



**Diving With a Purpose - Collective Approach
to Restoring our EcoSystem**

2024

CORAL MONITORING TRAINING PROGRAM

A delicately balanced coral ecosystem is essential for all life; it provides food, it protects our shorelines, it's the new frontier for science exploration and it provides over 70% of oxygen production on the planet. To address the challenges impacting the coral reef ecosystem requires recognition, assessment and mitigation. The purpose of DWP-CARES is to teach recreational divers as citizen scientists to collect current data on the condition of the coral ecosystem.

This year's DWP-CARES program is focused on building proficiency in the area of ecosystem data collection protocols. Our program will be divided into two sections, an independent virtual module to prepare participants for the subsequent in-water training module that will build on the skills you studied virtually.

By the end of the program, participants will understand the challenges facing the coral ecosystem as well as the importance of addressing the issue. You will be equipped with the fundamental tools and empowered to expand on your knowledge to make a difference as citizen scientists.

VIRTUAL MODULE

<u>SESSION</u>	<u>OFFICE HOURS</u>
[1] Introduction	
[2] Fish Survey	2/6/24 7pm EST
[3] Invertebrate Survey/Gorgonians	2/29/24 7pm EST
[4] Substrate Survey/Hand Signals	No Office hours
[5] Coral Identification	3/28/24 7pm EST
[6] Roving Coral Survey	4/9/24 7pm EST
[7] Disease and Bleaching	4/30/24 7pm EST
[8] Closeout	5/21/24 7pm EST 5/30/24 7pm EST

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024



Diving With a Purpose - Collective Approach to Restoring our EcoSystem

CARES SYLLABUS

Session #1 INTRODUCTION

- What is DWP/DWP-CARES
- Delicately balanced ecosystem
 - Climate change
 - Warming oceans
 - Rising water levels
 - Ocean acidification
 - overfishing
- Core takeaways
- Accessing Content Trello - None of my materials are proprietary
- Overall program content Monitoring
- What we're going to do to make a difference
- Why are there so many protocols
- Schedule for the year including office hours
- Writing Sample datasheet completion
- Homework Trello

Session #2 FISH SURVEY

- Citizen Science/data collection
- Completing data sheets delivering hard copies to instructors
- Clear legible data transferable is essential
- Waiting to complete fish survey
- Dimensions of fish survey
- Transect as a reference line
- Fish Anatomy
- Fish Identification
- Size of Parrot and Grouper
- Quantity of school
- Fish crossing transect

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024



Diving With a Purpose - Collective Approach to Restoring our EcoSystem

Session #3 INVERTEBRATE SURVEY

- Dimensions of invertebrate survey
- Transitioning reef hard/soft
- Gorgonian identification soft/other
- Quantity/2-meterX10
- Damage and Trash scale,% colony/%population
- Google spreadsheet

Session #4 SUBSTRATE/HAND SIGNALS

- Dimensions of substrate survey
- Benthic characterization
- Plumb bob usage
- Cracks & crevices
- Hand signals review
- Algae
- Soft coral/only two
- Rock vs rubble
- Sand vs silt
- Sponges
- RKC
- Other/Everything else
- Datasheet completion

Session #4 CORAL IDENTIFICATION

- 4 letter designation
- Coral
- Biology
- $\text{CO}_2 + \text{H}_2\text{O} + \text{sunlight} \rightarrow \text{Oxygen} + \text{glucose}$
- Individual polyp vs colony
- Boulder vs branching
- Star vs starlet
- Flowering
- Palythoa vs MCAV

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024



**Diving With a Purpose - Collective Approach
to Restoring our EcoSystem**

Session #5

ROVING CORAL

- Dimensions of Roving coral survey
- Designated FKNMS species
- Roving procedures
- Scaling size
- Percentage of mortality exercise

Session #6 DISEASE AND BLEACHING

- Importance of hard coral
- What is bleaching
- PB/Paling/ Bleaching
- Bleaching vs RKC
- Impact of bleaching and disease on coral reefs
- Datasheet completion
- Importance of hard coral
- Coral bleaching and disease SCTLD

Session #7 GETTING OUT OF THE HOLE

- Stop killing the ocean
 - Remove plastics and debris
 - Stop using single-use plastics (packages, straws water bottles)
 - Speak to others, friends and businesses
 - Support businesses that practice lighter carbon footprint activities
 - Zinc oxide sunscreens that don't kill marine life
 - Stop buying decorative balloons for celebrating
- Engage in Monitoring Efforts
- Engage in Debris Removal Exercises
- Engage in Coral Nursery and Outplanting Efforts
- Educate the General Public about what you know %70 Oxygen

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024



**Diving With a Purpose - Collective Approach
to Restoring our EcoSystem**

REGISTRATION PACKAGE

REGISTRATION FEE -

New Adult Participant Fee:	\$1,200.00
Returning Adult Participant Fee:	\$850.00
New Youth Participant Fee:	\$700.00
Returning Youth Participant Fee:	\$550.00

HOUSING ACCOMMODATION -

YOUTH - YDWP-CARES participants are housed in double occupancy housing in Islamorada, Florida and shuttle to the classroom and dive boats daily.

ADULT - All adult participants make their own housing accommodations and meet at the classroom and dive boat daily. DWP-CARES will be making accommodations at Sunset Inn in Islamorada (\$130/nt. db/occ.) Interested participants may contact DWP regarding assisting with making a reservation.

ADULT INTERNATIONAL - Housing and local transportation will be included in the cost of registration for selected field school.

IN-WATER AGENDA

Sunday June 2, 2024/ (Youth) July 14, 2024

6:00pm: Meet & Greet (All Attendees)

Class will take place mostly inside, but participants should bring appropriate hats, clothing, water, etc for outside practice in the sun.

Monday Jun 3, 2024 / (Youth) July 15, 2024

9:00am – 12:00pm- Orientation: KEY DIVES

- Housekeeping & plan for the day

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024



**Diving With a Purpose - Collective Approach
to Restoring our EcoSystem**

- Dive Planning
- Dive Team organization
- Diving signals
- Environmental Conditions

12:30-1:30pm – Lunch on your own

1:30 – 5:30 pm -

Mock Survey Site Instruction:

Survey Techniques Hands-on Instruction Outside

Hands-on Fish size ID practice

Tuesday Jun 4, 2024 / (Youth) July 16, 2024

9am Morning Classroom

1pm - Meet at KEY DIVES

430pm Boat Debrief

Transfer data to file

Wednesday Jun 5, 2024 / (Youth) July 17, 2024

9am Morning Classroom

1pm Meet at KEY DIVES

Group photo (Wear your shirts)

430pm Boat Debrief

Transfer data to file

Thursday Jun 6, 2024 / (Youth) July 18, 2024

9am Morning Classroom ICARE

1pm Meet at KEY DIVES

430pm Boat Debrief

Transfer data to file

Friday Jun 7, 2024 / (Youth) July 19, 2024

9am Morning Classroom KEY LARGO LIBRARY

1pm Meet at KEY DIVES

430pm Boat Debrief

Transfer data to file

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024



**Diving With a Purpose - Collective Approach
to Restoring our EcoSystem**



Saturday Jun 8, 2024 / (Youth) July 20, 2024

9am Morning Classroom

1pm Meet at KEY DIVES

430pm Boat Debrief

Transfer data to file

Graduation! 6pm DWP-CARES

Kramer Wimberley kramer.wimberley@divingwithapurpose.org (732) 887-0903

REGISTRATION DEADLINE IS JANUARY 30, 2024