**Student Name**

**Student ID Number**

**English 302**

**ICW Part 1 Discipline Specific Resources (Weeks 4-5)**

**1**. Visit <http://infoguides.gmu.edu/> <http://library.gmu.edu/tutorials>

Professional association

* American Public Health Association (APHA)
* Centers for Disease Control and Prevention (CDC)
* Health Resources and Services Administration (HRSA)
* National Center for Biotechnology Information (NCBI)
* National Institutes of Health (NIH)
* National Oceanic and Atmospheric Administration (NOAA)
* National Occupational Health Services (NOHS)

Discipline specific database

* *Agriculture Science Database*
* *Biological Science Database*
* *Cambridge University Press Journals*
* *Environmental Science Collection*
* *PubMed Central*
* *Materials Science Collection*
* *Medline Database*
* *Ocean Health Index*
* *PubMed Central*
* *Social Science Database*

Academic journal (peer-reviewed)

* *American Fisheries Society (AFS)*
* *Environmental Health Perspectives*
* *Environmental Practice*
* *Marine Pollution Bulletin*
* *Microbial Ecology*
* *PLoS One*

Trade publications

* *Aquatic Conservation: Marine and Freshwater Ecosystems*
* *Biogeosciences (BG)*
* *Biological Conservation*
* *The Biological Bulletin*
* *Journal of the International Coral Reef Societ*
* *Deep-Sea Research Pat I: Oceanographic Research Paper*
* *Deep-Sea Part II: Topical Studies in Oceanography*
* *Earth and Planetary Science Letters*
* *Environmental Pollution*
* *The Biological Bulletin*

Gray literature (by and for professionals) (annual report, policy report, internal documents)

* American Fisheries Society
* National Institutes of Health
* Centers for Disease Control and Prevention
* National Institutes of Health
* Smithsonian Ocean

**2.** Visit the website of a professional association you have identified.

National Oceanic and Atmospheric Administration:

* Mission statement:

1. To understand and predict changes in climate, weather, oceans and coasts;
   * Science at NOAA is the systematic study of the structure and behavior of the ocean, atmosphere, and related ecosystems; integration of research and analysis; observations and monitoring; and environmental modeling. NOAA science includes discoveries and ever new understanding of the oceans and atmosphere, and the application of this understanding to such issues as the causes and consequences of climate change, the physical dynamics of high-impact weather events, the dynamics of complex ecosystems and biodiversity, and the ability to model and predict the future states of these systems. Science provides the foundation and future promise of the service and stewardship elements of NOAA’s mission.
2. To share that knowledge and information with others;
   * Service is the communication of NOAA’s research, data, information, and knowledge for use by the Nation’s businesses, communities, and people’s daily lives. NOAA services include climate predictions and projections; weather and water reports, forecasts and warnings; nautical charts and navigational information; and the continuous delivery of a range of Earth observations and scientific data sets for use by public, private, and academic sectors.
3. To conserve and manage coastal and marine ecosystems and resources.
   * Stewardship is NOAA’s direct use of its knowledge to protect people and the environment, as the Agency exercises its direct authority to regulate and sustain marine fisheries and their ecosystems, protect endangered marine and anadromous species, protect and restore habitats and ecosystems, conserve marine sanctuaries and other protected places, respond to environmental emergencies, and aid in disaster recovery. The foundation of NOAA’s long-standing record of scientific, technical, and organizational excellence is its people. NOAA’s diverse functions require an equally diverse set of skills and constantly evolving abilities in its workforce.

Also underlying NOAA’s continued success is its unique infrastructure. NOAA’s core mission functions require satellite systems, ships, buoys, aircraft, research facilities, high-performance computing, and information management and distribution systems. The agency provides research-to-application capabilities that can recognize and apply significant new understanding to questions, develop research products and methods, and apply emerging science and technology to user needs. NOAA invests in and depends heavily on the science, management, and engagement capabilities of its partners. Collectively, NOAA’s organizational enterprise-wide capabilities — its people, infrastructure, research, and partnerships — are essential for NOAA to achieve its vision, mission, and long-term goals.

* Publications:
  + NOAA Technical memorandum NWS CR
  + Southeast Fisheries Science Center (SEFSC)
  + Northeast Fisheries Science Center (NEFSC)
  + Office of Sustainable Fisheries (OSF)
* Topics of recent articles and conferences:
  + Featured topics include earth’s climate change
  + Preparing and anticipating Arctic changes
  + Preserving corals
  + Battling wildfires
  + National Ocean Service Annual Report
  + Fisheries Stories
* Values and current concerns of this discourse community:
  + Build on a foundation of science
  + Use of knowledge to protect people and the environment
  + Understanding the Ocean and the environment
  + Climate predictions and projections
  + Integration of research and analysis
  + Protect endangered marine and anadromous species
  + Lead by example
* Recent research:
  + Heat-stressed corals
  + Meteorologists helping battle Australia’s wildfires
  + Can we clean up, stop or end harmful algal bloom?
  + The invasive turkeyfish: To beat it, try eating it
  + NOAA steps up effort to move new ideas from lab to marketplace
  + From hurricanes to seal pups: 4 ways drones are helping NOAA scientists conduct research

**3.** Write out your research question and identify potential search terms.

* Research questions
  + What is the relationship between the marine life and public health?
  + How does marine pollution effect public health?
  + Does marine life benefit the medical field?
* Search Terms
  + Public Health
  + Human Health
  + Community Health
  + Ocean Science
  + Marine Science
  + Improve
  + Evidence
  + Environmental
  + Chemical Pollution
  + Red Tides
  + Medical
  + Harmful Algal Bloom
  + Tilapia Skin
  + Blue Blood
  + Horse-Shoe Crabs

1. Begin your annotated bibliography.

(Down at the bottom of the page)

1. Use your notes to write a paragraph answering the following questions:

The oceans’ marine ecosystem has a strong link to public health. The ocean provides sources of food, nutrients, medicine, drinking water, pathogens and most importantly absorbs carbon dioxide from the atmosphere to reduce climate change impacts and regulate it. However, the relationship between marine ecosystems and humans can have both positive and negative impacts on one another. For instance, algal blooms are a rapid growth of microscopic algae or cyanobacteria in water and as more algal grows other plants die. Algal blooms are not always harmful but due to the toxins they produce or from using up oxygen in the water, they can lead to fish die-offs, an unpleasant odor and a bad taste which can affect drinking water and cause nutrient pollution. Also, some human activities such as pollution and overfishing, negatively impact the marine ecosystem. Overfishing results in a disruption to the entire food chain, thus negatively impacting human health. Water pollution with plastic, oils, chemicals and other toxic substances are harmful to not only marine life but also humanity. Plastic kills marine animals, destroys habitats and can even affects animals' mating rituals, which can result in the extinction of an entire species as well as alterations to the ecosystem that affect nutrients, and proteins that humans consume. In addition, marine ecosystems play a crucial part in providing medicine in contribution to human health, particularly in traditional Asian and Indian medicine. According to the NOAA; while most drugs derived from natural sources come from terrestrial organisms, research suggests that marine invertebrates produce more antibiotic, anti-cancer, and anti-inflammatory substances than any group of terrestrial organisms. Some chemicals produced by marine animals that may be useful in treating human diseases include; Ecteinascidi which is extracted from tunicates; being tested in humans for treatment of breast and ovarian cancers and other solid tumors. Discodermalide which is an anti-tumor agent. Bryostatin which is a potential treatment for leukemia and melanoma. Pseudopterosins which is an anti-inflammatory and analgesic agent that reduces swelling and skin irritation and accelerates wound healing. And a potent pain-killer is w-conotoxin MVIIA, extracted from the cone snail.

When choosing the articles for my annotated bibliography, I found an overwhelming amount of articles about the ocean, which I found surprising since scientists estimate that less than 5% of the ocean has been explored. I narrowed down my search by making the linkage between marine ecosystems and human health. It is a very broad topic to narrow, human health and ocean health is the main objective. Most of the articles are related to either marine life’s health, the affects of human activity of marine life, the benefits of marine life to human health and the connection between them. This simplified my research to obtain the information need and tie it together.