The Partnership for Reform in Science in Mathematics (PRISM) Phase I was a large scale comprehensive MSP with a focus on implementation of ten integrated strategies involving 17,000 teachers and over 500 higher education (IHE) faculty. In PRISM Phase II, collaborative research teams systematically investigated the most successful strategies from PRISM Phase I: 1) culture change in higher education and 2) the implementation and impact of learning communities involving both K-12 and IHE faculty. Within these two projects, mathematicians assumed a variety of roles including development of the state level K-12 math standards, designing courses and co-teaching with exceptional K-12 teachers, engaging in professional learning communities focused on effective teaching of mathematics, and engaging in collaborative research teams. Evidence of positive impact includes changes in departmental culture, increased use of student centered teaching practices, development of skill in classroom research, and improved student success at both the K-12 and higher education level. Armstrong continues to implement successful research focused leaning communities through the support of the provost as well as through our Noyce grant: Building STEM Teachers through Cohorts and Communities. (Received September 25, 2012)