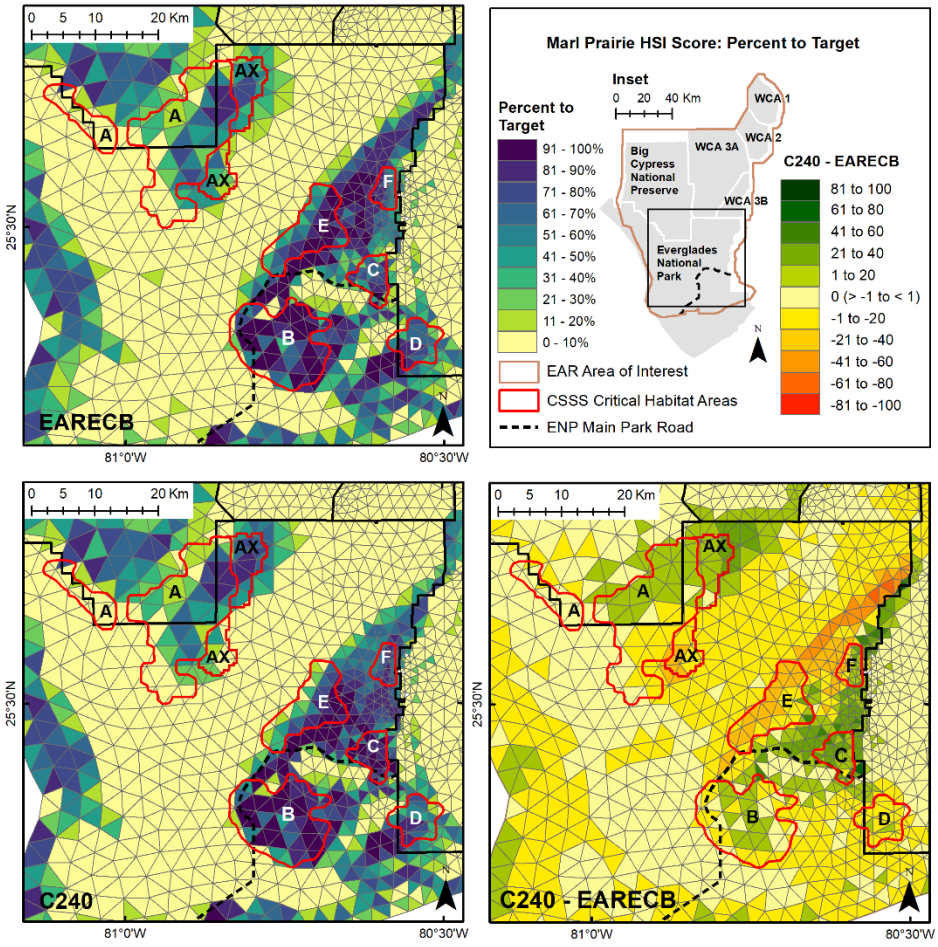
USGS Joint Ecosystem Modeling (JEM) comments on EAA Reservoir WR Tech Doc

25 June 2020

- Marl Prairie
  - Figure 4-34. On page v and page 44: Caption should read, “the differences in percent to target between the ECB and Alternative", not percent differences between
  - There is an updated version of Figure 4-34, see below



- American alligator
  - Page 51: “A habitat suitability index developed by RECOVER for the American alligator” should read, **“A habitat suitability index developed for the American alligator, and used for RECOVER, can predict...”** and the model citation as follows should be included, Shinde et al. 2014: Shinde, D., L. Pearlstine, L.A. Brandt, F.J. Mazzotti, M.W. Parry, B. Jeffery, and A. LoGalbo. 2014. Alligator Production Suitability Index Model (GATOR–PSIM v. 2.0): Ecological and Design Documentation. South Florida Natural Resources Center, Everglades National Park, Homestead, Florida, USA. Ecological Model Report. SFNRC Technical Series 2014:1.

- Apple Snail
    - **Section 4.3.5 Apple Snail**, page 55: This sentence: "Apple snail habitat conditions increase by approximately 454,000 acres (710 square miles) in northern and central WCA-3A, WCA-3B, and SRS but decrease by 118,000 acres (184 square miles) in eastern WCA-3A during dry years (e.g., 2004) for Alternative C240 compared to the ECB (Figure 4-40b)." should read, **"The number of acres where adult apple snail population numbers are predicted to increase under C240 compared to ECB in a dry year includes approximately 454,000 acres (710 square miles) in northern..."**
    - Additionally, there is no description of the apple snail model, which is called EverSnail, it can be described briefly as: The apple snail model, EverSnail, quantifies the dynamics of the Apple Snail (*Pomacea paludosa*) population as a function of hydrology and temperature (i.e., habitat conditions). Adult snail population size during a given year is a product of egg production, and thus environmental conditions, from the previous year (Darby et al. 2015).
        - This is the reference for Darby et al. 2015: Darby, P.C., D.L. DeAngelis, S.S. Romañach, K. Suir, and J. Bridevaux. 2015. Modeling apple snail population dynamics on the Everglades landscape. Landscape Ecology 30(8): 1497–1510.
    - Also, was density calculated by your team to lead to this sentence?: "Overall, the apple snail population density increases 41% during the simulation period (1995 to 2005)..." If not then, we suggest to revise to **"Overall, the adult apple snail population numbers increase by 41%..."** to be more explicit.