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P. Jameson Graber* (pjpg140130@utdallas.edu), Naveen Jindal School of Management, The University of Texas at Dallas, 800 West Campbell Rd, SM30, Richardson, TX 75080. *Systems of quasilinear parabolic equations in mean field games.*

We consider systems of quasilinear parabolic equations of Hamilton-Jacobi/Fokker-Planck type. In contrast to standard mean field games, in which there is only one pair of equations, we consider multiple equations coupled by way of the quasilinear term. The model therefore characterizes a mean field Nash equilibrium multiple populations, each characterized by a different strategy. Combining the methods developed by Bensoussan and Frehse for Nash games with more recent techniques from mean field game theory, our goal is to show the existence of smooth solutions under standard assumptions on the coupling. (Received January 17, 2015)