1125-05-2506 **Brent Gorbutt***, bgorbutt@gmu.edu. On the equivariant K-theory of type A Peterson varieties. We reprove the Monk formula for the S^1 -equivariant cohomology of type A Peterson varieties proved by Harada-Tymoczko using a formula developed by Goldin-Knutson. We then explore the S^1 -equivariant K-theory of type A Peterson varieties. (Received September 20, 2016)