

DES has the following suggestions for changes to the UDWS WUP and DMP operation plans dated March 3, 2011 as revised by UDWS and Durham in David Cedarholm's email of March 29, 2011.

Outflow from Wiswall must equal inflow during low flows.

During release flows, stream flow needs to exceed the protected flow threshold for the bioperiod.

In response to the March 29 comments, DES suggests the following changes:

- 1) Operation and measurement of the change in storage by UDWS/Durham may be based on use resulting in a one inch per day decline averaged over seven days with a 2 inch per day maximum.
- 2) Quantification of inflow using the methods defined by UDWS/Durham in their water monitoring plan will be used to define outflow based on inflow.
- 3) The relief flow pulse takes approximately 23 hours to reach the designated river from Pawtuckaway. Testing of flow attenuation will be implemented this summer by DES during which time UDWS/Durham will test their inflow measurement systems (if ready.)
- 4) The relief flow pulse under a Instream Flow management activity will be started 24 hours earlier to account for the delay in flow reaching the Designated River. The release will start the day before flow conditions exceed the catastrophic conditions.

UDWS/Durham may choose to store the released volume for up to the end of the release pulse (72 hours following the release start from Pawtuckaway dam(s).

UDWS/Durham must release sufficient flow to exceed the catastrophic flow conditions for two days. UDWS/Durham must demonstrate that it can quantify, store, and then release for two consecutive days, the difference between the flow at Packers Falls gage and the pre-relief flow discharge plus a minimum of 20% of the difference, such that the resulting release is an average daily discharge exceeding the protected flow magnitude for 48 hours.

- 5) Operation of outflow using stoplogs may include modified stoplogs calibrated to release of partial flows as alternatives to removing/replacing whole stoplog increments by means of notching or boring the stoplogs.