FWS Learning objectives related to on-channel moving complexes approach

1) For alternatives with in channel habitat that does not include flow releases during the nest initiation period, the learning objective is: **Increase the confidence in the flow vs. nest initiation relationship graph.** There are currently very few data points that feed into that relationship. What is the minimum flow required for nest initiation? Is the relationship influenced by other factors such as island height?
2) There is significant uncertainty related to fledge ratios on the central Platte River due to the limited amount of fledge data available. The learning objective is: **Develop a stronger data driven fledge ratio for terns and plovers nesting on the central Platte River.** Currently, there is not a large amount of fledge data on the central Platte under a wide range of conditions or time period. Predator fencing and trapping occurs on the off-channel habitats but not on in-channel habitat. If predation is a major cause of nest/chick loss, learning could focus on factors believed to increase or decrease predation such as distance to predator perches or in-channel flows. Investigating the cause of nest/chick loss on in-channel habitat will help inform potential management actions. A relationship has not been established between flow and fledge ratio at this time- more data points could result in developing a relationship or increasing confidence that a relationship does not exist.
3) Learning objective: **Develop a stronger relationship for nest initiation and island height.** The MCA approach will use existing island heights (which are variable) to create nesting habitat. Is there any relationship between increased use and higher or lower islands (relative to river stage)? More nesting data on the river will strengthen existing relationships that have been developed.
4) There appears to be questions related to the nest densities for on-channel habitat. Learning objective: **Continue investigating and strengthening the relationship of nest density for on-channel habitat to increase the ability to compare densities of off-channel to on-channel.**
5) Learning objective: **Refine the relationship of island persistence over time.** The period of data for recent in-channel habitat creation has occurred during a period when the frequency of summer high flows has been greater than the historic timeframe. This has increased erosion of in-channel islands and reduced persistence. Investigations should focus on the long-term average for the life of an island and the erosion rates during a long period of time.

As for other hypothesized benefits of the MCA approach, most generally agree that reducing in channel vegetation is good for the Platte River ecosystem and the endangered species that depend upon it. There is more uncertainty regarding the benefits of sediment augmentation, obtaining sediment balance or over supplying sediment. The Service considers sediment balance and over supplying sediment as preferred over sediment deficit. For these reasons, we consider any sediment augmentation to be beneficial to the Platte River ecosystem. Sediment monitoring is expensive and has a high degree of uncertainty (particularly with smaller amounts). For these reasons, we believe our assumption that- increasing sediment availability and abundance will provide benefits to the Platte River ecosystem (regardless of location)- is reasonable and additional monitoring aimed at learning is not needed.