

**Henry E. Tonnemacher, Environmental Biologist:** Founder, Owner and Operator of **Seven Seas Ltd.**, an environmental consulting and contracting company specializing in Marine Environmental Assessments, Underwater Scientific Research, Coral Reef Surveys & Reconstruction, Benthic Surveys and Water Quality Monitoring. A U.S.C.G. licensed 100-ton Master (Captain of vessels circa 110 feet long) for power and sailing vessels continuously since 1978. Diving Supervisor, Certified Commercial Diver and Environmental Biologist for Cruzan Maritime Services, LLC as a subcontractor.

**Contact information:** Cell # 340-642-7816, send email to: go7seas@gmail.com

## **One Representative 7-Seas-Ltd. Project from each year 1983-present**

**Year Completed – Project Title, Brief Project Description – Project Location(s) & (Client)**

**2016 – Design of the Baseline Characterization Study for the HOVENSA Environmental Response Trust** – Benthic surveys and sediment sample collection survey design - St. Croix South Shore Industrial Area (Industrial Economics Inc.)

**2015 – Fish Catch & Landing Surveys**, Port Sampling of USVI Commercial Fish Catches – St. Thomas & St. Croix (MER Consultants, DPNR, Atlantic Coastal Cooperative Statistics Program and NOAA's Southeast Fisheries Science Center)

**2014 – Diving Supervisor, Captain and Commercial Diver**, various commercial diving and vessel captaining projects - St. Croix and other Caribbean Islands (Cruzan Maritime Services, LLC and The National Park Service, US Dept. of the Interior)

**2013 – Water Quality Study**, a full year of extensive field data collection to determine the best location for the Salt River Bay Marine Research and Education Center (MREC) seawater system intake - St. Croix, USVI (CoastWorks for UNCW and DOI)

**2012 – Underwater Sediment Sampling and Biological Surveys**, collect samples to support the damage claims of the Government of the Virgin Islands against HOVENSA and Lockheed Martin, et al. - St. Croix (Law Offices of John K. Dema, P.C.)

**2011 – Commercial Fish Trap Catch Survey**, new fish traps were baited, set and collected at 638 locations, results to help set annual catch limits for commercial fish species – St. Croix, USVI (NOAA - NMFS - SE Fisheries Science Center)

**2010 – Benthic Surveys, Construction and Installation of Boundary Marker Buoys**, USCG approved markers - East End Marine Park, St. Croix, USVI (The Nature Conservancy and the Virgin Islands Department of Planning and Natural Resources)

**2009 - Coral Reef Reconstruction and Stabilization**, mitigation at two separate sites after oil tanker and sport boat groundings - St. Croix, USVI (Ship Owners & Insurers via Jimenez, Graffam & Lausell, Attorneys at Law, and Polaris Applied Sciences)

**2008 – Shark Capture, Tagging and Release**, for research project to determine populations and movement of shark species within the monument - Buck Island Reef National Monument, St. Croix (National Park Service)

**2007 - Marine Benthic Resource Survey**, Estate William & Punch marina and resort development (Amalago Bay)- Frederiksted, St. Croix, V.I. (Island Resources Foundation for McComb Engineering & the Mashantucket Pequot Tribal Nation)

**2006 - Long Term Sampling of African Dust Air Masses in Air and Seawater for Microbes and Contaminants**, collecting air samples through filters for laboratory analysis - St. Croix, V.I. (Texas A&M University and the U.S. Geological Survey)

**2005 - Elkhorn Coral Study of Bleaching, Disease and Population Densities**, long term photographic and data surveys - Buck Island Reef National Monument, St. Croix (Dept. of the Interior / National Park Service)

**2004 - Marine Environmental Surveys**, benthic surveys off shore of two proposed beachfront resort and community developments - Frenchman's Bay and Nazareth Bay, St. Thomas (Dr. Dennis Hubbard for McComb Engineering)

**2003 - Water Quality Monitoring for the Wetlands and Riparian Areas Inventory**, using multi-probe sondes and water sample collections - U.S. Virgin Islands (Island Resources Foundation for the V.I. Dept. of Planning and Natural Resources)

**2002 - Ocean Outfall Ecological Evaluations (6th year)**, complete benthic surveys to determine any possible impacts of process water effluent from manufacturing plants - Freeport, Grand Bahama (V.I. Marine Advisors for Ramboll Environ)

**2001 - Water Quality Monitoring for New Coke Loading Dock Construction**, using multi-probe sonde data and water samples collected for laboratory analysis - St. Croix, V.I. (Hess Oil Virgin Islands Corporation)

**2000 - Marine Environmental Assessment for a Proposed Subsea Fiber-optic Cable Network**, benthic surveys to determine possible impacts - U.S. Virgin Islands (V.I. Marine Advisors for Innovative Communications Corp.)

**1999 - Easter Island Follow-up Assessment of the Reefs and Reef Development**, documenting previously unknown coral reefs - Easter Island (The Science Museum of Long Island / The Explorer's Club / U. S. National Park Service)

**1998 - Photographic Survey of the Marine Life of Numerous Offshore Islands**, for promotion of SCUBA diving around the islands of Sipadan, Mabul, Kapalai and others - Sabah, Borneo, Malaysia (Malaysia Tourism Promotion Board)

**1997 - Monitoring of an AT&T Submarine Cable Lay**, to document the associated environmental damage of spilled drilling mud and other impacts during the project – Frederiksted, St. Croix (VI Marine Advisors / V.I. Government)

**1996 - Underwater Coring and Drilling Studies**, to determine possible offshore mining areas for construction sand - Anguilla and St. Croix (VI Marine Advisors for the British Overseas Development Office and NOAA)

**1995 - Site Survey, Mapping and Water Quality Monitoring of Cenotes and Underwater and Caves**, to determine possible impacts of tourism development - Cozumel, Mexico (Island Caves Research Center for the Mexican Government)

**1994 - Construction and Monitoring of a 100 Unit Offshore Artificial Reef with Associated Beach Restoration**, to restore to original the sandy beach and the adjacent coral reef - St. Thomas, USVI (VI Marine Advisors for Lennar Partners, Inc.)

**1993 - Photographic Survey of the Remote Coral Reefs of the Sulu Sea**, to document some of the oceanic and benthic marine life previously reported from remote islands and reefs - Sulu Sea, Philippines (Seven Seas Ltd.)

**1991-92 - Coral Reef and Water Quality Monitoring for the Schooner Channel Dredging Project**, baseline benthic surveys and water quality analysis to assess potential dredging impacts - St. Croix, USVI (V.I. Port Authority)

**1990 - Post Hurricane Hugo Underwater Video Surveys**, assessments of Buck Island Coral Reefs and the Sewage Treatment Plant Offshore Outfall Pipe - St. Croix (The National Park Service, and the V.I. Dept. of Public Works)

**1989 - Coral Reef and Water Quality Monitoring for the Gordon A. Finch Molasses Pier Construction**, photographic and lab analysis of data to determine possible construction project impacts - St. Croix, USVI (Island Resources Foundation)

**1988 - Marine Archaeological Survey of Christiansted Harbor** {see 1991-92}, baseline survey to locate potential cultural resources prior to dredging project impacts - St. Croix, USVI (Island Resources Foundation)

**1987 - Marine Archaeological Survey of Limetree Bay** {see 1989} - St. Croix (Island Resources Foundation)

**1986 - Assistant Marine Coordinator**, for the filming of the full length TV movie "Dreams of Gold - The Mel Fisher Story" starring Loretta Swit and Cliff Robertson - Frederiksted, St. Croix (Interplanetary Productions)

**1983 - 1986 - Owner and Captain** of the 40 foot trimaran sailing vessel "Romany Road", SCUBA Diving & Sailing Charters; NAUI instruction for Open Water Diver through Instructor; underwater video productions (MTV, etc.) – U.S. and British Virgin Islands.

## **Seven Seas Ltd. clients have included:**

National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA), National Park Service (NPS), U.S. Geological Survey (USGS), U.S. Navy, U.S. Coast Guard, FBI, Woods Hole Oceanographic Institute, Hess Oil V.I. Corp., The Government of the Virgin Islands (numerous departments), Clipper Cruise Line, The Nature Conservancy, The Ocean Conservancy, Texas A & M University, Texas A&M Research Foundation, The University of the Virgin Islands, NOVA Southeastern University, Oberlin College, The Keck Geology Consortium, Science Museum of Long Island, Island Resources Foundation, Polaris Applied Sciences, Appledore Marine Engineering, Inc., Pelican Cove Investments, LLC, Caribbean Sea Adventures, Tyco Telecommunications Inc., National Response Corporation (SEACOR), The Advent Group Inc., Law Offices of John K. Dema, P.C., Deep Breath Diving Services, CoastWorks, Jimenez, Graffam & Lausell, Attorneys at Law, V.I. Marine Advisors Inc., BoatTEST.com

## **Work Experience and Education:**

**1983 - Present: Seven Seas Ltd.**, Complete marine services, specializing in benthic surveys and coral reef research including coral reef reconstruction. Part-time employee of Cruzan Maritime Services, LLC (formerly Cruzan Divers, Inc.)

**1981 - 83: West Indies Lab of Fairleigh Dickinson University**, Instructor for the college credited course "Advanced Diving for Scientific Studies", NAUI SCUBA Instructor Trainer and Certified Recompression Chamber Operator (see also 1977-80).

**1980- 81: Cay Divers**, Start-Up Consultant, Manager, Captain and SCUBA Instructor for a full service dive shop and SCUBA training facility at Hotel on the Cay in Christiansted Harbor, St. Croix, captain of the 40' diving vessel "Cay Diver".

**1977 - 80: West Indies Lab**, Diving Supervisor, NOAA Hydrolab Underwater Habitat (NULS-1) Diving Coordinator, Saturation Diver (NOAA Aquanaut), Research Diver Instructor and Diving/Research Vessel Captain (see 1981-1983 also).

**1975 - 77: Underwater Research Center**, Manager, Boat Captain and SCUBA Instructor of a complete marine center with a main shop and four additional staffed hotel outlets in St. Maarten, Netherlands Antilles and St. Martin, French West Indies.

**1974 - 75: Carriacou Marine School**, Carriacou, Grenada, West Indies; develop and teach Environmental Biology and Oceanography for the Canadian Junior College, Certified Instructor by the Canadian Ministry of Education.

**1972 - 74: California State University, Sacramento**, full time student, BA degree in Environmental Biology; Minors in Math and Chemistry, marine biology and oceanography instructor during summer breaks (see 1971-1973 below).

**1971 - 73: Summer Camp Afloat (US Intercostal Marine Squadron)** Oceanography & Marine Biology Instructor for summer programs at: Singer Island, Florida (1973), West End, Grand Bahama, Bahamas (1972) and Spanish Wells, Bahamas (1971).

**1970 - 72: Sierra College, Rocklin, California**, full time student, AA degree in Biology, teacher for the oceanography section of Dr. R. A. Underhill's general biology course, curator and life support operator of all marine aquaria.

**1970: Encina High School and Sacramento Science Center**; developed and taught the first accredited semester course in oceanography for high school students in the United States, taught oceanography for California coast field classes.