Fork Buckhannon	Randolph & Upshur	15	III
*Left Fork of Right Fork of Little Kanawha	Lewis & Upshur	19	II
*Lilly Fork	Clay & Nicholas	12	III
Little Kanawha (Headwaters)	Lewis & Upshur	18	II
*Little Laurel	Nicholas	21	II
Little River East Fork	Pocahontas	22	I
Little River West Fork	Pocahontas	17	II
Mill Creek	Randolph	21	II
North Fork Deer Creek	Pocahontas	26	I
Right Fork Buckhannon	Upshur & Buckhannon	21	II
Right Fork Little Kanawha	Upshur, Lewis & Webster	15	III
*Right Fork Middle Fork	Upshur	19	II
Shavers Fork (lower)	Randolph	14	III
Shavers Fork (fish for fun)	Randolph	14	III
Shavers Fork (upper)	Randolph	14	III
Sitlington Creek	Pocahontas	16	II

*Signifies streams classified during F-10-R-22

Table 3 continued.

Stream	County	Numerical Rating	Management Class
Slaty Fork Section of Elk River	Randolph	24	I
*Stoney Creek	Pocahontas	21	II
*Signifies streams classified during F-10-R-22			
Sugar Creek	Webster	17	II
Swago Creek	Pocahontas	16	II
Tea Creek	Pocahontas	20	II
Tygart River Headwaters	Randolph	17	II
West Fork Greenbrier	Pocahontas	12	III
Williams River	Webster & Pocahontas	18	II
District IV			
*Anthony Creek	Greenbrier	13	III
Big Clear Creek	Greenbrier	12	III
*Camp Creek	Mercer	21	II
Clear Fork	McDowell	17	II
Culverton Creek	Greenbrier	23	I
Dry Fork (upper)	McDowell	20	II
East River	Mercer	16	II
*Glade Creek of Mann	Fayette	18	II
*Glade Creek of New	Raleigh	19	II
Howards Creek	Greenbrier	11	III
Laurel Creek	Fayette	15	III
*Laurel Creek	Monroe	15	III
*Laurel Run	Greenbrier	18	II
LIttle Clear Creek	Greenbrier	10	III
Marsh Fork	Raleigh	11	III
*Mash Fork	Mercer	17	II
*Meadow Creek	Greenbrier	14	III
Meadow Creek	Summers	17	II
*Mill Creek	Fayette	18	II
Milligan Creek	Greenbrier	26	I
*Mountain Creek	Mercer	18	II
North Fork Anthony Creek	Greenbrier	20	II
North Fork Cherry River	Nicholas & Greenbrier	20	II
Paint Creek	Fayette	13	III
*Panther Creek	McDowell	13	III
*Pigeon Creek	Mercer	22	I
*Pinch Creek	Raleigh	22	I
*Pinnacle Creek	Wyoming	13	I
*Rich Creek (fly fishing only section)	Monroe	23	I
*Signifies streams classified during F-10-R-22			

Table 3 continued.

Stream	County	Numerical Rating	Management Class
Second Creek	Monroe & Greenbrier	196	II
Second Creek (fly fishing only section)	Monroe & Greenbrier	25	I
*South Fork Cherry	Nicholas & Greenbrier	18	II
*Spring Creek	Greenbrier	16	II
Turkey Creek	Monroe	26	I
*Wolfe Creek	Fayette	23	I
Wolfpen Creek	Fayette & Greenbrier	11	III
District V			
Big Huff Creek	Wyoming & Logan	6	IV
East Fork Twelvepole	Wayne	10	III
Spruce Laurel Fork	Boone	8	III
West Fork Twelvepole	Wayne	9	III

*Signifies streams classified during F-10-R-22