

DRM Post-Bleaching Survey Criteria

At the end of the DRM summer survey in either late October or early November, once all surveys are complete, all entered data will be pulled from the DRM data entry portal and bleaching prevalence values will be summarized across each subregion-zone. Bleaching prevalence (for the purpose of deciding whether post-bleaching assessments are warranted) will be based on ONLY the 16 target species listed below.

1. *Colpophyllia natans*
2. *Dichocoenia stokesii*
3. *Diploria labyrinthiformis*
4. *Meandrina meandrites*
5. *Mussa angulosa*
6. *Mycetophyllia aliciae*
7. *Mycetophyllia ferox*
8. *Mycetophyllia lamarckiana*
9. *Pseudodiploria clivosa*
10. *Pseudodiploria strigosa*
11. *Acropora cervicornis*
12. *Acropora palmata*
13. *Montastraea cavernosa*
14. *Orbicella annularis*
15. *Orbicella faveolata*
16. *Orbicella franksi*

Species selection justification: The first ten species (1-10) listed are the species targeted along transects 3 and 4 at each DRM survey site. These two additional transects were specifically designed to focus on the species that were most affected by SCTL D. Using the target species from transects 3 and 4 serves a dual purpose of capturing both bleaching impacts and disease during a post-bleaching survey. In addition, *C. natans*, *D. stokesii*, *P. strigosa*, and *P. clivosa* are species used in the DRM survey site allocation process. These species are known to be good indicators of thermal stress because they typically only bleach during extreme high temperatures or prolonged high temperature events. *Acropora cervicornis* and *A. palmata* are included due to their ESA status and high abundance in certain habitats in Southeast Florida. *Montastraea cavernosa* and all three species in the *Orbicella* complex (*annularis*, *faveolata*, and *franksi*) are included due to their susceptibility to SCTL D and high abundances in most habitats. In addition, these species make up some of the most important reef builders on FCR and are often the largest contributor to structural complexity of the reef.

Within each subregion-zone, pooled across all four transects and all sites, if there are less than 10 total colonies of the target species surveyed that summer, the list of species will be expanded to include both *Solenastrea bournoni* and *Porites astreoides* to determine bleaching prevalence for post-bleaching surveys. In the northern extent of the reef tract, several of the target species (1-16) reach their northern limit and are often absent from survey sites. Therefore, these two species that are known to be present throughout the reef tract, and more heat tolerant than most other weedy coral species, will be used for the post-bleaching criteria in the absence of the listed target species.

Post-bleaching criteria: If the prevalence of bleached and partially bleached colonies pooled across the above species reaches or exceeds 50% at the subregion-zone level, a post-bleaching survey will be

initiated for that subregion-zone. Or, if the prevalence of bleached, partially bleached, and pale colonies reaches or exceeds 75% at the subregion-zone level a post-bleaching survey will be initiated.

Post-bleaching survey sites: If the prevalence threshold is reached, post-bleaching assessments will be completed at Coral Reef Evaluation and Monitoring Project (CREMP) and/or Southeast Florida Coral Reef Evaluation and Monitoring Project (SECREMP) sites that fall within that same subregion-zone. Both programs monitor at fixed locations every year and are designed to detect changes in coral cover and population structure. Each CREMP and SECREMP site was established to represent the different habitat types in each subregion. At each CREMP and SECREMP site there are four ~22m fixed stations that are run from an offshore fixed pin to an inshore fixed pin. For each post-bleaching survey, traditional DRM data collection methods will be completed at two of the four stations along the first 10 meters of the stations. The stations with the most target species present will be prioritized. Target species' abundance along the CREMP and SECREMP stations will be calculated from the most recent monitoring surveys.

Additional post-bleaching survey sites: During the DRM summer surveys, if conditions indicate a severe bleaching event is already underway in July and August, a subset of the summer survey sites can be selected for post-bleaching surveys if capacity from partner organizations is available. Sites will be selected in the subregion-zones that show early signs of severe bleaching. To establish sites and corresponding transects for the post-bleaching assessments, the transects completed during the summary surveys will be marked with temporary masonry nails at the beginning and end of Transects 1 and 2. This will aid in ensuring the summer and post-bleaching survey are performed at the same location. All temporary markers will be removed following the post-bleaching survey.

Timing of post-bleaching surveys: Post-bleaching surveys will be conducted during the month of December or January based on the water temperatures and Coral Reef Watch Bleaching Index recorded at the end of the DRM season. Partners will be contacted in early November if a post-bleaching survey is determined necessary, a team will be put together, and a plan will be formulated. If post-bleaching surveys are determined necessary in more than one subregion-zone, effort will be made to have them completed within a limited time frame so that environmental conditions are similar among the surveys.