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Taixi Xu* (txu@spsu.edu), 1100 S. Marietta Parkway, Southern Polytechnic State University,
Department of Mathematics, Marietta, GA 30060. *Finite-Dimensional Integrable Systems*
Associated with the Modified Dispersive Water Wave Equation.

In the paper, we nonlinearize the Lax pairs for the higher order modified dispersive water waves equations by Bargmann constraints and then give the finite dimensional completely integrable Hamiltonian systems associated with this hierarchy. We also give the involutive representation of the solutions to these equations. (Received September 20, 2007)