Imnaha MPG Multivariate CCM with spawners included in the attractor reconstruction ec3 r rec_n ec4_ ec5 0.50 flow 0.25 0.00 0.50 hatch 0.25 0.00 Time series Jan Hatchery spring Smelt CPUE 0.50 Feb Hatchery summer Smelt ssb npgo 0.25 Mar Hatchery total SRKW J pod 0.00 CSL Bonneville Dam SRKW K pod Apr May CSL haulout SRKW L pod Cross-mapping correlation, p 0.50 CSL males Jun SRKW KL pods pdo HS aerial survey Jul SRKW JKL pods 0.25 HS Bonneville Dam SRKW deaths Aug 0.00 Sep HS Stock assessment SRKW births Oct SSL aerial survey River mean discharge 0.50 pinn Nov SSL Bonneville Dam River peak flow 0.25 SSL rookery OR raw Dec River gage hight 0.00 PDO window **TOT Bonneville Dam** River peak flow day NPGO year CSL pups 0.50 smelt 0.25 95% ρ 0.00 True False 0.50 SRKW 0.25 -0.00 -0.50 up48 0.25 0.00 012345678 012345678 012345678 012345678

Environmental variable offset, year