Chesapeake Fish Passage Prioritization - Dam Fact Sheet

CFPPP Unique ID: **VA_401** **SMITHFIELD LAKE DAM**

Bay-wide Diadromous Tier	2
Bay-wide Resident Tier	6
Bay-wide Brook Trout Tier	N/A
NID ID	VA09315
State ID	401
River Name	Mount Holly Creek
Dam Height (ft)	19
Dam Type	Earth
Latitude	36.9767
Longitude	-76.6649
Passage Facilities	None Documented
Passage Year	N/A
Size Class	1b: Creek (3.861 - 38.61 sq mi)
HUC 12	Warren Creek-Pagan River
HUC 10	Pagan River-James River
HUC 8	Lower James
HUC 6	James
HUC 4	Lower Chesapeake

Landcover

NLCD (2011)	
% Impervious Surface in Upstream Drainage Area	0.6
% Natural Cover in Upstream Drainage Area	55.89
% Forested in Upstream Drainage Area	38.62
% Agriculture in Upstream Drainage Area	36.2
% Natural Cover in ARA of Upstream Network	48.82
% Natural Cover in ARA of Downstream Network	61.14
% Forest Cover in ARA of Upstream Network	28.37
% Forest Cover in ARA of Downstream Network	20.82
% Agricultral Cover in ARA of Upstream Network	44.07
% Agricultral Cover in ARA of Downstream Network	16.16
% Impervious Surf in ARA of Upstream Network	0.6
% Impervious Surf in ARA of Downstream Network	8.84

Chesapeake Conservancy (2016)	
% Tree Cover in ARA of Upstream Network	44.88
% Tree Cover in ARA of Downstream Network	52.33
% Herbaceaous Cover in ARA of Upstream Network	51.14
% Herbaceaous Cover in ARA of Downstream Network	23.27
% Barren Cover in ARA of Upstream Network	0
% Barren Cover in ARA of Downstream Network	0.81
% Road Impervious in ARA of Upstream Network	0.58
% Road Impervious in ARA of Downstream Network	3
% Other Impervious in ARA of Upstream Network	0.9
% Other Impervious in ARA of Downstream Network	6.83

Metric descriptions can be found at:
http://52.53.143.233/chesapeake-dev/plugins/barrier-prioritization-proto2/images/Metric_Glossary.pdf

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Network, System Type and Condition

Functional Upstream Network (mi)	7.15	Upstream Size Class Gain (#)	0
Total Functional Network (mi)	198.91	# Downsteam Natural Barriers	0
Absolute Gain (mi)	7.15	# Downstream Hydropower Dams	0
# Size Classes in Total Network	3	# Downstream Dams with Passage	0
# Upstream Network Size Classes	1	# of Downstream Barriers	0

NFHAP Cumulative Disturbance Index	High
Dam is on Conserved Land	No
% Conserved Land in 100m Buffer of Upstream Network	29.3
% Conserved Land in 100m Buffer of Downstream Network	1.71
Density of Crossings in Upstream Network Watershed (#/m2)	0.15
Density of Crossings in Downstream Network Watershed (#/m2)	0.23
Density of off-channel dams in Upstream Network Watershed (#/m2)	0
Density of off-channel dams in Downstream Network Watershed (#/m2)	0

Diadromous Fish

Downstream Alewife	Current	Downstream Striped Bass	None Documented
Downstream Blueback	Current	Downstream Atlantic Sturgeon	None Documented
Downstream American Shad	None Documented	Downstream Shortnose Sturgeon	None Documented
Downstream Hickory Shad	None Documented	Downstream American Eel	Current

Presence of 1 or More Downstream Anadromous Species	Current
# Diadromous Species Downstream (incl eel)	3

Resident Fish

Barrier is in EBTJV BKT Catchment	No
Barrier is in Modeled BKT Catchment (DeWeber)	No
Barrier Blocks an EBTJV Catchment	No
Barrier Blocks a Modeled BKT Catchment (DeWeber)	No
Native Fish Species Richness (HUC8)	62
# Rare Fish (HUC8)	2
# Rare Mussel (HUC8)	1
# Rare Crayfish (HUC8)	0

Stream Health

Chesapeake Bay Program Stream Health	FAIR
MD MBSS Benthic IBI Stream Health	N/A
MD MBSS Fish IBI Stream Health	N/A
MD MBSS Combined IBI Stream Health	N/A
VA INSTAR mIBI Stream Health	High
PA IBI Stream Health	N/A

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