Chesapeake Fish Passage Prioritization - Dam Fact Sheet

CFPPP Unique ID: **VA_344** **WILLIS RIVER DAM #9**

Bay-wide Diadromous Tier	5
Bay-wide Resident Tier	2
Bay-wide Brook Trout Tier	N/A
NID ID	VA02910
State ID	344
River Name	Payne Creek
Dam Height (ft)	36.3
Dam Type	Earth
Latitude	37.4824
Longitude	-78.3721
Passage Facilities	None Documented
Passage Year	N/A
Size Class	1a: Headwater (0 - 3.861 sq mi)
HUC 12	Buffalo Creek-Willis River
HUC 10	Upper Willis River
HUC 8	Middle James-Willis
HUC 6	James
HUC 4	Lower Chesapeake

Landcover

NLCD (2011)	
% Impervious Surface in Upstream Drainage Area	0.29
% Natural Cover in Upstream Drainage Area	77.07
% Forested in Upstream Drainage Area	65.52
% Agriculture in Upstream Drainage Area	18.06
% Natural Cover in ARA of Upstream Network	93.5
% Natural Cover in ARA of Downstream Network	79.33
% Forest Cover in ARA of Upstream Network	73.56
% Forest Cover in ARA of Downstream Network	65.28
% Agricultral Cover in ARA of Upstream Network	3.55
% Agricultral Cover in ARA of Downstream Network	16.03
% Impervious Surf in ARA of Upstream Network	0.18
% Impervious Surf in ARA of Downstream Network	0.71

Chesapeake Conservancy (2016)	
% Tree Cover in ARA of Upstream Network	91.14
% Tree Cover in ARA of Downstream Network	79.1
% Herbaceaous Cover in ARA of Upstream Network	5.65
% Herbaceaous Cover in ARA of Downstream Network	15.73
% Barren Cover in ARA of Upstream Network	0
% Barren Cover in ARA of Downstream Network	0.1
% Road Impervious in ARA of Upstream Network	0.51
% Road Impervious in ARA of Downstream Network	0.6
% Other Impervious in ARA of Upstream Network	0.06
% Other Impervious in ARA of Downstream Network	0.78

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)	6.27	Upstream Size Class Gain (#)	0
Total Functional Network (mi)	5437.29	# Downsteam Natural Barriers	0
Absolute Gain (mi)	6.27	# Downstream Hydropower Dams	2
# Size Classes in Total Network	6	# Downstream Dams with Passage	4
# Upstream Network Size Classes	1	# of Downstream Barriers	4

NFHAP Cumulative Disturbance Index	Not Scored / Unavailable at this scale
Dam is on Conserved Land	No
% Conserved Land in 100m Buffer of Upstream Network	15.76
% Conserved Land in 100m Buffer of Downstream Network	11.23
Density of Crossings in Upstream Network Watershed (#/m2)	0.62
Density of Crossings in Downstream Network Watershed (#/m2)	0.84
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	Potential Current	Downstream Striped Bass	None Documented
Downstream Blueback	Potential 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	Potential Curre
# Diadromous Species Downstream (incl eel)	1

Resident Fish

Barrier is in EBTJV BKT Catchment	No
Barrier is in Modeled BKT Catchment (DeWeber)	No
Barrier Blocks an EBTJV Catchment	Yes
Barrier Blocks a Modeled BKT Catchment (DeWeber)	No
Native Fish Species Richness (HUC8)	51
# Rare Fish (HUC8)	0
# Rare Mussel (HUC8)	3
# 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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