



# Development of a GIS Data Base for Saipan's Drinking Water Delivery System



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The environmental educational materials about water resource issues in earth science textbooks and online at the websites of government agencies now available to Commonwealth of the Northern Mariana Islands (CNMI) school children and educators are focused on conditions existing on the U.S. mainland. These materials and accompanying illustrations and images do not fully address basic features related to water resources and the critical need to protect and conserve as related to Saipan, Rota and Tinian.

Recently, environmental educational materials for students age 9-12 about fresh water resource issues on Guam were developed. The "Guam Water Kids" materials emphasize the importance of Guam's fresh water as a key resource, explain hydrological concepts, and introduce a sense of stewardship for conserving and protecting fresh water. These materials include a pre-recorded presentation, teacher's lesson plans with suggested activities, a Chamorro language glossary and a companion website.

Specifically, in order to foster a better understanding of the importance of fresh water as a key resource and a sense of stewardship, we intend to adapt the existing materials in "Guam Water Kids" to create "CNMI Water Kids" featuring water resource information and issues pertaining to Saipan, Rota and Tinian. Some materials such as the animated illustration of the water cycle, the photos defining fresh water featuring a tropical setting, and conservation at home, may be retained. The Chamorro language glossary will require only minor revisions. Illustrations featuring maps with the location of ground and surface water for each of the three islands and some place-specific photos will need to be developed. In addition to revising illustrations,

the written text and script will need to be adapted and recorded.

Components for CNMI will include (1) a CD PowerPoint™ presentation with pre-recorded narrator and music with animation that can be used as (a) a scripted or extemporaneous slideshow, (b) a stand-alone presentation with pre-recorded narrator and music, or (c) a continuous "unmanned" presentation such as at an exhibit booth, (2) two Lesson Plans for teachers with activities, related vocabulary, and Chamorro glossary, and (3) "CNMI Water Kids" website featuring self-study slide shows, activities, and downloadable copies of the educational resource materials including the teacher lesson plans.

The project will accomplish the following objectives.

1. Provide an online resource for teachers and other youth leaders that will enable them to share the importance of water resources and the need for protecting them using materials that students in the CNMI can easily relate to.
2. Provide a website to support educators with downloadable materials and for youth to independently explore CNMI water resources while developing a sense of stewardship.
3. Provide a convenient, self-contained classroom presentation that shares the basic concepts of the hydrological cycle and water resource issues with support materials for teachers on CD.

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