



State of Vermont

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 Department of Forests, Parks and Recreation
 Department of Environmental Conservation
 State Geologist
 RELAY SERVICE FOR THE HEARING IMPAIRED
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 Department of Environmental Conservation

WATER QUALITY DIVISION

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Kyle Jones, Resource Management Specialist
 Cape Cod National Seashore
 South Wellfleet, MA 02663

Dear Kyle,

Thanks for your request for information on water resources in the Marsh-Billings property. It is exciting that NPS is acquiring this valuable property. I was able to dig up a bit of information regarding both The Pogue, and Gulf Stream.

The Pogue:

Enclosed are some data, circa 1966 and 1952! The 11 acre "Pogue" probably should not be considered a quaking bog. Indeed, both ambient pH data and macrophyte lists from these old survey sheets suggest water quality and biota of a pond system. Though it is listed on the NWI as an openwater palustrine wetland, I think you will agree that the old species list does not corroborate that. For what it is worth, it is neat to find such old information, since we have no current data on the Pogue. When (if?) you get new data, please pass it along.

Gulf Stream:

I have enclosed the notations from our 305(b) water quality inventory for the stretch of Gulf Stream along Rt 12 which crosses the Marsh-Billings farm. Our records indicate that designated uses are only partially supported for that stretch of stream, due to siltation from alteration to riparian vegetation, silvicultural activities, and poor gravel road maintenance. The uses considered partially impaired are 'Aquatic Life Use Support,' aesthetics, and contact recreation. When you need more clarification on this, feel free to contact myself, or Cathy Kashanski, who maintains the rivers 305(b) assessment. She is available at the number listed on this letter. The NPS may find itself in a position to effectuate some non-point source controls on the Marsh Billings property to mediate that situation. Re-buffering of the streambank comes to mind immediately as a first, 'do-able' step.

There you have it. Feel free to get in touch should you require more information. Cheers!

Neil

Neil Kamman,
 Aquatic Biologist

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Regional Offices - Barre/Essex Jct./Pittsford/Rutland/N. Springfield/St. Johnsbury

3/31/97

Assessment Comments for Barnard Brook

NON-SUPPORT MILES

Barnard Brook: 1.0 - from dam at Billings Farm upstream one mile - non-support of aquatic biota/habitat due to silt settling out in impoundment. c(1100) s(8800)

PARTIAL SUPPORT MILES

Gulf Stream Brook: 4.2 - from Barnard/Pomfret town line to confluence with Barnard Brook - partial support of biota, aesthetics and contact recreation due to siltation and turbidity from natural, ag. induced and forestry induced streambank erosion, land development near Woodstock, poor gravel road maintenance, and loss of riparian vegetation. c(900,1100) s(1000,2000,3200,7600,7700,8300,8600)

Barnard Brook: 1.5 - from pond below junction with Gulf Stream to mouth- partial support of aquatic biota due to siltation and thermal modification from pond owner annually de-silting pond. c(1100,1400), s(8800)

Barnard Brook: 0.5 - from So. Pomfret downstream to new Pomphret school - partial support of aquatic biota due to siltation from streambank erosion. c(1100) s(7700)

Unnamed trib. to Barnard Brook: 1.0 - partial support of aquatic biota from sediment to brook from town road maintenance. c(1100) s(8300)

INFORMATION SOURCES

John Claussen - Vt. F&W fisheries biologist - noted impairment to Gulf Stream Brook

Gordon Lewis - NRCD Board of Directors (district) - Gulf Stream watershed - ag and residential land use; sees the need to correct streambank erosion/ sedimentation in order to correct/avoid larger problems.

John Bouton - Windsor Co. forester - noted greater level of impairment at higher flows, also noted streambed scouring problems, noted increased rate and amount of deposition over the past 5-6 years (from 1988).

Kevin Kaija - SCS - noted poor gravel road maintenance near Gulf Stream and Unnamed trib. as well as bank erosion problems.

1424-1 (50)
photo ref. 36 - 221

Vermont Fish and Game Service
Reconnaissance Survey
Waterfowl Habitat

Name of area: *The Pogue*

File # *36-1*

Location *Woodstock. Quad 10.5-9.4*
Just N of Woodstock.

Date: *June 16, 1952*

Observers: *McIntosh, Weeden, Atwell*

Size: *15 acres.* *+ 11 ac*

Water conditions:

pH *7.6*

Flow

Fluctuation

Source: *spring*

Bottom:

pH *6*

Type *brick*

Nature of surroundings: *Formerly Hemlock-yellow Birch stand*
Now largely deciduous Forest, 1/2 Pine plantations

Man made effects and use: *Road all the way around not*
Travelled as cars are prohibited. 1 shack, Not
occupied. Area is on a private estate.

Animal life: *Billing's farm*
Waterfowl

Beaver — *cuttings.*
Muskrat

Remarks and recommendations:

Pond is wooded nearly to edge in most places.
a couple of small cattail areas offer the only shelter.
It is posted and no vehicles are allowed.
(No map drawn)

1424-1

photo ref. 36-221 ³

USGS Ref: 36-B-1

WETLAND DATA SHEET

Contact: B. Dawson Time in Area _____ Yrs.

Wetland No. THE POQUE Est. Size 30 Acres ± 11 ac

Existing Area: Yes ☒ No _____ Potential: Yes _____ No 1 Origin: Nat. Beaver

M-M

County Windor Township Woodstock

Types of Waterfowl Use

Fisheries

Use

Nesting H M L N
Migrating H M L N
Feeding H M L N

Warm
Cold
Anad.

H M L N
H M L N
H M L N

Boating H M L N

Hunting

H M L N

Trapping H M L N

Vuln:

H M L N

Present Ownership

Source of Threat Town

Priv. Corp. Public

WATER SUPPLY Auxiliary

Names-Addresses of Owners: Town

Remarks: CHLORINE PUT IN FOR WATER

Date Compiled: 3/15/66 By: Payne

AERIAL RECONNAISSANCE

Wetland Type: _____ Wetland Value: H M L N Potential H M L N

Waterfowl Observed:

Species Pairs Singles Flocks Broods

Remarks: _____

Field Recon: Priority S 1 2 3

Date Compiled: _____ By: _____

Submerged and Floating Plants

Anacharis canadensis	N. variegatum	P. foliosus	
A. occidentalis	Polygonum amphibium natans	P. gramineus	
Bidens beckii	P.	P. illinoiensis	
B. (sp)	P.	P. natans	F
Brasenia schreberi	P.	P. nodosus	
Ceratophyllum demersum	Ranunculus aquatilis	P. obtusifolius	
Chara (sp)	R Spirodela polyrrhiza	P. pectinatus	
Isoetes tuckermanni	Utricularia vulgaris	P. praelongus	
Lemna minor	U.	P. pusillus	
L. trisulea	Vallisneria americana	P. Richardsonii	
Myriophyllum exalbescens	Potamogeton alpinus	P. Robbinsii	
M. (sp)	P. amplifolius	P. zosteriformis	
Najas flexilis	R P. confervoides	P.	
Nitella (sp)	P. crispus	P.	
Nymphaea tuberosa	P. epiphydus	Nymphoides	R
Nuphar advena	C P. filiformis		
	<u>Emergent Plants</u>		
Acorus calamus	E. sp.	R Sagittaria cuneata	
Alisma plantago-aquatica	E.	S. latifolia	R
Asclepias incarnata	E.	S. rigida	
A.	Equisetum fluviatilis	R S.	
A.	Eriocaulon septangulare	Scirpus americanus	
Butomus umbellatus	Eriophorum virginicum	S. atrovirens	
Calla palustris	Heteranthera dubia	S. fluviatilis	
Callitriche hermaphroditea	Hypericum boreale	C S. pedicellatus	
C.	H. virginicum	C S. validus	
Cardamine	Iris versicolor	C S.	
Carex orinata	Juncus balticus	S.	
C. flava	J. effusus	Solanum dulcamara	
C. intumescens	Leersia oryzoides	Scutellaria epilobifolia	
C. rostrata	Lysimachia punctata	Sium suave	
C. striata	Lythrum salicaria	Sparganium americana	
C. Lasiocarpa (?)	F Ludwigia palustris	S. chlorocarpum	
C. Tuckermanni	C Megalodonata beckii	S. eurycarpum	R
Ciuta maculata	Menyanthes trifoliata	S. fluctuans	
Cladium mariscoides	Mimulus ringens	C S. androkedum	F
Cyperus	Peltandra virginica	Spartina pectinata	
C.	Phalaris arundinacea	C Typha angustifolia	
Decodon verticillatus	Pontederia cordata	T. latifolia	C
Dulichium arundinacium	C Potentilla palustris	Zizania aquatica	
Eleocharis acicularis	Rumex brittanica	calamagrostis canadensis	C
E. palustris	R. verticillatus	Galium	C
Glyceria striata	F myosotis	choelea sensibilis	R
	Lysimachia terrestris	Bidens sp.	
	<u>Woody Species</u>	Impatiens	
Acer rubrum	C Cornus sp.	R Ulmus americana	
Acer saccharinum	C.	Vaccinium macrocarpon	
Alnus (sp)	C.	V. oxycoccus	
Cephalanthus occidentalis	Ilex verticillata	Viburnum	R
Chamaedaphne calyculata	R Thuja occidentalis	Salix	R
		spinaea alba	C

Occurrence - A-abundant; F-frequent; C-common; R-rare