

From: [Brian Madden](#)
To: [Daniel P. Rukakoski](#); [Paul E. Malmrose](#); [George S. Kansas](#); [Matthew E. Davison](#); [Dan R. Buttrick](#)
Subject: FW: Town of East Lyme/City of New London water interconnection, GPDIV-201205981
Date: Monday, November 26, 2012 9:49:02 AM

All,

Please see the response below from Fisheries. They agreed with the assessment, but stated that the in-stream work should occur between June 1 and Sept 30 during low flow periods and to avoid any potential impacts to Bridle Shiner spawning, egg incubation, fry development, and migration.

Apparently, this internal DEEP correspondence from Nov 7th never made its way to Elaine Hinsch to be incorporated within the Nov 20th letter.

Please let me know if there are any questions/comments.

Best,
Brian

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From: Murphy, Brian [mailto:Brian.Murphy@ct.gov]
Sent: Monday, November 26, 2012 9:25 AM
To: 'Brian Madden'
Subject: FW: Town of East Lyme/City of New London water interconnection, GPDIV-201205981

Hi Brian,

Below are my comments on this permit and protective measures for Bridle Shiner.

Brian D. Murphy, Senior Fisheries Habitat Biologist
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Inland Fisheries Division
Habitat Conservation and Enhancement Program
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From: Murphy, Brian
Sent: Wednesday, November 07, 2012 9:26 AM
To: Radacsi, Sara
Cc: Gephard, Steve; Aarrestad, Peter; Barnett, Mindy
Subject: Town of East Lyme/City of New London water interconnection, GPDIV-201205981

Hi Sara,

The application involves the interconnection and transfer of potable water with a “net-neutral” approach, in which excess water from East Lyme will be transferred to New London during the period September 15th through May 15th. Water will be delivered to the Lake Konomoc water treatment plant thereby reducing New London’s withdrawals from Lake Konomoc. Conversely during the period of May 16th through September 14th, New London will provide water to East Lyme, up to 85% of the total quantities that have been transferred and banked in Lake Konomoc. Per this agreement, water from New London WTP to East Lyme cannot exceed 1 million gallons per day in any two consecutive 24 hour periods and East Lyme is required to purchase a minimum of 14,850,000 gallons of water from New London during the May-September period.

The Inland Fisheries Division (IFD) has no significant fisheries resource and instream habitat concerns relative to the water supply aspect of this water diversion. Per prior water diversion permitting, East Lyme is required to maintain specific instream flows within the Pattagansett River related to the operation of groundwater withdrawals at Wells # 5 and 6. As such, this interconnection will ensure adequate water supply for the Town of East Lyme when their groundwater withdrawals are reduced or curtailed due to permitted instream flow release requirements.

Relative to the construction of water distribution infrastructure, the interconnection pipeline will be constructed within the existing roadway or roadway shoulder associated with Routes 85 and 161, Bultertown Road and Sachatello Drive. The pipeline will emerge from the ground and cross above the streams without directly impacting wetlands or watercourses, except at Latimer Brook in which the water main is proposed to be installed to a depth of at least 3 ft. below the existing streambed. Cofferdams and turbidity curtains will be utilized to minimize instream impacts.

Bridle shiner (*Notropis bifrenatus*) which is listed as a State-listed Species of Concern has been documented in Latimer Brook. The bridle shiner matures after one year and lives for approximately 2 years (Harrington 1948; Holm et al. 2001). Spawning occurs toward the end of May to the end of July within shallow water areas less than 2 feet in depth in clearings surrounded by dense vegetation. Bridle shiner are known to prefer silty, sandy substrates (Scott and Crossman 1973). Anecdotal evidence (Jenkins and Burkhead 1994; Holm et al. 2001) indicates that bridle shiner are usually associated in close proximity to emergent macrophytes. IFD records from 1993 indicate that bridle shiner have been documented within upstream areas of the Latimer Brook watershed above Beckwith Pond. A field review determined that habitats at the proposed crossing location were unlikely to support bridle shiner.

As a best management practice, any unconfined instream work within Latimer Brook should be restricted to the period from June 1 to September 30, inclusive. A June 1 through September 30 timeframe can be utilized as an effective mitigation measure for construction related disturbances due to the following reasons: (1) timeframe will serve to protect the spawning, egg incubation, and fry development of resident fishes, (2) timeframe does not interfere with seasonal migratory behaviors, and (3) timeframe coincides with historic low rainfall levels in Connecticut a period in

which instream construction activities such as dewatering, excavation, trenching, and cofferdam placement are most effective.

Regards,

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Literature Cited

Harrington, R. W., Jr. 1948. The life cycle and fertility of the bridled shiner, *Notropis bifrenatus* (Cope). *American Midland Naturalist* 39(1):83-92.

Holm, E., P. Dumont, J. Leclerc, G. Roy, and E. Crossman. 2001. Status of the bridge shiner, *Notropis bifrenatus*, in Canada. *The Canadian Field-Naturalist* 115(4):614.

Jenkins, R. E., and N. M. Burkhead. 1994. *Freshwater fishes of Virginia*. American Fisheries Society, Bethesda, Md.

Scott, W.B. and E.J. Crossman. (1973) *Freshwater Fishes of Canada*. Bulletin 184. Fisheries Research Board of Canada, Ottawa.