

**MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM**

NR Eligible: yes
no

Property Name: USGS Stream Gage Monitoring Station Inventory Number: F-6-141
 Address: West Bank of Monocacy River, 60 feet south of SHA Bridge No. 1006500 Historic district: yes no
 City: Bridgeport, MD Zip Code: _____ County: Frederick
 USGS Quadrangle(s): Taneytown
 Property Owner: United States Geological Service Tax Account ID Number: _____
 Tax Map Parcel Number(s): _____ Tax Map Number: 16
 Project: Replacement of SHA Bridge No. 1005600 Agency: FHWA/SHA
 Agency Prepared By: MD SHA
 Preparer's Name: Anne E. Bruder SHA Architectural Historian Date Prepared: 03/26/2009

Documentation is presented in: Project review and compliance files.

Preparer's Eligibility Recommendation: Eligibility recommended Eligibility not recommended
 Criteria: A B C D Considerations: A B C D E F G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property: _____

Inventory Number: _____ Eligible: yes no Listed: yes no

Site visit by MHT Staff yes no Name: _____ Date: _____

Description of Property and Justification: *(Please attach map and photo)*

The USGS Stream Gage Monitoring Station on the west bank of the Monocacy River, Bridgeport, Frederick County was constructed in 1942. It was not the first stream gage monitoring station in either the United States or in Maryland. The first station was constructed in 1889 at the direction of USGS Director John Wesley Powell. Powell was the director of the USGS between 1881 and 1894. The first station in Maryland that continues in use is located in the Potomac River near US 15 over the Potomac at Point of Rocks. It was constructed in 1895. Nationwide there are approximately 7000 stream gage monitoring stations used to measure water flow and provide scientific information used by various government agencies such as the Weather Service and state Departments of Transportation. There are two types of data collection either by float and counterweight or by pressure sensors. The USGS Stream Gage Monitoring Station in Bridgeport is a float and counterweight example.

The USGS Stream Gage Monitoring Station retains integrity of location, design, setting, materials, workmanship and association. Research was conducted for evaluation of the structure under the National Register of Historic Places Criteria A and C. Under NRHP Criterion A, the USGS Stream Gage Monitoring Station represents the work of the US Government to scientifically study streams and water flow in the United States and provide the information for the benefit of its citizens, as well as the nation's water and land. However, since it is one of 7000 stations across the country and one of 125 in the State of Maryland, it alone does not

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended <input type="checkbox"/>	Eligibility not recommended <input checked="" type="checkbox"/>
Criteria: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	Considerations: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G
MHT Comments:	
<u><i>Jim Fulmer</i></u> Reviewer, Office of Preservation Services	<u>6/26/09</u> Date
<u><i>[Signature]</i></u> Reviewer, National Register Program	<u>6/29/09</u> Date

explain the significance of these studies, and it is not individually eligible for the NRHP under Criterion A. Under NRHP Criterion C, while the building retains its integrity of design, materials and workmanship, it is a utilitarian type of building constructed of concrete block. As a result, it lacks the distinctive characteristics of a type, period of method of construction and is not the work of a master nor does not possess high artistic value. Research conducted under NRHP Criterion B did not identify any person of local, state or national significance associated with the construction of the USGS Stream Gage Monitoring Station. NRHP Criterion D was not investigated as part of this study.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ Eligibility not recommended _____

Criteria: ___ A ___ B ___ C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Reviewer, Office of Preservation Services

Date

Reviewer, National Register Program

Date

Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. F-6-141

1. Name of Property (indicate preferred name)

historic United States Geological Survey (USGS) Stream Gage Monitoring Station
 other USGS Hydrologic Unit 02070009

2. Location

street and number West Bank of Monocacy River, 60 feet south of SHA Bridge 1006500 not for publication
 city, town Bridgeport, MD vicinity
 county Frederick

3. Owner of Property (give names and mailing addresses of all owners)

name USGS
 street and number 5522 Research Park Drive telephone 443-498-5535
 city, town Baltimore state MD zip code 21228

4. Location of Legal Description

courthouse, registry of deeds, etc. Frederick County Courthouse liber folio
 city, town Frederick, MD tax map 16 tax parcel tax ID number

5. Primary Location of Additional Data

- Contributing Resource in National Register District
 Contributing Resource in Local Historic District
 Determined Eligible for the National Register/Maryland Register
 Determined Ineligible for the National Register/Maryland Register
 Recorded by HABS/HAER
 Historic Structure Report or Research Report at MHT
 Other:

6. Classification

Category	Ownership	Current Function	Resource Count
<input type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input type="checkbox"/> agriculture	Contributing
<input type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> commerce/trade	<u> 1 </u>
<input type="checkbox"/> structure	<input type="checkbox"/> both	<input type="checkbox"/> defense	Noncontributing
<input checked="" type="checkbox"/> site		<input type="checkbox"/> domestic	<u> </u> buildings
<input type="checkbox"/> object		<input type="checkbox"/> education	<u> </u> sites
		<input type="checkbox"/> funerary	<u> </u> structures
		<input checked="" type="checkbox"/> government	<u> </u> objects
		<input type="checkbox"/> health care	<u> </u> Total
		<input type="checkbox"/> industry	
		<input type="checkbox"/> landscape	
		<input type="checkbox"/> recreation/culture	
		<input type="checkbox"/> religion	
		<input type="checkbox"/> social	
		<input type="checkbox"/> transportation	
		<input type="checkbox"/> work in progress	
		<input type="checkbox"/> unknown	
		<input type="checkbox"/> vacant/not in use	
		<input checked="" type="checkbox"/> other: Science	
			Number of Contributing Resources previously listed in the Inventory
			<u> 0 </u>

7. Description

Inventory No. F-6-141

Condition

excellent deteriorated
 good ruins
 fair altered

Prepare both a one paragraph summary and a comprehensive description of the resource and its various elements as it exists today.

The United States Geological Survey (USGS) stream gage monitoring station stands on the west bank of the Monocacy River in Bridgeport, Frederick County, Maryland, approximately 60 feet south of the existing concrete-arch bridge, Bridge No. 1006500 that was built in 1925. The station is a modest, one-story, one-bay-wide by one-bay-deep, concrete-masonry structure topped with a flat roof. The Maryland Geological Survey (MGS) constructed it in 1942, and it remains in active use.

The United States Geological Survey (USGS) stream gage monitoring station stands on the west bank of the Monocacy River in Bridgeport, Frederick County, Maryland, approximately 60 feet south of the existing concrete-arch bridge, Bridge No. 1006500 that was built in 1925. It is also sited adjacent to the stone abutment ruins of the 1827 Taneytown to Emmitsburg Turnpike covered bridge. T

The station is a modest, one-story, one-bay-wide by one-bay-deep, concrete-masonry structure topped with a flat roof. The station is reached by a flight of poured-concrete steps and landing, which are flanked by metal railing. The metal entry door features a metal plaque that indicates it is co-owned and operated by the MGS and the USGS. Originally, the stream monitoring station was funded by the MGS, and the USGS operated (and still does) the monitoring equipment stored inside the gage station, collecting the measurement data and publishing the results.¹

Stream gage monitoring stations use one of two operating systems to sense changes in water pressure as the stream level increases and decreases: a float and counterweight system, or by a system of pressure sensors. The station at MD 140 in Bridgeport is operated using the float and counterweight system. The interior of the top of the gage station contains an electronic data logger with a float and counterweight interfaced on the back of the unit. An intake pipe at the bottom of the station connects to the stream, allowing the floating component of the system to measure the rise and fall of water, sending the ongoing stream-flow measurement to the data logger every 15 minutes.

¹ James P. Reger, Ph.D., Program Chief, Environmental Geology and Mineral Resources, DNR, e-mail correspondence, 3/14/2007.

8. Significance

Inventory No. F-6-141

Period	Areas of Significance	Check and justify below		
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> agriculture	<input type="checkbox"/> economics	<input type="checkbox"/> health/medicine	<input type="checkbox"/> performing arts
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> archeology	<input type="checkbox"/> education	<input type="checkbox"/> industry	<input type="checkbox"/> philosophy
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> architecture	<input type="checkbox"/> engineering	<input type="checkbox"/> invention	<input type="checkbox"/> politics/government
<input checked="" type="checkbox"/> 1900-1999	<input type="checkbox"/> art	<input type="checkbox"/> entertainment/ recreation	<input type="checkbox"/> landscape architecture	<input type="checkbox"/> religion
<input type="checkbox"/> 2000-	<input type="checkbox"/> commerce	<input type="checkbox"/> ethnic heritage	<input type="checkbox"/> law	<input checked="" type="checkbox"/> science
	<input type="checkbox"/> communications	<input type="checkbox"/> exploration/ settlement	<input type="checkbox"/> literature	<input type="checkbox"/> social history
	<input type="checkbox"/> community planning		<input type="checkbox"/> maritime history	<input type="checkbox"/> transportation
	<input type="checkbox"/> conservation		<input type="checkbox"/> military	<input checked="" type="checkbox"/> other: <u>Government</u>

Specific dates 1942 **Architect/Builder** Maryland Geological Survey

Construction dates 1942

Evaluation for:

National Register Maryland Register not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

The United States Geological Survey (USGS) established gage houses that are used for housing recording equipment used to continuously measure the level of the stream over time as it rises and falls. The recorded stream levels are used with physical measurements of the streamflow to develop continuous records of streamflow over time.

“The United States Geological Survey was established on March 3, 1879, a few hours before the mandatory close of the final session of the 45th Congress, when President Rutherford B. Hayes signed the bill appropriating money for sundry civil expenses of the Federal Government for the fiscal year beginning July 1, 1879. The USGS is known for its history of public service and scientific advances. USGS scientists pioneered hydrologic techniques for gaging the discharge in rivers and streams and modeling the flow of complex ground-water systems.”²

“The United States Geological Survey (USGS) began collecting streamflow information in 1889, when the first stream-gaging station was established on the Rio Grande River near Embudo, New Mexico. Personnel from the Irrigation Survey, which was then a branch of the USGS, were directed by John Wesley Powell to develop procedures that could be used to produce reliable streamflow estimates. Powell felt that it was important to inventory the flow of streams in the arid west prior to settlement.” The gage houses that are used for housing recording equipment used to continuously measure the level of the stream over time as it rises and falls. The recorded stream levels are used with physical measurements of the streamflow to develop continuous records of streamflow over time. Examples of streamflow gaging include flood frequency analysis and low-flow/drought conditions. The Weather Service uses the flood frequency analysis to develop flood warnings, while hydrologists use high-flow records when designing bridges and culverts or analyzing stream scour.³

Approximately 125 stream gage stations are currently in operation throughout Maryland. The stream gage station located on the Potomac River at Point of Rocks (at US 15) is the oldest that has remained actively in operation since February of 1895. Others throughout Maryland have remained in operation since the 1920s, such as gage stations at Rock Creek, Deer Creek, Antietam Creek, Conococheague Creek, Wills Creek, and Seneca Creek.⁴

The Maryland Geological Survey (MGS) constructed the stream gage station in 1942, and it remains in active use. This station in Bridgeport currently receives funding from Frederick County to gather data from the station every six to eight weeks.⁵ The Monocacy

² Download from USGS website, USGS History, http://www.usgs.gov/aboutusgs/who_we_are/history.asp accessed March 27, 2009.

³ Websites accessed through Search.usgs.gov March 2009: ks.water.usgs.gov/new/media/events/Iola.briefing.sheet.pdf and md.water.usgs.gov/publications/presentations/md-de-dc_rt98/md-de-dc_rt98.ppt

⁴ Ibid.

⁵ Edward J. Doheny, Chief, Hydrologic Networks Section, USGS, e-mail correspondence, 3/19/2007 and 3/20/2007.

Maryland Historical Trust
Maryland Inventory of
Historic Properties Form

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Name
Continuation Sheet

Number 8 Page 1

River floods frequently and USGS records indicate that the flood of August 24, 1933 reached a stage of about 25 feet. An earlier flood occurred in June 1889, which residents reported to the USGS, but it was not as high as the 1933 flood.

USGS Stream Gage Station, Hydrologic Unit 02070009 has been evaluated for the National Register of Historic Places under Criteria A and C. See attached DOE form for NRHP eligibility determination.

9. Major Bibliographical References

Inventory No. F-6-141

Download from USGS website, USGS History, http://www.usgs.gov/aboutusgs/who_we_are/history.asp accessed March 27, 2009.
Websites accessed through Search.usgs.gov March 2009: ks.water.usgs.gov/new/media.events/Iola.briefing.sheet.pdf and
md.water.usgs.gov/publications/presentations/md-de-dc_rt98/md-de-dc_rt98.ppt
Edward J. Doheny, Chief, Hydrologic Networks Section, USGS, e-mail correspondence, 3/19/2007 and 3/20/2007.
James P. Reger, Ph.D., Program Chief, Environmental Geology and Mineral Resources, DNR, e-mail correspondence, 3/14/2007.

10. Geographical Data

Acreage of surveyed property Less than 1 acre
Acreage of historical setting Less than 1 acre
Quadrangle name Taneytown Quadrangle scale: 1:24,000

Verbal boundary description and justification

60 feet south of SHA Bridge No. 1006500, MD 140 over the Monocacy River, on the west bank of the Monocacy River. Because it is within SHA right-of-way it does not have a separate parcel number.

11. Form Prepared by

name/title	Anne E. Bruder with Stacy Streett		
organization	Maryland SHA	date	March 2009
street & number	707 North Calver Street	telephone	410-545-8559
city or town	Baltimore	state	MD 21202

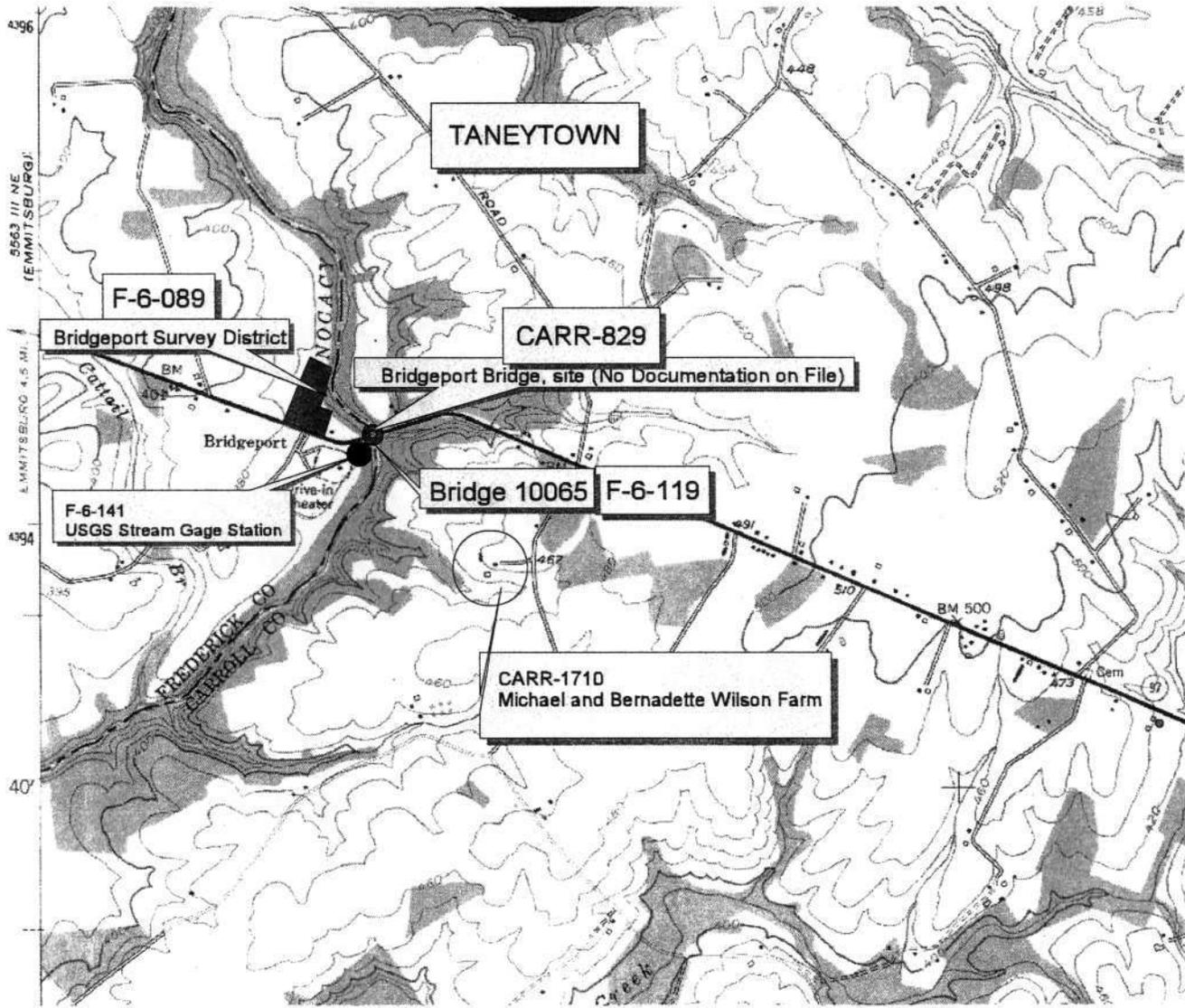
The Maryland Inventory of Historic Properties was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust
Maryland Department of Planning
100 Community Place
Crownsville, MD 21032-2023
410-514-7600

F-6-141

Location Map USGS Taneytown Quad 1:24,000



- Mhtihpcr.shp
- Mhtihpr.shp
- Maryland Historical Trust Easements
- National Register of Historic Places
- USGS Topo Quad Index
- County



0.9 0 0.9 1.8 Miles



F-6-141

USGS STREAM GAGE MONITORING
STATION

FREDERICK CO., MD.

A. BRONDER

11/2008

MDSHPD

LOOKING SOUTHWEST AT NORTH^W
WEST FACIES

1/7

#6-141

USGS STREAM GAGE MONITORING, STA.
FREDERICK CO., MD

A. BRUNER

1/2008

WDSHP

LOOKING SOUTH AT MAIN DECK
IN NORTH FACILE

3/7



F-6-141

USGS STEEL W. CAGE MONITORING
STATION

FREDERICK CO., M.D.

A. BRUDER

W/2008

IND ST PO

LOOKING EAST AT PIPE

3/7



F-6-141

USGS STREAM GAGE MONITORING STN
FREDERICK CO., MD.

A. FREUDER

11/2008

WIND GAUGE

DOOR IN SOUTH FACADE

4/7



F-6-141

USCS STREAM GAGE MAINTENANCE, STA.
A. BREIDEN.
FREDERICK CO., MD

W/2008
MD SAPO

PIPE IN BIVER

5/7



F-6-141

USGS STREAM GAGE MONITORING STN.
FREDERICK CO., MD.

A. BRUNDA

W/2008

MD SAPO

WEST & SOUTH FACIES.

6/7



F-6-141

USGS STREAM GAGE MONITORING STN.

FREDERICK CO., MD

A. BRONDA

1/2008

MD SNPO

EAST FACADE WALKWAY ATTACHED TO
FORMER BRIDGEPORT COVERED BRIDGE
SITE.

7/7