

Alternative Analysis Table
Lacustrine Resources
Luzerne County

Lacustrine Resource ID and Crossing Number ¹	Watercourses/ Lake Name	Ch 93 Designated/ Existing Use ²	Wild Trout ³	Stocked Trout ⁴	Milepost ²	Latitude	Longitude	Primary Pipeline Crossing Method ³	Secondary Pipeline Crossing Method ³	Tertiary Pipeline Crossing Method ³	Temporary Equipment Crossing	Geology Constraints	Topography Constraints	Insufficient Workspace to Stage Trenchless	Practicality	Other (See Justification)	Implementing Trenchless Technology	Routing to Avoid/Minimize (a/m)	Crossing at Narrowest Location	Co-Locating	Reducing LOD (a/m)	Minimizing Construction Duration	Adhering to Construction Timing Windows	Implementing BMPs	Justification		
052115_JC_1001_P_MA	Lehigh River	HQ-CWF, MF	III	-	23	41.131387	-75.688235	FX	DPX	DPX	N/A		X			X			X				X	X	X	X	Steep slopes north of the crossing (35%) and south of the crossing (16%) present challenges to trenchless methods. HDD launch & receiving pits would need to be sited 1 foot above water level. Variability of geotechnical materials also challenge the feasibility of Direct Pipe, Microtunnel and Conventional boring methods. See site-specific justification discussion in Section 12.6 of the Alternatives Analysis (Lehigh River/Reservoir).

Notes:

1. In instances where a watercourse is crossed by the proposed pipeline or workspace multiple times, crossing numbers (e.g. "-1", "-2") have been added to the Watercourse ID.

Watercourse ID Key: P = perennial, I = intermittent, E = ephemeral, MA = major, IN = intermediate, MI = minor, C = canal, D = ditch

2. All route deviations implemented after the FERC Certificate Application are denoted with an "R" and indicate a MP equation. MPs with an "R1" indicate route deviations implemented and provided to FERC prior to the issuance of the DEIS. MPs with an "R2" indicate route deviations implemented as part of the September 2016 Route Update. MPs with an "R3" indicate route deviations implemented post-FERC Certificate issuance. All MPs without an "R" indicate that the route has not changed since the Certificate Application.

3. Crossing Type Key for Watercourse Channels:

• DPX = Dam-and-Pump Crossing

• HDD = HDD Crossing