

UMAM Coastal Workgroup Meeting Summary
DEP Orlando District Office, May 22, 2013 at 9am

Attendees: Don Deis (Atkins) Workgroup Coordinator
Calvin Alvarez (FDEP)
John Humphreys (FDEP)
Marty Seeling (FDEP)
Vladimir Kosmynin (FDEP)
Lainie Edwards (FDEP)
Michelle Reiber (SJRWMD)
Mark Brandenburg (SJRWMD)
Mindy Parrott (SFWMD)
Al Gagne (SWFWMD)
Jeff Wheaton (SWFWMD)
John Emery (SWFWMD)
Ben Shepard (FFWCC)
Ron Mezich (FFWCC)
Jeff Collins (USACE)
Kat McConnell (USACE)
Terri Jordan-Sellers (USACE)
Mark Fonseca (Continental Shelf Associates)
Ryan Horstman (Stantec)

John Humphreys presented on the overall UMAM rule revision process and described goals such as reductions to the time necessary to perform field assessment, minimization of cognitive bias, and improved scoring consistency. John explained that the framework for achieving these goals included the following components:

- Development of standardized field protocols to ensure a uniform process.
- Transitioning the current methodology's framework from one dependent on narrative description to one based in quantitative and/or categorical criteria.
- Establishment of UMAM Part I reference standards (reference sites) in hierarchical preference from those that are field location specific (physical), through those generated from geographic information systems (modeled), to reference standards derived from general community descriptions found in professional literature (narrative).
- Development of a training and calibration program exhibiting field (comprehensive), webinar (remote), and archival (on demand) components, with comprehensive training structured towards local subject matter experts and a "train the trainer" approach.
- Creation of a relational database that allows users to perform multiple parameter queries of UMAM/mitigation projects and to access examples from permitted projects.
- Review of methods used to calculate the Preservation Adjustment Factor, Time Lag, and Risk and then to develop of tools and/or worksheets to ensure consistency of application.
- Leveraging inclusive rule language and external guidance, manuals, and tools to achieve goals..

Mark Brandenburg then provided an overview of the first two UMAM calibration exercises that SJRWMD initiated last year, presented the results, and described the third calibration exercise, which is in the coastal environment.

Don Deis reviewed the existing UMAM rule in relation to seagrass communities and highlighted subfactors that were relevant to seagrass communities.

The workgroup then discussed potential factors/attributes that are important to coastal submerged aquatic communities. The attributes listed below are in no particular order. The goal of listing the factors/ attributes is to determine which factors are diagnostic in determining the overall quality/health of the community and can be reasonably determined within permitting timeframes. The workgroup will develop this diagnostic list of factors after reviewing the list below and conversing via email.

Seagrass

- Natural disturbance (hurricanes, algal blooms)
- Ephemeral nature, historic cover, seasonality, temporal and spatial variations
- Water depth
- Functions the habitat provides
- Diversity, abundance, percent cover, and type of seagrass present
- pH
- Salinity
- Temperature
- Visibility/light penetration (photosynthetically active radiation)
- Currents, wave action, tidal exchange (cycles and extremes)
- Location (inshore, offshore, in an Aquatic Preserve or Marine Protected Area)
- Anthropogenic effects (frequency of disturbance)
- Propeller scarring (number and intensity)
- Wildlife usage – vertebrate and invertebrate (grazing, abundance, diversity) (life stages – larval, juvenile, adult)
- Threatened/endangered species use
- Nutrients
- Substrate type, sediment thickness, structural complexity (rugosity)
- Edge effect, patchiness, patch size
- Microbathymetry (structural variability)
- Bioturbation
- Epiphyte cover (species diversity, light limitation effects to seagrass)
- Proximity to discharges
- Proximity to other adjacent habitats (edge effect) (adjacent to or within other habitats – hardbottom, mangrove, oyster reefs, mud flats, sandflats)
- Invasive/nuisance species
- Algal abundance
- Succession patterns
- Patch size

Hardbottom

- Proximity to shore, inlet, or channel
- Relief category, topographic complexity (rugosity, interstitial spaces)
- Ephemeral nature (persistent/ephemeral)
- Functions the habitat provides
- Diversity and abundance
- Scale of the assessment (extent/resolution)
- Invasive/nuisance species (sessile only)

- Waves, currents, tides, water depth
- Wildlife usage (grazing, abundance, diversity)
- Exposure of rock (e.g. use by larval and juvenile fish)
- Community type
- Size/age classes of sessile organisms
- Threatened/endangered species use
- Age, size, distribution of organisms
- Anthropogenic effects (frequency of disturbance)

The meeting adjourned at 2pm.