



JOB DESCRIPTION FORM

POSITION (PID) #		690069			
IDENTIFYING INFORMATION			POST CERTIFICATION		
Post Title	Principal Scientist - Marine Heritage and Ocean Human Health		Print Name	Signature	Date
Present Grade	PS 30-32		Prepared By		
Department/Section	Conservation Services/Historic Wrecks		Post holder Agreed		
Ministry	Environment and Sports		Dept. Head Agreed		
POST STATUS			POST TRANSFER (if applicable)		
	New Post	Revised Post	Redefined Post	Previous Title	Custodian of Wrecks
Date		9 Dec 2008		Previous Department	
Cabinet Conclusion Ref				Previous Ministry	
Last Review Date	01 July 2003			Previous Number	
Panel Decision	Grade	Date	Signature	Previous Grade	
	35-37	1 Oct 10	aylyffe	Date of Transfer	

1. SUMMARY OF MAIN DUTIES (Ideal Maximum Four)	%
1. Assessment of Wrecks and Historic Marine sites	30%
2. Ocean Human Health Research.	30%
3. Science Communications and public outreach	30%
4. Management and administrative duties	10%
	TOTAL = 100%

<p>2. SUMMARY OF ACCOUNTABILITY</p> <p>2.1 What specifically is this post accountable for?</p> <p>Working under the guidance and direction of the Director of the Department of Conservation Services the Post holder is charged with liaising, directing and collaborating in local and international multi disciplinary research initiatives in the fields of ocean human health science and maritime heritage. The Post holder works with local and overseas institutes, government bodies and research organizations to create mutually beneficial collaborative research opportunities and in conjunction with the Historic Wrecks Authority, and in accordance with the Historic Act, 2001, as the Custodian of Historic Wrecks, is accountable for the creation and implementation of a management plan for Bermuda's historic marine assets and for locating, assessing and classifying shipwrecks and marine heritage sites, issuing licenses to access protected wrecks and marine heritage sites and creating and managing the National Collection. The Post holder replaces the Receiver of Wreck in Customs regarding all wrecks over fifty (50) years old. The Post holder develops and implements outreach programmes to promote community education and engagement and performs high level advisory duties to other Government ministries and departments. In addition, the Post holder undertakes management and administrative duties associated with the administration of wrecks and human/ocean health research and undertakes related duties, as requested by the Director of the Department of Conservation Services.</p> <p>2.2 Briefly describe the level of decision making authority held by this post.</p> <p>The post holder has the authority to manage professional relationships for key Government research projects and under the provisions of the Historic Wrecks Act, 2001 to make decisions and provide recommendations at a professional level on the assessment, classification of shipwrecks and the issuance of licenses to access protected wrecks and maritime heritage sites. The post holder also makes professional recommendations on planning applications that impact the marine environment, carrying out site assessments and surveys for historic marine assets and determines the best methods for mitigating threats and making management decisions from a broad array of scientific peers, NGO's and Government bodies. The Post holder has significant autonomy in the planning and carrying out of research operations and specifically dive operations for sample collection, surveys and monitoring of the marine environment and marine heritage assets and in the management of visiting scientists, archaeologists and dive volunteers. The post holder determines and sets research priorities on matters relating to ocean and human health science, sea level rise, marine heritage and builds partnerships to advance these.</p> <p>2.3 To which position does this post report directly? The Director of the Department of Conservation Services.</p>

3. ESSENTIAL KNOWLEDGE & SKILLS

List the key knowledge and skills required to fulfill the *minimum requirements* of the post under the following categories.

3.1 General Knowledge / People Skills (Soft Skills).

The post holder must possess excellent leadership, organizational, inter-personal, communications, conflict resolution, problem solving and decision making, team building and mediation skills. The Post holder must be able to bring together individuals and groups that sometimes hold widely divergent and deeply entrenched points of view with the aim of influencing, to promote harmonious collaborations and, therefore, needs strong conflict mediation, team building, partnership development and interpersonal problem solving skills. The Post holder needs to be able to lead and work as a member of a multidisciplinary team and be a strong public speaker with highly developed communication skills (written and verbal) and be able to communicate technical ideas to a general audience.

3.2 Technical Knowledge / Position Specific Skills (Hard Skills). This includes knowledge of particular legislation, processes, specialties, etc.

The post holder must be able to interpret and communicate relevant scientific themes, topics and literature from a wide range of the sciences and be conversant with methods of marine science fieldwork, archaeological exploration and the recovery, stabilization and preservation of artifacts and possess a good working knowledge of shipwrecks and the maritime history of Bermuda and have a good understanding of the Historic Wrecks Act, 2001, the Wrecks and Salvage Act 1959 and other relevant local and international legislation and jurisdictional. Advanced SCUBA skills, familiarity with health and safety regulations and best practice and strong coastal navigation and boat handling skills are also required. Academic research and report publication skills and a high degree of computer literacy with emphasis on database design and management are required. Familiarity with GIS protocols and electronic navigation tools and skills in underwater documentation through photography and film are essential.

4. MINIMUM EXPERIENCE REQUIRED (Tick the Appropriate Box)

Based upon the above identified knowledge and skills, what is the minimum number of years experience required to fulfill the duties of this post?

- | | | |
|--|--|---|
| <input type="checkbox"/> No previous experience required | <input type="checkbox"/> Minimum one (1) year | <input type="checkbox"/> Minimum two (2) years |
| <input type="checkbox"/> Minimum three (3) years | <input checked="" type="checkbox"/> Minimum five (5) years | <input type="checkbox"/> Minimum ten (10) years |

4.1 Identify specific experience.

A minimum of five (5) years' relevant experience in field work exploring wrecks is required for the post.

5. MINIMUM EDUCATIONAL QUALIFICATION REQUIRED (TICK THE APPROPRIATE BOX)

- | | | |
|--|---|---|
| <input type="checkbox"/> Secondary School Graduation Certificate | <input type="checkbox"/> Apprenticeship/College Certificate | <input type="checkbox"/> College Diploma |
| <input type="checkbox"/> Associates Degree | <input type="checkbox"/> Advanced or Specialist Qualification | <input type="checkbox"/> Bachelors Degree |
| <input type="checkbox"/> Masters Degree | <input type="checkbox"/> Professional Designation (Includes Chartered Status) | <input checked="" type="checkbox"/> Doctorate |
| Other | | |

5.1 Please list the title of the academic qualification / professional designation required:
The Post holder must possess a Doctorate's Degree or equivalent in Marine Archeology.

5.2 List any special licenses, registrations or certifications required for this job:
The Post requires certification in Advanced SCUBA, CPR, Boat Pilot (Bermuda C class) and First Aid.

6.0 RESOURCES UNDER MANAGEMENT

6.1 Management and Supervision of Staff

(Please ensure that the Organization Chart submitted is up to date, accurate and reflects the information listed below)

Please list the position titles (including PID) of 'All Staff' under the 'Direct Supervision' of this post.

1. N/A

6.2 Non-Staff Budget and Revenue Streams (FOR EACH SUB SECTION TICK THE APPROPRIATE BOX)

6.2.1 What 'Responsibility' does this post have for 'Managing Non-Staff Budget' and 'Government Revenue Collection'? (Non-Staff Budget typically applies to contracts for program delivery & capital expenditure projects)

None

Has Direct Management Responsibility

Is the Accounting Officer

6.2.2 Please indicate the level of Non-Staff Budget and/or Revenue Streams for which this post is responsible.

None

Less than \$500k

\$500k to \$2m

\$2m to \$10m

\$10m to \$40m

Greater than \$40m

6.3 Infrastructure for Vital Government Services (FOR EACH SUB SECTION TICK THE APPROPRIATE BOX)

6.3.1 Is the post responsible for managing 'Infrastructure' critical to the delivery of 'Vital' Government Services?

No

Yes. Has Direct Management Responsibility

Yes. Is Ultimately Responsible

6.3.2 If 'Yes' to the above, what would be the impact of failure of this infrastructure?

Low Impact: Mainly internal to Government

Medium Impact: Mainly internal to Government

High Impact: Mainly internal to Government

Low Impact: Bermuda-Wide

Medium Impact: Bermuda-Wide

High Impact: Bermuda-Wide

7. Additional Information

The Position requires flexibility and independent accountability and that the Post holder is able to discharge the duties and responsibilities of the post with skillful diplomacy. Experience in training and motivating divers and a demonstrated ability to teach are considered to be highly desirable assets.

DUTIES AND RESPONSIBILITIES OF THE POST**8. DETAILED DESCRIPTION OF MAIN DUTIES AND RESPONSIBILITIES OF THE POST**

(Please use the same Headings for Main Duties as Listed in Section 1.0)

8.1 ASSESSMENT OF WRECKS AND HISTORIC MARINE SITES

8.1.1 Locates, identifies and accurately maps the location of all known wrecks on the shores or in the waters of Bermuda through GIS mapping and data storage, conducts a risk assessment and then, in conjunction with Historic Wrecks Authority, assesses the level of protection needed, to maximise their heritage value by classifying them as open or restricted.

8.1.2 Gathers data (film, photograph and GIS) on known wreck sites and establishes controls that will determine if changes are occurring on these sites.

8.1.3 Establishes an official "Register of Wrecks" and enters all classifications and locations of wrecks and historic artifacts into the Register. Conducts assessments of significance of specific wreck qualifications of licencees, etc.

8.1.4 Classifies any submarine area that is not known to contain a wreck but that contains or may contain historical artifacts as a marine heritage site and identifies the location of the site.

8.1.5 Responsible for marking the wrecks and marine heritage sites as either "open" or "restricted" for recreational use by divers, using green or red submarine markers.

8.1.6 Develops and implements an underwater cultural resources management programme that will protect

resources, while at the same time ensuring responsible research and public access to Bermuda's underwater heritage.

8.1.7 Provides advice as it relates to development and projects that impact on the marine heritage assets.

8.1.8

8.2 OCEAN/HUMAN HEALTH RESEARCH

8.2.1 Initiates and runs collaborative ocean/human health studies related to the use of marine resources supporting research that highlights the interconnectedness of human health and environmental/ocean health.

8.2.2 Facilitates the coordination of key scientific projects working with local and international NGO's, institutes, research organisations and international government bodies.

8.2.3 Sits on the Sargasso Sea Management Committee working with international scientific bodies, Non Governmental and ultimately International Governments to establish special protections for the Sargasso Sea.

8.2.4 Co chairs the Sargasso Sea communications committee responsible for oversight of donor outreach and communications for the Sargasso Sea Initiative.

8.2.5 Organises and conducts research trips out to the Sargasso Sea for scientific research, for donor outreach, as well as for film and media purposes.

8.2.6 Writes funding proposals for the Sargasso Sea initiative, ocean human health research.

8.2.7 Establishes and maintains official links with overseas tertiary institutions and research organisations in the domains of public health and marine research: specifically with the University of Laval Public Health Institute and the Atlantis mobile laboratories overseeing human health studies of the health benefits and risks of seafood consumption - specifically overseeing maternal cord blood studies and local fish and seafood risk benefit studies for mercury and selenium/omega 3 fatty acids respectively.

8.2.8 Acts as the Bermuda liaison on the WHO PAHO sanctioned Atlantis CARICOM ocean human health marine ecotoxicology mission.

8.2.9 Maintains thorough and up-to-date knowledge of relevant local and international research, published information, and data within assigned key research areas.

8.2.10 Sits on the interdepartmental climate change task force and participates in sea level rise research with local and international agencies; Specifically the Bermuda Underwater Exploration Institute and the Bedford Institute of Oceanography in Nova Scotia.

8.2.11 Is expected to bring scientific expertise and research networks to bear on specific and relevant aspects of emergency or emerging ocean human health issues as they may arise.

8.2.12 In partnership with the University of Laval, Quebec writes proposals for and oversees research carried out in Bermuda in the realm of Omega three fatty acids, specifically in the areas of school performance and healthy pregnancy indicators.

8.2.13 Manages research on the human health risk/benefit of seafood consumption in partnership with the Department of public health at Laval University - including fetal cord blood studies.

8.3 COMMUNICATION AND PUBLIC OUTREACH

8.3.1 Manages and prepares media releases both internally and externally on the Sargasso Sea Initiative.

8.3.2 Creates and manages public outreach communication and publication of ocean human health research and maritime heritage projects.

8.3.3 Attends local and international conferences and meetings to manage the communication of research initiatives specifically for the Sargasso Sea initiative and ocean human health research.

8.3.4 Teaches courses and gives lectures (from primary to post graduate) locally and internationally on the Sargasso Sea Initiative, ocean human health issues and marine heritage.

8.3.5 Prepares and submits scientific papers for dissemination in popular media as well as in peer reviewed publications for the Sargasso Sea initiative, ocean human health issues and for marine heritage - specifically shipwrecks.

8.3.6 Networks with local and international television, film and print media outlets and writes articles, prepares film treatments and scripts and assists in the production of media on key aspects of the Sargasso Sea initiative ocean human health research and Bermuda shipwrecks.

8.3.7 Issues recommendations to the Department of Health on risk benefit of local fish specifically for pregnant women and conducts seminars and information sharing talks with key stakeholders.

8.3.8 Sits as the Bermuda Government representative on the Sargasso Sea communications committee

8.3.9 Engages members of the public, especially the local dive community and finders of historic wrecks, to gather all the information on known wreck sites and other marine heritage sites.

8.3.10 Instructs interested members of the local dive community, especially finders of historic wrecks in the appropriate methodologies for the exploration and documentation of wrecks.

8.3.11 Creates public outreach vehicles designed to promote conservation, education and public engagement.

8.4 MANAGEMENT AND ADMINISTRATIVE DUTIES

- 8.4.1 Controls the archaeological and scientific examination of wrecks by setting conditions for licenses dependent on the types of research proposed and the nature of the wreck site.
- 8.4.2 Reports on the activities of the Sargasso Sea initiative to the Ministry
- 8.4.3 Administrates as a member of the Sargasso Sea management committee research and funds received for the promotion of the Sargasso Sea initiative.
- 8.4.4 Creates and manages research partnerships with international and local research organizations specific to his duties including the drafting of MOU's.
- 8.4.5 Issues licenses for the survey or research of wrecks and marine heritage sites, after consultation with the Historic Wrecks Authority.
- 8.4.6 Monitors and controls the progress of research activities, documentation of work and the stabilization and preservation of biological samples and artifacts in the domains of Sargasso Sea, ocean human health and marine archaeological research.
- 8.4.7 Sets the agenda and brings issues to the Historic Wrecks Authority, in order to advise the Minister, such as on the classification of wrecks and marine heritage sites as Open or Restricted.
- 8.4.8 Develops and maintains a "Register of Finders" for previously unreported wrecks.
- 8.4.9 Develops policies and procedures for the management of wrecks and artifacts.
- 8.4.10 Prepares and manages the budget for the volunteer and trainee programme in the Section and undertakes human resources administrative duties in respect to the trainees and volunteers. In this regard, interviews, recruits, orient, trains, supervises and provides guidance, as required.
- 8.4.11 Provides orientation and supervision of trainees and volunteers in the Section and assigns work to volunteers and ensures that the work is completed according to the established schedules and required standards.
- 8.4.12 Facilitates the creation and management of a National Collection to display Bermuda's underwater cultural heritage, including artifacts, photographs and records of wrecks and artifacts collected from the historic wrecks of Bermuda both public and private.
- 8.4.13 Participates in the development of a video and image library for the Sargasso Sea initiative as well as in the development of an electronic virtual database for the National Collection, when required.