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| **Please rank hypotheses in order of importance (1 – Highest, 22 – Lowest) for learning during the Extension.** | | | |
| Uncertainty: How much of an effect does predation have on PP productivity? | | | |
|  | General Hypothesis **PP1:** Predation is responsible for significant reductions in plover productivity and poses a significant threat to sustaining sufficient long-term plover productivity within the AHR. | | |
|  |  | | Management Hypothesis: **PPM2:** Predator fencing enclosing nesting sites and/or predator deterrent lights are necessary for sustaining sufficient long-term plover productivity within the AHR. |
|  | General Hypothesis **PP3:** Predation increases as sites age. | | |
|  |  | | Management Hypothesis **PPM4**: Allowing OCSW sites to “rest” intermittently is necessary to reduce losses to predation and sustain sufficient long-term plover productivity within the AHR. |
| Uncertainty: Are there enough forage resources at off-channel nesting sites to maintain PP productivity? | | | |
|  | General Hypothesis **PP5:** Additional forage resources are needed along wetted OCSW shorelines to sustain sufficient long-term plover productivity within the AHR. | | |
|  | General Hypothesis **PP6:** Site age reduces forage availability along wetted shorelines at OCSW nesting sites. | | |
|  |  | | Management Hypothesis **PPM7**: Allowing OCSW sites to “rest” intermittently is necessary to allow for replenishment of shoreline forage availability and to sustain sufficient long-term plover productivity within the AHR. |
| Uncertainty: Can we use Program water to maintain suitable WC roosting habitat? | | | |
|  | Management Hypothesis: **WCM1:** Low-magnitude, long-duration flow releases of 1,200 – 2,400 cfs during the germination period can be used to maintain suitable unobstructed channel width for WC roosting when large natural peak flows do not occur? | | |
|  | Management Hypothesis **WCM2**: Late summer short-duration high flow releases of 5,000 – 8,000 cfs for 3 days can be used to create and/or maintain suitable unobstructed channel width for WC roosting? | | |
| Uncertainty: Management of *Phragmites*. | | | |
|  | Management Hypothesis **WCM3**: Annual spraying of *Phragmites* is necessary to create and/or maintain suitable unobstructed channel widths for WC roosting. | | |
| Uncertainty: What conditions influence whether a WC will stop or fly over the AHR? | | | |
|  | General Hypothesis **WC4**: Time of day is the primary driver of WC stopovers with probability of use increasing with decreasing time until dark. | | |
|  | Management Hypothesis **WCM5**: Probability of WC stopping within the AHR increases with increasing flow until flow reaches 1,800 cfs and declines with increasing flow above 2,000 cfs. | | |
| Uncertainty: What conditions influence how long a WC will stop on the AHR? | | | |
|  | General Hypothesis **WC6**: Length of stay at previous stopover is primary driver of WC stopover length with length of stay increasing with decreasing length of stay at previous stopover. | | |
|  | Management Hypothesis **WCM7**: Length of WC stopover within the AHR increases with increasing flow until flow reaches 1,800 cfs and declines with increasing flow above 2,000 cfs. | | |
| Uncertainty: AHR contributions to WC fitness. | | | |
|  | General Hypothesis **WC8**: WC that stop within the AHR are more likely to successfully complete migration (spring and fall), have higher survival rates, and reproduce more successfully than those that fly over the AHR. | | |
|  | General Hypothesis **WC9**: WC with longer stopovers within the AHR are more likely to successfully complete migration (spring and fall), have higher survival rates, and reproduce more successfully than those with shorter stopovers. | | |
| Uncertainty: What is the importance of the AHR to WC survival in the fall vs. the spring? | | | |
|  | General Hypothesis **WC10**: Survival rates differ between WC that stop over in the fall vs. spring. | | |
|  | Management Hypothesis **WCM11**: Prioritizing flow releases during the fall WC migration will increase survival more than flow releases during the spring migration. | | |
| Uncertainty: What is the impact of hydro-stepping on WC use of the AHR? | | | |
|  | General Hypothesis **WC12**: WC length of stay and/or roost locations are influenced by daily flow variability. | | |
|  |  | Management Hypothesis **WCM13:** Reducing or eliminating hydro-stepping by maintaining flows at 1500 cfs during spring and fall WC migration will increase the length of WC stopovers and/or increase use of the western segments of the AHR for WC roosting. | |
| Uncertainty: Program management of river flow to maintain wet meadow hydrology. | | | |
|  | General Hypothesis **WC14**: Natural peak flows from March 1 – June 30 have the largest effect on wet meadow hydrology. | | |
| Uncertainty: How do Program management actions affect non-target listed and non-listed species of concern (species to be identified by USFWS and NGPC)? | | | |
|  | General Hypothesis **NT/NL1**: Program water and land management actions provide benefits to non-target listed and non-listed species of concern. | | |