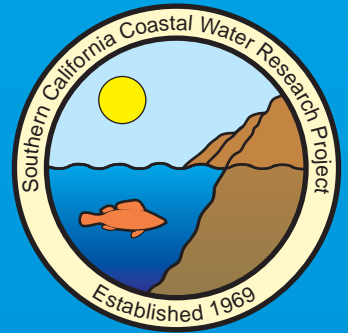


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Southern California Coastal Water Research Project

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FOREWORD

This investigation was a collaboration between the Southern California Coastal Water Research Project and the University of California, Berkeley School of Public Health. This project was funded by the City of San Diego through a Supplemental Environmental Project (ACL No.2001-094) and the San Diego Regional Water Quality Control Board through the Clean Up and Abatement Fund (SWRCB Contract No. 02-166-190-0). The conclusions represent those of the authors and are not necessarily the position of the City of San Diego, the State of California, or the U.S. Environmental Protection Agency (U.S. EPA). Mention of trade names does not constitute an endorsement by the City of San Diego or the State of California.

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ABSTRACT

Fecal indicator bacteria are routinely monitored at marine recreational bathing beaches to assess the public health risk of contracting swimming-related illness. There have been numerous epidemiology studies that demonstrated the relationship of indicator bacteria to health risk, but they have been mostly conducted on beaches impacted by point sources with known human fecal contributions. Few studies have examined this relationship at beaches where non-point sources are the dominant fecal input source.

Here, we present an epidemiology study conducted in Mission Bay, California, where nearly 20% of the historic routine bacterial samples failed water quality standards but the dominant fecal source appears to be non-human. The study focused on three primary questions: (1) Did water contact increase the risk of illness during the two weeks following exposure to water? (2) Among those individuals with water contact, were there associations between illness and measured levels of traditional indicators of water quality? and (3) Among those individuals with water contact, were there associations between illness and measured levels of non-traditional indicators of water quality?

The project was designed as a cohort study. Nearly 8,800 participants were recruited from the six most popular swimming beaches in Mission Bay on weekends and holidays during the summer of 2003. Each participant provided their current state of health and degree of water exposure on their day at the beach. On the same day, water quality was monitored for traditional fecal indicator bacteria (enterococcus, fecal coliforms, total coliforms). A subset of samples was also measured for non-traditional indicators, including new methods for measuring traditional indicators (chromogenic substrate or quantitative polymerase chain reaction [QPCR]), new bacterial indicators (*Bacteroides*), and viruses (somatic and male-specific phage, adenovirus, Norwalk-like virus).

Ten to 14 days later, the participants were contacted by phone and interviewed about symptoms of illness that occurred since their visit to the beach. They were queried about multiple types of illness: gastrointestinal illnesses (diarrhea, nausea, stomach pain, cramps, vomiting, highly credible gastrointestinal illness 1 or 2 [HCGI-1 or HCGI-2]); respiratory illnesses (cough, cough with phlegm, nasal congestion or runny nose, sore throat, significant respiratory illness); dermatologic outcomes (skin rash, infected cuts or scrapes); and non-specific symptoms (fever, chills, eye irritation, earache, ear discharge, eye irritation or redness). Multivariate analysis was conducted to assess relationships between health outcomes and degree of water contact or levels of water quality indicators. These analyses were adjusted for confounding covariates such as age, gender, and ethnicity.

Of the measured health outcomes, only skin rash and diarrhea were consistently significantly elevated in swimmers compared to non-swimmers. For diarrhea, this risk was strongest among children 5 to 12 years old. The risk of illness was uncorrelated with levels of traditional water quality indicators. Of particular note, the state water quality thresholds were not predictive of swimming-related illnesses. Similarly, no correlation

was found between increased risk of illness and increased levels of most non-traditional water quality indicators. A significant association was observed between the levels of male-specific coliphage and HCGI-1, HCGI-2, nausea, cough, and fever, but we interpret these associations cautiously because so few participants were exposed to the water at times when male-specific coliphage was detected.

While we found that traditional fecal indicators were ineffective predictors of health effects, it is difficult to extrapolate this finding beyond Mission Bay. Mission Bay is unusual in that it has been subjected to thorough cleanup activities that source tracking studies confirm leave human fecal sources as only a minor contributor. Moreover, Mission Bay has an unusually long hydraulic residence time compared to other coastal systems, which affects the age and viability of waterborne fecal material. This study, though, does suggest the need for further evaluation of traditional indicators in circumstances where non-point sources are the dominant fecal contributors.

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INTRODUCTION

Fecal indicator bacteria are monitored routinely at marine recreational bathing beaches to assess the public health risk of contracting swimming-related illnesses. In southern California, more than 85,000 samples are collected and over \$3 million is spent annually to assess public health risk using these bacterial tests as indicators of fecal contamination (Schiff *et al.* 2002). The focus on bacteria as a public health monitoring tool is predicated on the relationship between the density of fecal indicator bacteria and the occurrence of illnesses in the swimming population.

Numerous studies have demonstrated the relationship between fecal indicator bacteria at beaches and the occurrence of swimming-related illnesses (Prüss 1998, Wade *et al.* 2003). Prominent among these studies are Cabelli (1979 and 1983) who observed a relationship between enterococcus and illness rates at several beaches around the country, and Haile *et al.* (1999) who observed an increase in swimming-related illnesses and enterococcus, fecal coliforms, and total coliforms at beaches in Santa Monica Bay, California. These studies were the focal point for the establishment of water quality thresholds at marine beaches using fecal indicator bacteria in the United States and the State of California, respectively.

While these previous epidemiology studies successfully demonstrated the value of fecal indicator bacteria, virtually all of these studies were conducted at locations where human sewage was the predominant contamination source. Haile *et al.* (1999) was the only study to have focused on urban runoff as a source, but even this non-point source was known to contain human sources of fecal contamination. Most of the beach water quality problems in California are attributable to non-point source runoff (Noble *et al.* 2003, Schiff *et al.* 2003), and it is less clear that the health relationships for bacterial indicators will remain the same when non-human sources predominate (Calderon *et al.* 1991). Since animals shed bacterial indicators without some of the accompanying human pathogens, there is considerable uncertainty in extrapolating present water quality thresholds that are based on the risk of swimming-associated illnesses to non-point source situations. A poor correlation between bacterial indicators and virus concentrations has been found when examining urban runoff (Jiang *et al.* 2001, Noble and Fuhrman 2001), in contrast to the significant relationships that have been found when examining water bodies influenced by human sources, such as septic tanks (Lipp *et al.* 2001).

Here, we present an epidemiology study conducted in Mission Bay, California, where state water quality standards have historically been exceeded more than 20% of the time (Schiff and Kinney 2002). Several million dollars have been expended to remove human contamination from the Mission Bay by inspecting and repairing the sanitary sewerage system surrounding the bay and diverting the largest storm drains away from the bay. As a result, recent source tracking studies suggest that human fecal material constitutes a minor proportion of fecal inputs to the Bay (City of San Diego and MEC/Weston 2004). However, exceedances of California's water quality standards continue to occur (Hanley 2002).

The goal of this study was to examine the health effects of swimmers and their relationship to water quality indicators in this system where non-human fecal sources are dominant. The study attempted to answer two primary questions:

- Did water contact increase the risk of illness in the two weeks following exposure to water in Mission Bay during the summer of 2003?
- Among those individuals with water contact, were there associations between illness and measured levels of traditional indicators of water quality?

In addition, we addressed a third question about whether there were associations between illness and measured levels of several nontraditional indicators of water quality. New laboratory methods, particularly nucleic acid-based methods, are promoted as monitoring tools because they are faster, cheaper, or more specific than traditional methods of measuring fecal indicator bacteria that rely on culture- or growth-based endpoints. The efficacy of any new public health monitoring tool can only be evaluated through an epidemiological study that documents its relationship to the incidence of swimming-related illness.

Specifically, we tested a rapid method for measuring bacteria and several measures of viruses. Whereas traditional measurement methods for bacteria are slow (> 18 hrs), we included a nucleic acid-based technique that provides results in less than four hours (Noble and Weisberg et al. In Press). Similarly, virus measurements have been an inefficient monitoring tool to date because of inefficient recovery methods, expense of detection methods, and length of time for obtaining results. Culture-independent, nucleic acid-based techniques allow measurements that are faster, less costly, and more specific. These methods have not been previously evaluated in an epidemiology study.

MATERIALS AND METHODS

This project was designed as a cohort study (NRC 2004). Six of the most popular swimming beaches in Mission Bay were targeted every weekend and holiday from Memorial Day to Labor Day during the summer of 2003. Participants were recruited each sampling day and, after giving consent, their current state of health and degree of exposure to the water were recorded. Water quality was measured at multiple sites and over multiple time periods on the same days as the epidemiological data. Ten to 14 days later, the participants were contacted by phone and interviewed about symptoms of illness that occurred after their visit to the beach. The resulting data were tested for significant differences in illness between swimmers and non-swimmers. Among the participants that swam, the probability of illness was regressed against various measures of water quality exposure. The specific methods used in this study are described below and are organized into four sections: sampling sites, water quality data collection, epidemiological data collection, and data analysis.

Sampling Sites

The study sites were selected based on a pilot study conducted in the summer of 2002. Aerial photography, supplemented with on-the-beach enumeration of swimmers for groundtruthing (to confirm the findings of the aerial survey), was used to identify the locations and times of greatest swimmer activity. Hourly images from 9:00 AM to 6:00 PM were collected on 10 days at 10 different swimming areas in Mission Bay. The pilot study identified the most effective times and locations for maximizing the number of potential study participants.

Recruitment of beach-goers occurred at six Mission Bay beaches on weekends and holidays, beginning Memorial Day weekend and continuing through Labor Day weekend, 2003 (Figure 1). Recruitment took place between 12:00 PM and 4:00 PM each weekend day. Water quality samples were collected at the same six beaches. A total of 18 sites were targeted, with the number of sites per beach ranging from two to five, depending upon the length of beach and anticipated swimming activity (Table 1). Data were collected on 29 of 32 targeted sampling dates; three days were excluded from sampling (June 9, 17, and 18, 2003) due to inclement weather and significantly reduced beach usage.

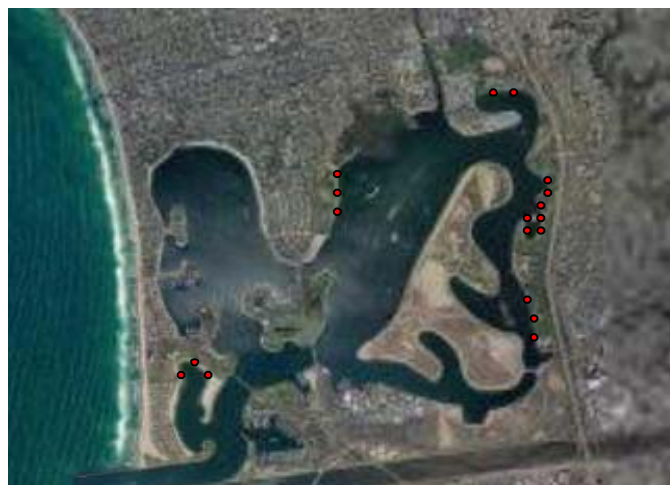


Figure 1. Map of study sites.

Table 1. Study sites used for water quality sampling during the Mission Bay epidemiology study. Latitude and longitude in NAD83 datum.

Beach	Site Number	Latitude	Longitude
Visitor Center	1	32.47.19N	117.12.55W
Visitor Center	2	32.47.30N	117.12.54W
Tecolote Shores	1	32.46.34N	117.12.54W
Tecolote Shores	2	32.46.46N	117.12.61W
Tecolote Shores	3	32.46.61N	117.12.66W
Leisure Lagoon	1	32.47.02N	117.12.67W
Leisure Lagoon	2	32.46.93N	117.12.62W
Leisure Lagoon	3	32.46.96N	117.12.58W
Leisure Lagoon	4	32.47.07N	117.12.55W
Leisure Lagoon	5	32.47.15N	117.12.58W
De Anza	1	32.47.81N	117.12.71W
De Anza	2	32.47.80N	117.12.78W
Crown Point	1	32.47.36N	117.13.86W
Crown Point	2	32.47.24N	117.13.85W
Crown Point	3	32.47.15N	117.13.90W
Bonita Cove	1	32.46.12N	117.14.72W
Bonita Cove	2	32.46.17N	117.14.79W
Bonita Cove	3	32.46.16N	117.14.89W

Water Quality Data Collection

Twelve types of water quality measures were collected during this study. Three were traditional indicators (enterococcus, total coliforms, fecal coliforms) measured by traditional methods (membrane filtration [MF]). Three were the same indicators measured using the newer chromogenic substrate (CS) method. One was enterococcus measured by a new method, quantitative polymerase chain reaction (QPCR). The final five were new indicators (*Bacteroides*, somatic coliphage, male-specific coliphage, adenovirus, and Norwalk-like virus).

Water quality samples were collected at one of three temporal intensities, depending on indicator, which was necessitated by differences in sample volume, laboratory effort, and cost of the various methods (Table 2). The greatest sampling intensity occurred at all 18 sites hourly from 12:30 PM to 3:30 PM. These samples were analyzed by MF for total and fecal coliforms, and for enterococcus using the CS method. The second sampling intensity was also at all 18 sites, but only twice daily (12:30 PM and 2:30 PM). These samples were analyzed for enterococcus and *Bacteroides spp.* using QPCR. The third sampling intensity was a composite sample at each beach, once daily. The composite samples were comprised of the individual sites within each beach at the 12:30 PM sampling interval. These samples were analyzed for total and fecal coliforms (*E. coli*) using CS, enterococcus using MF, somatic and male-specific phage, and adenovirus and Norwalk-like virus.

Samples for analysis of total coliforms, fecal coliforms, and enterococcus were collected in 125 mL sterilized high-density polyethylene (HDPE) bottles. Composite samples for these

constituents were created by pouring the 125 mL HDPE bottles into a single 500 mL sterilized HDPE bottle. Samples for phage were collected in 1L sterilized HDPE bottles, while samples for analysis of virus were collected in 5 x 4L cubitainers. All samples were placed on ice in the dark and transported to the laboratory for processing within six hours. Sample analysis for total coliforms, fecal coliforms, and enterococcus was initiated within the six-hour holding time for these measurements.

Samples for *Bacteroides* and enterococcus QPCR analysis were collected as described by Brinkman *et al.* (2003). Samples for QPCR adenovirus and Norwalk-like virus were first amended with 50mM final concentration MgCl before being passed through glass fiber filters (GF/F) (Whatman, Clifton, NJ) using positive pressure. Following concentration, all filters were stored at -80°C until shipment to the analytical laboratory. Frozen filters were shipped to the laboratory in a cryoshipper containing liquid nitrogen to maintain the integrity of the nucleic acid material. Water samples for phage analysis were stored overnight at 4°C before shipment to the laboratory on ice via overnight express.

Laboratory Methods

Enterococcus was measured using three different techniques. Individual samples from each site were measured using Enterolert™ chromogenic substrate and the Quantitray 2000™ system (IDEXX Westbrook, ME), while composite samples were measured using the 24-hour EPA Method 1600 (m-EI). The third technique used to measure enterococcus was QPCR (Brinkman *et al.* 2003). Unlike the membrane filtration or chromogenic substrate techniques that rely on growth-based endpoints, QPCR relies on amplification of unique DNA sequences to estimate the number of bacterial cells in the original sample (Brinkman *et al.* 2003; Haugland. *In press*). This technique is currently being used by the U.S. EPA in their National Epidemiology Study.

Total coliforms and fecal coliforms were measured using two different techniques. In individual samples, total and fecal coliforms were enumerated by membrane filtration using APHA Method 9222B (m-Endo) and APHA Method 9222D (M-FC), respectively. In composite samples, total and fecal coliforms (*E. coli*) were enumerated using Colilert-18™ chromogenic substrate and Quantitray 2000™ system (IDEXX, Westbrook, ME).

The QPCR method also was used to measure *Bacteroides*, a group of fecal obligate anaerobic bacteria that cannot survive for extended periods in oxygenated environments (Bernhard and Field 2000; Bernhard *et al.* 2003). Measurements of this indicator were performed simultaneously with QPCR measurements of enterococcus.

F+ and somatic coliphages were detected and quantified in 1 L volumes of water by a modification of USEPA Method 1601 for enrichment and spot-plating that provides a Most Probable Number (MPN) estimate of coliphage concentration. One-liter sample volumes were supplemented with 0.05M MgCl₂, host bacteria were added (*E. coli* Famp for F+ coliphages or *E. coli* CN-13 for somatic coliphages), the sample was quickly divided into aliquots of three replicate volumes each of 300, 30, and 3 mL, and these volumes were enriched overnight at 36°C . A small volume of each enrichment culture was spotted onto an agar medium lawn of host bacteria and incubated for 4 hours at 36°C and scored for the presence of coliphages. The number of enrichment cultures that were positive for coliphages were used to compute an MPN concentration.

Analysis of Norwalk-like viruses and adenoviruses on GF/F filters was conducted by molecular methods. Three-quarter pieces of the first 75% of frozen filters with DNA concentrates were eluted and extracted using 1.5% beef extract elution, PEG precipitation, and viral-NA extraction/purification using GITC lysis buffer and Qiagen midi columns, followed by ethanol precipitation. A 2.5 µl volume of the final 50 µl of total concentrate was analyzed using semi-nested PCR. A one-ninth portion of the remaining 25% frozen Whatman GF/F filters was eluted and extracted using lysis buffer directly, followed by purification using the Qiagen plant kit. Of the final 50 µl volume of nucleic acid extract, 5 µl (10%) was used for (RT)-PCR analysis of each virus (human adenovirus, genogroup I norovirus, and genogroup II norovirus).

Table 2. Methods, analytical laboratories, and sampling intensity used for water quality measurements during the Mission Bay Epidemiology Study.

Parameter	Method	Analytical Laboratory	Sampling intensity
Enterococcus	EPA 1600	City of San Diego	Beach composite once per day
Enterococcus	96 well Quantitray	City of San Diego	Hourly sample at every site
Enterococcus	Quantitative PCR	EMSL	Two samples per day at each site
Fecal Coliforms	APHA Method 9222D	City of San Diego	Hourly sample at every site
Fecal Coliforms (<i>E. coli</i>)	96 well Quantitray	City of San Diego	Beach composite once per day
Total Coliforms	APHA Method 9222B	City of San Diego	Hourly sample at every site
Total Coliforms	96 well Quantitray	City of San Diego	Beach composite once per day
Bacteroides	Quantitative PCR	EMSL	Two samples per day at each site
Somatic Phage	Modified EPA 1601	University of North Carolina	Beach composite once per day
Male-specific Phage	Modified EPA 1601	University of North Carolina	Beach composite once per day
Adenovirus 40 and 41	Quantitative PCR	University of North Carolina	Beach composite once per day
Norwalk-like Virus	Quantitative PCR	University of North Carolina	Beach composite once per day

Epidemiological Data Collection

Three study instruments were developed for this project including: (1) an interviewer-administered screening form to assess eligibility and desire to participate; (2) a self-administered questionnaire (SAQ) that was completed by study subjects before they left the beach for the day; and (3) a computer-aided telephone interview (CATI) questionnaire administered to study participants approximately two weeks following their visit to a Mission Bay beach (Appendix 1). The study instruments, in addition to the study protocol and consent form, were approved by the Committee for the Protection of Human Subjects at U.C. Berkeley prior to study initiation.

Beach Recruitment

Interviewers canvassed the study beaches, approaching individuals and groups to determine their interest in and eligibility to participate in the study. Eligibility criteria included: (1) no previous participation in the study; (2) at least one family member of the household at the beach was 18 years old or older; (3) home address in the United States, Canada, or Mexico (interviews were conducted in either English or Spanish); and (4) had not swam (face or head under water) in the ocean or in a lake in the previous seven days. If an individual or household was eligible and agreed to participate, the interviewers obtained signed consent from the individual or all participating adult members of the household. Adults gave signed consent for children under 18. Participants were then asked for their names, their contact information, and their city and state of residence. The household data also contained the background variables of the recruited households, including household size and the language that was used to obtain consent. During the screening process, each participant was assigned a non-informative identification code. Interviewers marked the screening form to identify the water quality sampling site that corresponded best with the location of the individual or family on the beach. Participants were given an incentive (beach ball) and asked to complete the SAQ prior to their departure that day.

The SAQ consisted of 18 questions concerning possible exposures at the beach (i.e., swimming, other activities, food and beverages, other exposures) and exposures or illnesses experienced during the 2-3 days prior to the beach visit. The survey took no longer than 15 minutes to complete. Participants who failed to complete the survey at the beach were contacted within three days by telephone interviewers, and their surveys were completed over the phone. Participants that completed the survey at the beach were given additional incentives (water bottles and beach balls).

Follow-Up CATI Interview

Between 10 and 14 days following their beach visit, participants were telephoned and asked to complete a 10- to 15-minute interview. This interview consisted of the following types of questions: (1) demographic information, including race, income, education level; (2) swimming and other exposures since the interview day; (3) existing health problems potentially related to the study outcomes (e.g., chronic diarrhea); and (4) acute health conditions (gastrointestinal, respiratory, skin, eye, or ear) experienced since the visit to the beach. If acute illnesses were experienced, a series of questions were asked to determine whether the subject had to restrict normal activities (missed work or school, or other activities) and whether they visited a doctor, clinic, or other medical facility for the illness. As with the previous interviews, the head of household answered questions for children under 18.

Health Outcomes Measured

The health outcomes quantified through the CATI interview included gastrointestinal illness, respiratory symptoms, dermatologic symptoms, and other non-specific symptoms. Gastrointestinal illness included nausea, vomiting, diarrhea, and stomach pains or cramps. In addition, two categories of highly credible gastrointestinal illness (HCGI) were measured. HCGI-1 was defined as either: (1) vomiting plus diarrhea or fever; or (2) cramps and fever. HCGI-2 was defined as vomiting plus fever. Respiratory outcomes included cough, cough with phlegm, nasal congestion or runny nose, sore throat, and significant respiratory disease (SRD). SRD was defined as: (1) fever plus nasal congestion; or (2) fever plus sore throat; or (3) cough with phlegm. Dermatologic outcomes included skin rashes and infected cuts or scrapes. Non-

specific symptoms included fever, chills, redness or eye irritation, earache, and ear discharge or drainage.

Data Analysis

Water Quality

Water quality analysis focused on assessment of swimmer exposure, including: (1) identification of the ranges of fecal indicator bacteria densities among beaches; (2) determining whether the compositing strategy within a beach adequately represented the beach average as determined by individual samples at multiple sites across a beach; and (3) correlating the different indicator organisms and methods to ascertain if the densities were providing redundant or unique information relative to swimmer exposure.

Epidemiology

Two principal epidemiological analyses were conducted. The first was a model to evaluate whether there was a significant difference in illness rate between swimmers and non-swimmers. Swimming risk (i.e., swimmers compared to non-swimmers) was contrasted for multiple definitions of “swimming,” including: “any water contact,” “water up to the shoulder,” “water on the face,” “face under the water,” “water in the mouth,” and “swallowed water.” These definitions were designed to reflect qualitatively different levels of exposure to the water.

The second analysis was a model that examined whether there was a significant relationship between the risk of illness in swimmers and water quality (as measured water quality indicators). These models were constructed for each of the measured water quality indicators using numerous approaches for swimmer exposure, including incremental changes for daily geometric mean for all sites at a beach, daily geometric mean for the site(s) nearest the swimmer, and geometric mean for just those site(s) and time(s) nearest the swimmer. Additionally, state water quality thresholds for enterococcus were examined using dichotomous cutpoints (>35 vs. ≤ 35 and >104 vs. ≤ 104) for evaluating risk. In all models involving indicators, a value of zero was used for water quality exposure values below the detection limit.

All analyses were conducted as both univariate and multivariate models. The multivariate models included potential confounding factors as covariates. The covariates examined were age category (0-5, 5-12, 12-30, >30), gender, ethnicity, allergies, history of swimming again after the beach interview, history of collecting shells at the beach, history of digging or having one’s body buried in the sand, history of playing with seaweed or algae, history of chronic illnesses (gastrointestinal, asthma, or chronic skin conditions), contact with other sick people, use of insect repellent at the beach, use of sunblock at the beach, history of showering immediately after swimming, consumption of raw or undercooked eggs or meat, income, and consumption of food while at the beach. All variables, except age, were categorized as 1 or 0. Race was collapsed into two categories, white and non-white.

All analyses were conducted using the same basic model that is being used in the U.S. EPA BEACHES study. This is a nested interaction model that allows linear combinations of variables to be estimated. This permits comparisons among swimmers while retaining non-swimmers in the model, as well as comparisons among swimmers versus non-swimmers. The components of the model are:

p = probability of illness

(NOTE: “ $p / (1-p)$ “ defines the odds of illness

$X_1=1$ if any contact with water; 0 otherwise

X_2 is the water quality measure

X_3 is a 1/0 indicator of other exposure (body contact, head under water, etc.)

Non-swimmers= α

$$\ln(p/(1-p)) = \alpha + \beta_1 x_1 + \beta_2 (x_1 * x_2) + \beta_3 x_3 + \beta_4 (x_3 * x_2)$$

(NOTE: The model reduces to $\ln(\text{odds}) = \alpha$ when all other variables are set equal to “0”, i.e., the situation representing non-swimmers.

$$\text{Swimmers-any contact} = \alpha + \beta_1 x_1 + \beta_2 (x_1 * x_2)$$

$$\text{Swimmers-other contact} = \alpha + \beta_1 x_1 + \beta_2 (x_1 * x_2) + \beta_3 x_3 + \beta_4 (x_3 * x_2)$$

In the multivariate analyses, a backwards deletion procedure (Rothman and Greenland 1998) was used to identify factors that most affected the water quality/illness relationship. This procedure uses the following algorithm:

- (1) The full model is fit with all covariates.
- (2) The estimate of interest is saved (e.g., coefficient for association between water quality and illness)
- (3) The first covariate in the list is removed, and then the model is refit
- (4) The estimate of interest is saved.
- (5) The percentage change between the estimate in Step 2 and the estimate in Step 4 is calculated.
- (6) The procedure is repeated for all covariates in list
- (7) After all models have been fit, determine the covariate that had the smallest impact on the water quality/illness relationship (i.e., the smallest percent change). This covariate is removed completely.
- (8) Repeat Steps 3-7 until removal of any single additional covariate produces a change greater than 10% (or some other pre-specified criterion) in the fully adjusted water quality/illness relationship. In this study, a change greater than 10% was used as the criterion for stopping the removal of covariates.

The advantage of this procedure is that it focuses on the exposure/outcome relationship and selects the covariates that are the strongest confounders of this key relationship. This is in contrast to traditional stepwise procedures that focus on the significance, or strength, of the association between the covariate and the outcome (rather than the association between the exposure and the outcome). The disadvantage is that each model can require extremely long times to complete. For example, many of the models required more than one week to complete (running 24 hours/day).

The risk of illness output from the models was expressed as an odds ratio. For models comparing swimmers and non-swimmers, the odds ratio can be interpreted as the odds of a specific illness in swimmers divided by the odds of illness in non-swimmers. Odds ratios (statistically) significantly greater than 1.0 are indicative of illness elevated for swimmers compared to non-swimmers. For models assessing the association between water quality among swimmers, the odds ratios can be interpreted as the increase in the odds of illness per defined unit of increase in the water quality measure among swimmers. The odds ratios were calculated by exponentiating the regression coefficient provided by the model output.

Attributable risk calculations were performed for health outcomes that were significantly increased in swimmers compared to non-swimmers. Attributable risk is a measure of excess risk. For this study, models adjusted for relevant covariates (see above) were used to estimate the percentages of swimmers and non-swimmers ill for any health outcomes with a statistically significant elevated adjusted odds ratio. The adjusted attributable risk estimates were determined by estimating adjusted probabilities of swimmers and non-swimmers from a multivariate logistic model, weighting the covariates at the mean value for each covariate. The adjusted attributable risk was then calculated as the difference between the probability of illness among swimmers with mean levels of covariates and non-swimmers with mean levels of covariates. These results are expressed as the number of excess cases of illness seen among 1,000 swimmers (along with a 95% confidence interval of this estimate).

Emphasis is placed on the multivariate (adjusted) results throughout the report because they correct for confounding from substantial differences in ethnicity, age, beach, and other covariate distributions. The univariate results, though, are provided in Appendices 2 and 3 for the adjusted odds ratios and attributable risk calculations.

RESULTS

Water Quality

A total of 1,897 water samples were collected during the survey, with the sampling schedule and number of samples differing among microbial indicators (Table 3). All intended samples were collected, with the exception of those on June 9, 17, and 18, when drizzle led to a lack of swimmers and sampling was curtailed. With the exception of one sample for traditional indicators that was spilled and four virus samples that were compromised in the freezing/thawing process, every sample collected was analyzed successfully in the laboratory.

Table 3. Number of samples processed for each beach by indicator type.

Beach	Traditional Fecal Indicators	PCR-based Fecal Indicators	Phage	Virus
Bonita Cove	324	131	25	24
Crown Point	324	132	23	22
De Anza Cove	207	88	26	25
Leisure Lagoon	539	219	24	23
Tecolote Shores	304	132	24	24
Visitors Center	200	88	24	23
Total	1897	790	151	141

Traditional fecal indicator bacteria

A wide range of traditional bacterial densities were measured over the course of the study (Table 4). The majority of samples had quantifiable levels of enterococcus, fecal coliform, and total coliform; between 16% and 40% of the samples were below the method detection limits, depending upon the indicator. Maxima for all three bacterial indicators ranged to 10^5 MPN/100mL. About 16% of all samples that measured traditional fecal indicator bacteria exceeded state water quality thresholds, with enterococcus accounting for most of the exceedances (96%) and total coliforms the least (2%).

Table 4. Range of concentrations for traditional water quality indicators (number/100 mL) and frequency of exceedance (N=1,897) of the State of California's water quality threshold.

	No. of Samples Below RL	Geomean	Maximum	No. of Samples Exceeding Threshold	State Water Quality Threshold
Enterococcus-CS	585	29	57,940	265	>104
Fecal Coliform	304	25	48,000	99	>400
Total Coliform	808	102	45,000	5	>10,000
Total:Fecal Ratio	-	-	-	75	Total:Fecal < 10 When Total > 1,000

The lowest average concentrations occurred at Crown Point (Figure 2), where less than 6% of the enterococcus values exceeded state water quality thresholds. The highest densities of

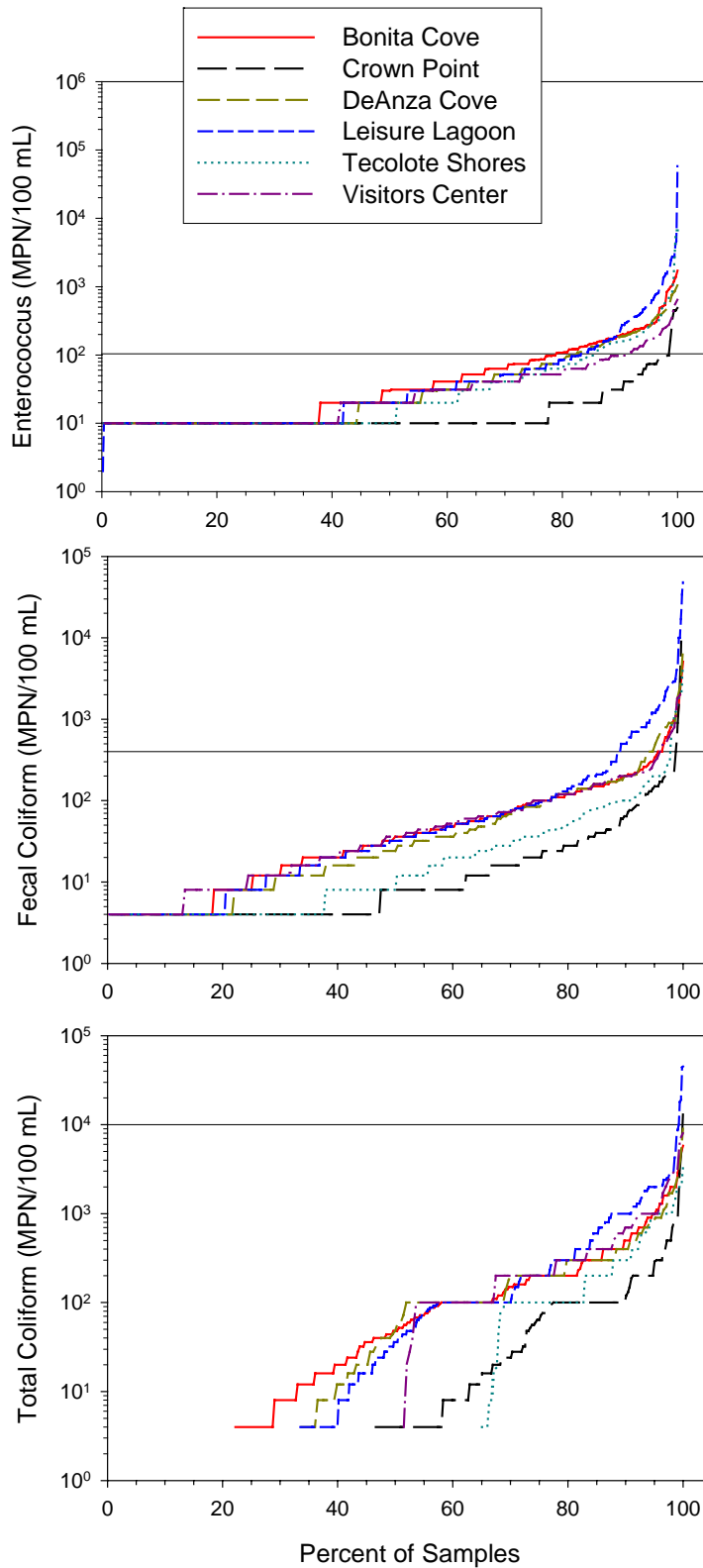


Figure 2. Cumulative distribution frequency for enterococcus, fecal coliform, and total coliform by study beach. The horizontal line indicates the state's water quality threshold (see table 4).

enterococcus were observed at Leisure Lagoon with maximum densities reaching 57,940 MPN/100mL. The greatest frequency of water quality exceedances occurred at Bonita Cove. More than 21% of the samples collected at this beach exceeded state water quality thresholds.

Non-traditional fecal indicator bacteria

A wide range of non-traditional bacterial densities were measured over the course of the study (Table 5). The majority of samples had quantifiable levels of enterococcus and *Bacteroides*, with 6% and 37% of the samples below method detection limits, respectively. Maxima for both bacterial indicators ranged from 10⁵ to 10⁶ MPN/100mL. For enterococcus, 42% of samples exceeded the state water quality threshold. There is no state water quality threshold for *Bacteroides*.

Table 5. Range of concentrations (number/100 mL) for non-traditional fecal indicator bacteria. QPCR = quantitative polymerase chain reaction.

	No. of Samples Below RL	Geomean	Maximum	No. of Samples Exceeding Threshold	State Water Quality Threshold
Enterococcus-QPCR	46	65	141,053	351	>104
Bacteroides	294	102	3,718,815	-	-

Only minimal correlation was found among traditional and non-traditional fecal indicator bacteria indicators (Table 6). The best relationships were among the traditional indicator bacteria, particularly the coliform groups. The worst relationships were for *Bacteroides*, which might be expected since they are functionally a different group of microorganisms. For enterococcus, the relationship between the growth-based assay and the nucleic acid-based technology was not strong (Figure 3). QPCR overestimated the enterococcus density compared to the growth-based assays, possibly due to the presence of non-viable DNA, which are only measured by PCR.

Table 6. Correlation coefficients between traditional and non-traditional fecal indicator bacteria. CS= chromogenic substrate; QPCR = quantitative polymerase chain reaction.

	Fecal Coliform	Enterococcus-CS	Enterococcus-QPCR	Bacteroides
Total Coliform	0.51	0.40	0.28	0.01
Fecal Coliform		0.35	0.17	0.01
Enterococcus-CS			0.24	0.24
Enterococcus-QPCR				0.01

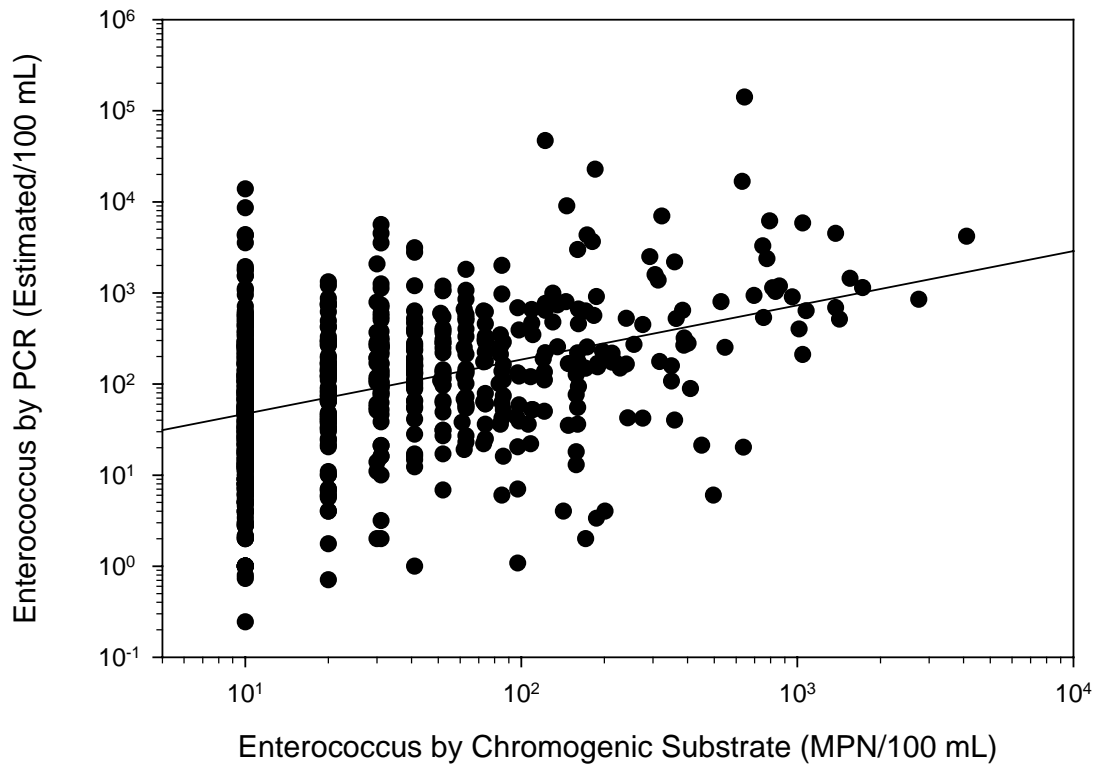


Figure 3. Comparison between enterococcus using traditional growth-based assay (chromogenic substrate) versus the non-traditional nucleic acid-based (QPCR) technology.

Virus Measurements

Virtually no pathogenic virus was detected in the samples collected from Mission Bay over the course of the study (Table 7). There were no detectable Norwalk-like virus and only a single sample detected for adenovirus. The majority of samples had quantifiable levels of somatic phage, but not for male-specific phage, which is more strongly associated with human fecal material (Figure 4). Roughly 68% of the samples had detectable levels of somatic phage and maximum concentrations were observed near 36 MPN/100 mL. Male-specific phage was detected in 11% of the samples and maximum concentrations reached only 1 MPN/100 mL.

Table 7. Range of concentrations (number/100 mL) for virus measurements.

	Total No. of Samples	No. of Samples Below RL	Geomean	Max
Adenovirus	151	150	-	0.01
Norwalk-like Virus	151	151	-	-
Male-specific Phage	141	125	0.2	0.78
Somatic Phage	141	45	0.6	36.6

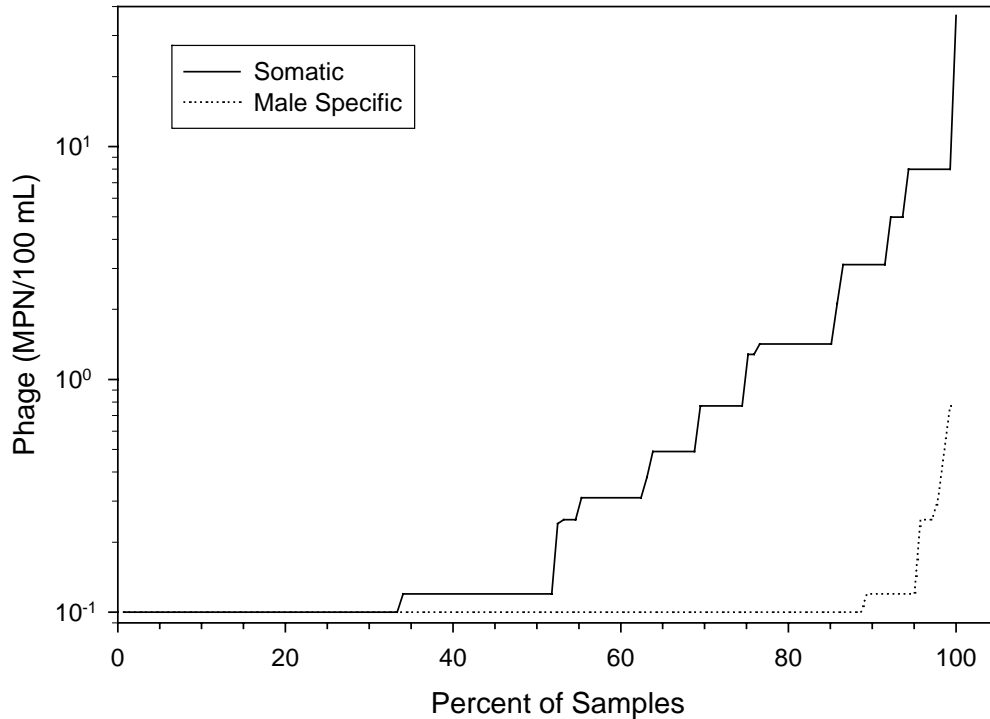


Figure 4. Cumulative distribution frequency for somatic and male-specific phage in Mission Bay during the study.

Effectiveness of compositing

Comparisons of composite samples to averages of individual grab samples for a site indicated that compositing was effective in representing beach-wide water quality for enterococcus (Figure 5). Compositing described 69% of the variability in the individual grab sample arithmetic means ($r^2 = 0.69$), and the y-intercept closely approximated the origin. This relationship was considered quite reasonable considering laboratory duplicate analysis described 61% of the variability observed between paired laboratory analyses from the same sample container using the same (chromogenic substrate) method ($r^2 = 0.61$). Significant relationships existed for composite samples versus the arithmetic mean of individual grab samples ($r^2 = 0.39$) for the fecal coliforms. Fecal coliform comparisons may be hindered because the chromogenic substrate method quantifies *E. coli* while the membrane filtration quantifies the entire fecal coliform group. The weakest relationship between composite samples and the arithmetic mean of individual grab samples was for total coliform ($r^2 = 0.06$).

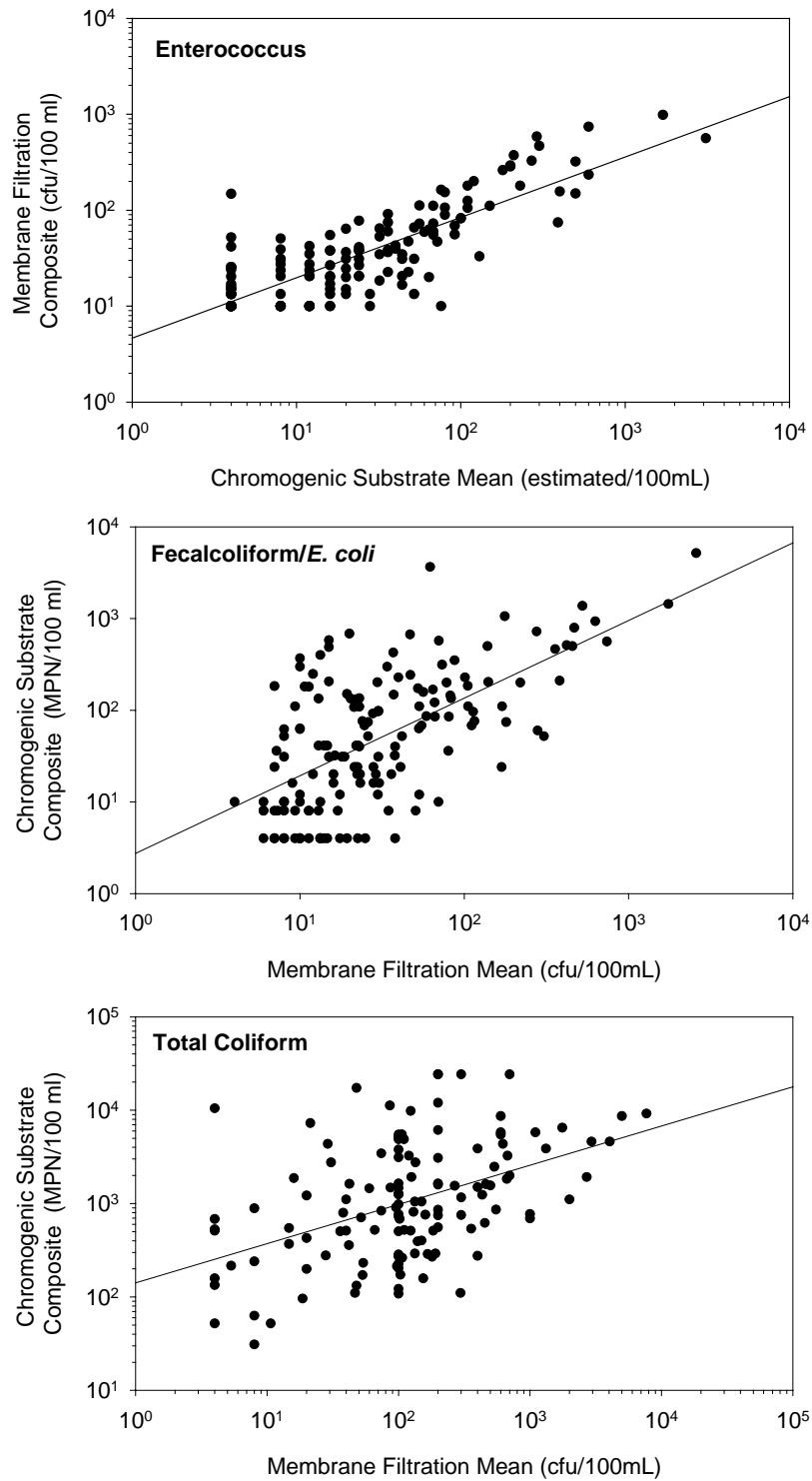


Figure 5. Comparison of compositing versus the arithmetic mean of individual grab samples for enterococcus, fecal coliform/E. coli, and total coliform. Composite and grab samples were analyzed using either the chromogenic substrate or membrane filtration methodologies.

Epidemiology

A total of 12,469 individuals and 5,062 households were enrolled in the study. Of these, 8,797 (71%) of the enrolled participants and 3,501 (69%) of the households completed the follow-up telephone interview (Tables 8 and 9). Fifty-seven percent (n=4,971) of those that completed the follow-up interview were swimmers, compared to 3,742 non-swimmers. Non-swimmers were largely comprised of teens and adults aged 12 and older. In contrast, swimmers were roughly evenly divided among age groups with the majority (n=1,461, 29%) being 5 to 12 years old. There were slightly more males (54%) than female (45%) participants, which remained similar among swimmer and non-swimmer categories. Participants were dominated by Hispanic (54%) and white (28%) ethnicities.

Tabulations of participant responses (all beaches combined and separately by beach) to questions regarding sociodemographic characteristics, and exposures prior to, during, and following their visit to the beach can be found in Appendices 4, 5, 6 and 7, respectively.

Table 8. Individual sociodemographic characteristics collected from study participants at all beaches from Mission Bay.

Characteristic	Surveyed Participants							
	All		Swimmers		Non-swimmers		Missing	
	(N = 8,797)		(N = 4,971)		(N = 3,742)		(N = 84)	
	n	%	n	%	n	%	n	%
Age								
0 - 5	1,214	13.8	870	17.5	326	8.7	18	21.4
5.1 - 12	1,808	20.6	1,461	29.4	332	8.9	15	17.9
12.1 - 30	2,366	26.9	1,215	24.4	1,127	30.1	24	28.6
30.1 - 55	2,928	33.3	1,251	25.2	1,654	44.2	23	27.4
>55	332	3.8	76	1.5	253	6.8	3	3.6
Missing	149	1.7	98	2.0	50	1.3	1	1.2
Gender								
Male	4,761	54.1	2,624	52.8	2,100	56.1	37	44.0
Female	3,948	44.9	2,292	46.1	1,609	43.0	47	56.0
Missing	88	1.0	55	1.1	33	0.9	0	0.0
Race								0.0
White	2,495	28.4	1,181	23.8	1,307	34.9	7	8.3
African American	369	4.2	165	3.3	194	5.2	10	11.9
American Indian/Alaskan Native	62	0.7	35	0.7	27	0.7		
Asian/Pacific Islander	463	5.3	177	3.6	281	7.5	5	6.0
Hispanic/Latino	4,723	53.7	3,052	61.4	1,616	43.2	55	65.5
Mixed Race	407	4.6	241	4.8	163	4.4	3	3.6
Other	227	2.6	96	1.9	128	3.4	3	3.6
Missing	51	0.6	24	0.5	26	0.7	1	1.2

Table 9. Household sociodemographic characteristics collected from study participants at all beaches from Mission Bay.

Characteristic	Surveyed Participants N = 3,501 Households)	
	n	%
Household size (# of persons)		
1	1,269	36.2
2	649	18.5
3	532	15.2
4	511	14.6
5	290	8.3
6	140	4.0
7	68	1.9
>8	42	1.2
Missing	0	0.0
Country of Residence (HH)		
United States	3,170	90.5
Mexico	66	1.9
Canada	2	0.1
Missing	263	7.5
Average Annual Income (HH)		
< 10,000	284	8.1
10,001 to 20,000	639	18.3
20,001 to 30,000	444	12.7
30,001 to 40,000	360	10.3
40,001 to 50,000	294	8.4
50,001 to 60,000	231	6.6
60,001 to 70,000	181	5.2
70,001 to 80,000	210	6.0
80,001 to 100,000	229	6.5
>100,000	309	8.8
Missing	321	9.2

Health Outcomes for Swimmers versus Non-swimmers

Only two of the 14 health outcomes evaluated had an odds ratio that was consistently significantly elevated across all water exposures after adjustment for covariates (Table 10). The two outcomes for which there was increased risk were skin rash and diarrhea. Complete results for all health outcomes and all definitions of water exposure can be found in Appendix 2.

While the risk of diarrhea was significantly increased among swimmers compared to non-swimmers, the risk was greatest in a narrow age band (Table 11). Five- to 12-year-old children had at least double the odds of this health outcome after any water contact compared to non-swimmers of the same age. The elevated odds ratio in this age group was seen across multiple definitions of water exposure ranging from “any water contact” to “swallowed water.”

The risk of diarrhea was greater in Caucasian swimmers than in Hispanic swimmers, particularly among those who reported swallowing water (Table 12). The risk of diarrhea was significantly elevated for all ages of Caucasians after swallowing water, but was highest in Caucasian swimmers aged 5 to 12 years old. Although the risk of diarrhea was not statistically significantly elevated in Hispanic swimmers, the greatest odds ratios were observed in the 5- to 12-year-old age group. In contrast to the ethnic differences observed for diarrhea, the risk of skin rash was comparable between Caucasians and Hispanic swimmers despite increased water exposure. Odds ratios for skin rash were greatest in the 0- to 5-year-old age group compared to other age groups. When comparing ethnicity, odds ratios for skin rash were always greatest in Hispanic swimmers compared to Caucasians of the same age group.

Table 10. Adjusted odds ratios (swimmers vs. non-swimmers) for health outcomes using various definitions of water exposure. Bolded numbers indicate statistical significance.

Health Outcome	Adjusted OR (95% CI)		
	Any Water Contact	Water on Face	Swallow Water
Gastrointestinal			
Diarrhea	1.36 (1.04-1.78)	1.54 (1.16 – 2.06)	1.89 (1.34 – 2.66)
HCGI-1	0.96 (0.68-1.37)	1.03 (0.71 – 1.50)	1.01 (0.62, 1.66)
HCGI-2	0.93 (0.49-1.75)	1.10 (0.57 – 2.13)	1.12 (0.51, 2.45)
Nausea	0.88 (0.64-1.23)	1.11 (0.77, 1.61)	1.41 (0.91, 2.17)
Cramps	1.07 (0.81-1.42)	1.14 (0.86, 1.51)	1.53 (1.08, 2.15)
Vomiting	0.85 (0.58-1.26)	0.92 (0.61, 1.37)	0.86 (0.49, 1.52)
Skin Rash	2.25 (1.60-3.16)	2.39 (1.72 – 3.31)	2.11 (1.37 – 3.24)
Eye Irritation	1.19 (0.93 – 1.52)	1.29 (0.99 – 1.68)	1.69 (1.23 – 2.30)
Ear			
Earache	0.96 (0.65-1.44)	1.00 (0.64 – 1.56)	1.10 (0.63 – 1.93)
Ear Discharge	0.40 (0.16-1.01)	0.47 (0.19 – 1.13)	0.82 (0.22 – 3.00)
Fever	0.96 (0.70-1.32)	1.04 (0.74 – 1.47)	1.15 (0.76 – 1.75)
Respiratory			
SRD	1.08 (0.80-1.45)	1.03 (0.75 – 1.43)	0.99 (0.62 – 1.57)
Sore Throat	0.89 (0.69-1.16)	0.96 (0.71 – 1.32)	0.87 (0.56 – 1.34)
Cough	0.74 (0.54-1.02)	0.77 (0.54 – 1.11)	0.82 (0.47 – 1.41)

Table 11. Health outcomes by age group and water exposure.

	Any Water Exposure			
	Age Group (years)			
	0 - 5	>5 - 12	>12 - 30	>30
Gastrointestinal				
Diarrhea	0.75 (0.40 - 1.40)	2.80 (1.07 - 7.27)	1.71 (0.96 - 3.05)	1.28 (0.85 - 1.93)
HCGI-1	0.86 (0.45 - 1.59)	1.33 (0.56 - 3.14)	0.73 (0.36 - 1.44)	1.37 (0.60 - 3.15)
HCGI-2	0.74 (0.31 - 1.75)	2.26 (0.28 - 18.45)	0.64 (0.15 - 2.74)	2.10 (0.30 - 14.73)
Nausea	1.90 (0.62 - 5.83)	1.40 (0.52 - 3.79)	0.46 (0.26 - 0.83)	1.11 (0.63 - 1.95)
Cramps	1.20 (0.53 - 2.70)	1.61 (0.77 - 3.37)	0.57 (0.34 - 0.94)	1.51 (0.93 - 2.43)
Vomiting	0.58 (0.31 - 1.10)	1.59 (0.54 - 4.68)	0.68 (0.31 - 1.47)	1.45 (0.64 - 3.30)
Skin Rash	5.86 (1.81 - 19.0)	3.26 (1.30 - 8.15)	1.60 (0.89 - 2.86)	1.84 (1.04 - 3.25)
Eye Irritation	0.53 (0.27 - 1.04)	1.84 (0.94 - 3.61)	1.21 (0.81 - 1.82)	1.23 (0.80 - 1.88)
Ear				
Earache	0.86 (0.31 - 2.39)	1.14 (0.37 - 3.49)	0.62 (0.30 - 1.25)	1.47 (0.73 - 2.96)
Ear Discharge	0.12 (0.01 - 1.66)	0.22 (0.03 - 1.59)	0.58 (0.14 - 2.37)	0.63 (0.10 - 3.86)
Fever	0.68 (0.39 - 1.16)	1.67 (0.67 - 4.15)	0.83 (0.44 - 1.56)	1.44 (0.73 - 2.84)
Respiratory				
SRD	0.63 (0.32 - 1.22)	1.23 (0.57 - 2.66)	1.01 (0.58 - 1.75)	1.43 (0.86 - 2.35)
Sore Throat	0.74 (0.33 - 1.69)	1.21 (0.57 - 2.57)	0.82 (0.51 - 1.30)	0.90 (0.61 - 1.35)
Cough	0.52 (0.27 - 1.02)	0.84 (0.38 - 1.87)	0.78 (0.41 - 1.49)	0.84 (0.49 - 1.45)

(Table 11 Continued). Health outcomes by age group and water exposure.

	Water On Face			
	Age Group (years)			
	0 - 5	>5 - 12	>12 - 30	>30
Gastrointestinal				
Diarrhea	0.92 (0.49 – 1.74)	3.11 (1.19 – 8.15)	2.40 (1.31 – 4.38)	1.15 (0.69 – 1.90)
HCGI-1	1.07 (0.57 – 2.00)	1.24 (0.52 – 2.98)	0.84 (0.40 – 1.77)	0.93 (0.31 – 2.77)
HCGI-2	0.95 (0.40 – 2.28)	2.48 (0.30 – 20.33)	0.95 (0.21 - 4.27)	0.53 (0.03 – 8.01)
Nausea	1.97 (0.72 – 5.42)	1.35 (0.52 – 3.51)	0.59 (0.30 – 1.16)	1.31 (0.65 – 2.63)
Cramps	1.51 (0.67, 3.40)	1.84 (0.88 - 3.83)	0.61 (0.36 - 1.03)	1.23 (0.73 - 2.06)
Vomiting	0.75 (0.39 – 1.42)	1.64 (0.55 – 4.89)	0.84 (0.39 – 1.83)	0.97 (0.34 – 2.79)
Skin Rash	6.96 (2.14 – 22.62)	3.67 (1.47 – 9.17)	1.49 (0.86 – 2.57)	2.19 (1.21 – 3.95)
Eye Irritation	0.54 (0.27 – 1.08)	1.88 (0.96 – 3.70)	1.39 (0.90 – 2.16)	1.25 (0.75 – 2.08)
Ear				
Earache	0.57 (0.18 – 1.79)	1.15 (0.37 – 3.60)	0.68 (0.31 – 1.48)	2.16 (0.97 – 4.83)
Ear Discharge	0.20 (0.02 – 2.39)	0.33 (0.05 – 2.24)	0.46 (0.11 – 1.98)	0.97 (0.20 – 4.64)
Fever	0.74 (0.40 – 1.35)	1.78 (0.70 – 4.51)	1.23 (0.62 – 2.46)	0.76 (0.28 – 2.09)
Respiratory				
SRD	0.57 (0.29 – 1.14)	1.29 (0.58 – 2.84)	0.99 (0.55 – 1.79)	1.39 (0.76 – 2.53)
Sore Throat	0.73 (0.29 – 1.80)	0.88 (0.39 – 1.98)	1.22 (0.71 – 2.11)	0.98 (0.58 – 1.64)
Cough	0.42 (0.20 – 0.89)	0.93 (0.41 – 2.10)	0.80 (0.39 – 1.68)	0.99 (0.51 – 1.90)

	Swallow Water			
	Age Group (years)			
	0 - 5	>5 - 12	>12 - 30	>30
Gastrointestinal				
Diarrhea	0.97 (0.47 - 2.01)	5.30 (1.96 - 14.33)	1.76 (0.79 - 3.91)	1.78 (0.86 - 3.66)
HCGI-1	0.61 (0.25 - 1.49)	1.72 (0.65 - 4.59)	1.34 (0.49 - 3.67)	0.70 (0.08 - 6.29)
HCGI-2	0.74 (0.23 – 2.36)	2.83 (0.32 – 24.83)	0.92 (0.13 – 6.46)	3.15 (0.18 – 54.04)
Nausea	2.27 (0.76 – 6.81)	2.29 (0.84 – 6.23)	0.56 (0.21 – 1.46)	2.08 (0.81 – 5.33)
Cramps	2.05 (0.88 – 4.78)	2.51 (1.18 – 5.33)	0.52 (0.23 – 1.18)	1.83 (0.85 – 3.92)
Vomiting	0.41 (0.14- 1.18)	2.15 (0.57 – 8.13)	1.27 (0.43 – 3.77)	1.13 (0.12 – 10.12)
Skin Rash	10.42 (2.34 - 46.40)	4.10 (1.39 - 12.09)	1.15 (0.46 - 2.86)	1.32 (0.39 - 4.46)
Eye Irritation	0.89 (0.41 – 1.92)	2.87 (1.44 – 5.71)	1.48 (0.82 – 2.67)	1.53 (0.72 – 3.25)
Ear				
Earache	0.25 (0.03 – 2.18)	2.09 (0.65 – 6.78)	0.78 (0.26 – 2.28)	0.89 (0.18 – 4.30)
Ear Discharge	tf	tf	tf	tf
Fever	0.73 (0.36 – 1.45)	2.36 (0.88 – 6.28)	1.51 (0.64 – 3.55)	1.04 (0.22 – 4.91)
Respiratory				
SRD	0.62 (0.24 – 1.57)	1.18 (0.46 – 3.03)	1.03 (0.41 – 2.55)	0.71 (0.15 – 3.25)
Sore Throat	0.81 (0.26 – 2.50)	1.03 (0.42 – 2.52)	0.90 (0.38 – 2.10)	0.69 (0.25 – 1.86)
Cough	0.44 (0.15 - 1.32)	1.34 (0.48 - 3.70)	1.50 (0.53 - 4.27)	tf

Table 12. Adjusted odds ratios (swimmers vs. non-swimmers) for diarrhea and skin rash using various definitions of water exposure, stratified by racial category and age group.

	Any Water Exposure		Water on Face		Swallow Water	
	Caucasian	Hispanic	Caucasian	Hispanic	Caucasian	Hispanic
Diarrhea						
All Ages	2.16 (1.49 – 33.13)	0.98 (0.64 – 1.52)	2.38 (1.46 – 3.89)	1.16 (0.77 – 1.74)	3.92 (2.34 – 6.56)	1.37 (0.83 – 2.28)
0 – 5	1.73 (0.56 – 5.36)	0.68 (0.26 – 1.76)	2.01 (0.56 – 7.27)	1.06 (0.42 – 2.68)	5.47 (1.38 – 21.62)	1.10 (0.38 – 3.19)
>5 – 12	4.90 (0.64 – 37.32)	2.70 (0.61 – 12.06)	5.84 (0.70 – 48.51)	2.09 (0.60 – 7.27)	8.53 (1.06 – 68.47)	3.02 (0.82 – 11.16)
>12 – 30	2.33 (0.98 – 5.55)	1.20 (0.50 – 2.86)	3.17 (1.09 – 9.24)	1.87 (0.79 – 4.45)	3.66 (1.08 – 12.44)	1.70 (0.49 – 5.91)
>30	1.96 (1.19 – 3.23)	0.69 (0.33 – 1.44)	1.79 (0.85 – 3.76)	0.62 (0.28 – 1.38)	3.32 (1.22 – 9.03)	0.88 (0.27 – 2.86)
Skin Rash						
All Ages	2.44 (1.81 – 3.27)	2.09 (1.42 – 3.08)	2.39 (1.72 – 3.31)	2.19 (1.41 – 3.39)	2.11 (1.37 – 3.24)	2.01 (1.20 – 3.35)
0 – 5	5.86 (1.81 – 19.00)	12.05 (1.64 – 88.84)	6.96 (2.14 – 22.62)	12.01 (1.59 – 90.47)	10.42 (2.34 – 46.40)	12.54 (1.58 – 99.30)
>5 - 12	3.26 (1.3 – 8.15)	2.69 (0.96 – 7.53)	3.67 (1.47 – 9.17)	3.24 (1.14 – 9.21)	4.10 (1.39 – 12.09)	2.95 (0.98 – 8.86)
>12 - 30	1.60 (0.89 – 2.86)	1.39 (0.67 – 2.86)	1.49 (0.86 – 2.57)	1.52 (0.69 – 3.35)	1.15 (0.46 – 2.86)	1.23 (0.39 – 3.94)
>30	1.84 (1.04 – 3.25)	1.09 (0.53 – 2.22)	2.19 (1.21 – 3.95)	1.51 (0.67 – 3.40)	1.32 (0.39 – 4.46)	1.23 (0.35 – 4.33)

The calculated attributable risks (Table 13) for diarrhea estimated an excess of 11.1 cases of diarrhea per 1,000 swimmers who had any contact with the water in Mission Bay during the study period. This risk increased as the intensity of water exposure increased, with 16.1 per 1,000 among those who reported facial contact with water and 27.2 cases per 1,000 swimmers who reported swallowing water. Children aged 5 to 12 years old had the greatest attributable risk for diarrhea following swimming. For example, this age group showed an estimated excess of 27.4 cases per 1,000 among children with any water contact, an excess of 31.9 cases per 1,000 among those with facial contact with the water, and an excess of 59 cases per 1,000 among those who swallowed water. Excess cases of skin rash were highest in the 0- to 5-year-old age group, ranging from an excess of 46.8 per 1,000 with any water contact to 56.2 per 1,000 swimmers in this age group who swallowed water.

Table 13. Frequency (percent) reporting illness and calculated attributable risk (per 1,000 swimmers).

Diarrhea		Percent ill - Adjusted	
	Adjusted Attributable Risk (95% CI) (expressed as excess cases per 1,000 swimmers)	Non-swimmers	Swimmers
Any Water Contact			
All Ages	11.1 (0.0 - 22.1)	3.20	4.31
0 - 5	-14.1 (-47.7 - 18.5)	6.01	4.60
>5 - 12	27.4 (-8.9 - 63.7)	1.59	4.33
>12 - 30	14.3 (-7.0 - 35.6)	2.09	3.51
>30	10.0 (-8.6 - 28.6)	3.74	4.75
Water on Face			
All Ages	16.1 (3.6 - 38.6)	3.10	4.71
0 - 5	-4.2 (-36.7 - 28.4)	5.27	5.69
>5 - 12	31.9 (2.1 - 61.7)	1.58	4.78
>12 - 30	26.4 (-2.6 - 5.54)	1.98	4.62
>30	5.2 (-15.1 - 25.6)	3.73	4.25
Swallow Water			
All Ages	27.2 (8.9 - 45.6)	3.25	5.97
0 - 5	-1.6 (-42.5 - 39.4)	6.09	5.93
>5 - 12	59.0 (15.0 - 103.0)	1.48	7.38
>12 - 30	18.5 (-13.6 - 50.6)	2.55	4.40
>30	26.4 (-15.7 - 68.4)	3.63	6.28

(Table 13 Continued). Frequency (percent) reporting illness and calculated attributable risk (per 1,000 swimmers).

Skin Rash		Percent ill - Adjusted	
	Adjusted Attributable risk (95% CI) (expressed as excess cases per 1,000 swimmers)	Non-swimmers	Swimmers
Any Water Contact			
All Ages	19.0 (10.9 – 27.1)	1.58	3.48
0 – 5	46.8 (26.2 – 67.4)	1.02	5.70
>5 - 12	34.1 (15.8 – 52.3)	1.59	4.99
>12 - 30	10.9 (-2.3 – 24.1)	1.88	2.97
>30	10.6 (0.2 - 21.0)	1.27	2.31
Water on Face			
All Ages	22.6 (13.6 – 31.6)	1.69	3.95
0 - 5	52.1 (31.3 - 72.9)	0.93	6.14
>5 - 12	38.7 (20.4 - 57.0)	1.53	5.41
>12 - 30	10.8 (-4.3 - 25.9)	2.28	3.36
>30	15.0 (2.1 - 27.8)	1.30	2.80
Swallow Water			
All Ages	18.0 (3.7 – 32.3)	1.69	3.49
0 - 5	56.2 (-5.5 - 118.0)	0.64	6.3
>5 - 12	39.4 (5.0 - 73.7)	1.34	5.28
>12 - 30	3.1 (18.1 – 24.2)	2.08	2.39
>30	4.1 (-16.8 – 25.1)	1.34	1.75

Relationship between Health Outcomes and Water Quality

No correlation was observed between increased risk of illness and increased levels of traditional water quality indicators including enterococcus, fecal coliform, or total coliform. Using diarrhea as an example, odds ratios were not statistically significantly elevated due to increases in enterococcus (Table 14). The lack of relationship resulted despite numerous approaches to water quality exposure (i.e., combining or separating sites at a beach) or calculation of indicator metrics (i.e., daily geomean, daily maxima, or various cutpoints). Of particular note, the state water quality thresholds did not correlate with an increased risk of illness (Table 15).

Additionally, no correlation was found between increased risk of illness and levels of Bacteroides, enterococcus using rapid methods (QPCR), human pathogenic virus (adenovirus and Norwalk-like virus), or somatic phage. The relationship with viruses was difficult to evaluate, though, because no human pathogenic virus was found and adenovirus was only found in one sample. While low virus counts do not allow evaluation of a potential relationship with the two symptoms that were elevated in swimmers (skin rash and diarrhea), the low counts were consistent with the absence of increased health risk for the other health outcomes evaluated.

Significant associations between the levels of male-specific coliphage and HCGI-1, HCGI-2, nausea, cough, and fever were observed (Table 16). However, a low number of participants were exposed to the water at times when male-specific coliphage was detected (Table 17). Therefore, the relationships between male-specific coliphage and various outcomes should be interpreted cautiously. Results for all health outcomes for various indicator and water exposure levels are presented in Appendix 3.

Table 14. Adjusted odds ratio for diarrhea after two weeks for various water quality exposure metrics for enterococcus. The unit change in exposure in these models was set to represent a change of (ln 30). There were no statistically significant results.

	Any Water Contact	Water on Face	Swallow Water
Ln Daily Geomean @ Station Level	0.57 (0.30 – 1.07)	0.66 (0.32 – 1.34)	0.21 (0.05 – 0.85)
Ln Daily Geomean @ Beach Level	0.77 (0.33 – 1.80)	0.62 (0.24 – 1.60)	0.31 (0.06 – 1.59)
Ln Daily Max @ Station Level	0.67 (0.45 - 1.02)	0.77 (0.47 – 1.24)	NA
Ln Daily Max @ Beach Level	0.99 (0.71 – 1.38)	0.93 (0.64 – 1.34)	NA

Table 15. Adjusted odds ratios for health outcomes using two dichotomous measures of exposure to enterococcus.

Health Outcome	Adjusted OR (95% CI)	
	> 35 vs. ≤ 35	> 104 vs. ≤ 104
Gastrointestinal		
Diarrhea	1.01 (0.73-1.39)	1.22 (0.85-1.76)
HCGI-1	0.74 (0.51-1.06)	1.13 (0.73-1.75)
HCGI-2	0.69 (0.38-1.25)	0.80 (0.37-1.73)
Nausea	0.78 (0.51-1.20)	1.12 (0.65-1.92)
Cramps	0.91(0.66-1.24)	1.36 (0.95-1.95)
Vomiting	0.67 (0.43-1.03)	1.13 (0.67-1.92)
Skin Rash	0.83 (0.61-1.15)	1.00 (0.67 – 1.49)
Eye Irritation	0.97 (0.72-1.32)	0.77 (0.53-1.11)
Ear		
Earache	1.08 (0.68-1.70)	1.18 (0.70-2.00)
Ear Discharge	1.15 (0.30-4.36)	0.94 (0.19-4.62)
Fever	0.92 (0.65-1.31)	0.89 (0.58-1.37)
Respiratory		
SRD	0.96 (0.67-1.37)	1.13 (0.73-1.73)
Sore Throat	1.10 (0.80-1.50)	1.15 (0.77-1.72)
Cough	0.65 (0.40-1.05)	0.51 (0.25-1.03)

Table 16. Adjusted odds ratios for various health outcomes after two weeks for water exposures (per unit increase) to male-specific coliphage. Statistically significant results are shown in bold face type.

Any Water Contact

Health Outcome	Adjusted OR (95% CI)
Gastrointestinal	
HCGI-1	1.26 (1.06, 1.48)
HCGI-2	1.43 (1.13, 1.82)
Nausea	1.34 (1.16, 1.55)
Diarrhea	1.14 (0.97, 1.35)
Cramps	1.04 (0.83, 1.32)
Vomiting	1.21 (0.96, 1.53)
Skin Rash	1.00 (0.77, 1.31)
Eye Irritation	1.14 (0.95, 1.36)
Fever	1.25 (1.09, 1.44)
Ear	
Earache	Too few
Ear Discharge	Too few
Respiratory	
SRD	1.05 (0.85, 1.31)
Cough	1.22 (1.02, 1.48)
Sore Throat	1.04 (0.83, 1.30)

Table 17. Association of male-specific coliphage (defined as >0.10 cfu) with diarrhea.

	Diarrhea Reported	No Diarrhea Reported	Total
Male-specific Phage Present (>0.10 cfu)	8	153	161
Male-specific Phage Absent	195	3,878	4,073
Total	203	4,031	4,234

Time in the water

We also examined whether swimmers with prolonged water exposure (>1 hour) to Mission Bay had an elevated risk of illness compared to non-swimmers and found an OR of 1.44, 95% CI 1.08-1.92. This result is similar to that found in Table 10 for swimmers with any water contact compared to non-swimmers (1.36, 95% CI 1.04-1.78), suggesting a small but insignificant increase in the risk from prolonged exposure.

Among swimmers with greater than 1 hour of water exposure, the odds ratio for a 30-unit (3.4 log) increase in enterococcus was 0.74 (0.23-2.36). This result is similar to that seen for the risk of diarrhea among swimmers (defined as “any water contact”) exposed to enterococcus (0.57, 95% CI 0.30-1.07) for exposure measured as the ln of the daily geomean at the station level (Table 14).

DISCUSSION

Unlike most previous marine recreational epidemiology studies, this study found no relationship between illness rates and fecal indicator bacteria densities despite investigating numerous exposure measures. Wade *et al.* (2003) systematically reviewed 27 highly relevant marine recreational water epidemiology studies and found an increase in relative risk with increasing fecal indicator concentrations, particularly for enterococcus. For example, the observed increase in risk of swimming-associated illnesses from both Cabelli *et al.* (1982) and Haile *et al.* (1999) was highly correlated with increasing enterococcus concentrations. In virtually all of the studies summarized by Wade *et al.* (2003), however, water quality was impacted by known sources of human fecal contamination. The relationship with enterococcus, or any other fecal indicator bacteria, did not exist in Mission Bay, and one explanation for this difference may be the predominance of non-human fecal sources in Mission Bay. While animal sources can also harbor disease-causing agents, they are less likely to serve as vectors for human disease (NRC 2004).

The use of bacterial indicators as a predictor of swimming-associated illnesses is based on the presumption that they have survival properties similar to the pathogens they are intended to mirror. This presumption is less likely to remain true when circulation is restricted and residence times increase, which can be days to weeks in Mission Bay (Largier *et al.* 2003). Increased survival, and perhaps even regrowth of fecal indicator bacteria, has been suggested in sediments and wrack lining beaches including Mission Bay (Weiskel *et al.* 1996, City of San Diego/MEC Weston 2004). Regardless, the lack of relationship of non-human sources of fecal indicator bacteria to health risk suggests that the 28 water contact advisories posted at beaches in Mission Bay during the course of this study were misleading from a public health perspective, but were required by law.

It is arguable whether the viral measures in our study were better indicators of health risk and could be used in place of bacterial indicators for health risk assessments in Mission Bay. We found that increasing density of male-specific phage was correlated with increased incidence of several health outcomes, including HCGI-1, HCGI-2, nausea, cough, and fever. This is consistent with the success of this measure in freshwater application (Lee *et al.* 1997). However, we interpret these associations cautiously because male-specific coliphage were not detected often and so few subjects were exposed to the water at those times.

The human-specific viruses we measured in Mission Bay were rarely detected, which corresponds well with our low rates of swimming-associated illnesses. We did not encounter high virus counts that would have allowed us to assess their effectiveness as predictors in the positive direction. Moreover, even interpretation of viruses as negative predictors is compromised by technology limitations. We used the most advanced techniques available, but quantifying virus particles in seawater is difficult because DNA and RNA are lost due to complexation and interferences when concentrating and extracting nucleic acid material. Thus, we cannot be certain that the low levels we

observed were due to their absence from the system or from difficulties in recovering viruses that were present. However, our results do suggest that these non-bacterial measures have the potential to be more effective than traditional bacterial indicators as predictors of illness when non-human sources are dominant.

While we found that traditional fecal indicators were ineffective predictors of health effects in this study, it is difficult to extrapolate this finding beyond Mission Bay. Mission Bay is unusual in that it has been subjected to extensive cleanup activities and source tracking studies have identified that human fecal sources are now only a minor contributor to the overall bacterial load (City of SD/MEC Weston 2004). Our study, though, does suggest the need for further evaluation of traditional fecal indicator bacteria in circumstances where non-point, non-human contributions are the dominant fecal source.

It is important not to extrapolate our results beyond our study conditions. We would expect to see an increase in health risks, and likely an association with water quality indicators, if large sources of untreated human fecal material entered the Bay. Such a situation could occur when sewage overflows spill into the Bay.

Finally, we examined swimming-related illnesses during dry weather. No epidemiological data at any beach currently exists for health risks associated with swimming at these beaches following wet-weather events.

STUDY CONCLUSIONS

The Mission Bay Epidemiology Study was successfully implemented, collecting sufficient water quality data and recruiting sufficient numbers of participants. Based on the resulting data, the answers to our study questions can be summarized as follows:

- *Water contact moderately increased the risk of illness in the two weeks following exposure to water in Mission Bay during the summer of 2003.*

Two of the 14 health outcomes evaluated had an odds ratio that was significantly elevated after adjustment for covariates. The probability of skin rash and diarrhea was consistently significantly elevated in swimmers compared to non-swimmers in Mission Bay during the summer of 2003. The probability of more severe health outcomes such as highly credible gastrointestinal illnesses (HCGI-1 or HCGI-2) and significant respiratory disease (SRD) were not significantly elevated in swimmers compared to non-swimmers.

- *Among those individuals with water contact, there were no associations between illness and measured levels of traditional indicators of water quality.*

No correlation between increased risk of illness and increased levels of traditional water quality indicators (including enterococcus, fecal coliform, or total coliform) was found. This resulted despite numerous approaches to water quality exposure (combining or separating sites at a beach) or calculation of indicator metrics (daily geomean or maxima, various cutpoints, etc.). Of particular note in this study, the state water quality thresholds were not predictive of swimming-related illnesses.

- *Among those individuals with water contact, there were no associations between illness and measured levels of any non-traditional indicators of water quality except for male-specific coliphage.*

No correlation between increased risk of illness and increased levels of *Bacteroides*, enterococcus using rapid methods (QPCR), human pathogenic virus (adenovirus and Norwalk-like virus), or somatic phage was found. Since traditional enterococcus methods were unsuccessful at predicting swimming-associated illnesses, it is not surprising that the newer, more rapid methods were equally unsuccessful. Virtually no human pathogenic virus was found; adenovirus was only quantified in one sample. A significant association between the levels of male-specific coliphage and HCGI-1, HCGI-2, nausea, cough, and fever was observed. We interpret these associations cautiously, however, because so few subjects overall were exposed to the water at times when male-specific coliphage was detected.

The findings from Mission Bay are unique in this field, largely because Mission Bay may be a unique circumstance. Certainly, many other enclosed marine beaches, particularly in California, suffer from impaired water quality due to non-point sources of bacteria and poor circulation. However, it is premature at this time to extrapolate the findings from the current study to other enclosed marine beaches, especially if significant source identification work has not been accomplished. Moreover, the epidemiological findings from Mission Bay were collected from periods of dry weather and no known sewage spills. We would expect to see an increase in health risks, and likely an association with water quality indicators, if large sources of untreated human fecal material entered the Bay. No epidemiological data currently exists for health risks associated with swimming at these beaches following wet-weather events.

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APPENDICES

- Appendix 1: Mission Bay Human Subjects Protocol, Study Instruments, and Consent Form
- Appendix 2: Health Outcomes vs. Water Exposure Analyses
- Appendix 3: Health Outcomes vs. Water Quality Indicator & Water Exposures Analyses
- Appendix 4: Sociodemographic Characteristics of Study Population
- Appendix 5: Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit
- Appendix 6: Participant Responses to Questions Regarding Exposures During Beach Visit
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Appendix 1

Mission Bay Human Subjects Protocol, Study Instruments, and Consent Form

**Protocol for the Protection of Human Subjects
Submitted by Professor Jack Colford
School of Public Health
University of California, Berkeley**

1. Title:

Mission Bay Epidemiology Study

2. Related Projects:

None

3. Nature and Purpose

The purpose of the Mission Bay Epidemiology Study is to determine what the health risks are associated with swimming in Mission Bay, located in San Diego, California. Specific illnesses measured will focus on gastrointestinal upsets (GI illness) but will also include respiratory illnesses, skin ailments/complaints, ear ailments/complaints and eye ailments and complaints. An additional goal of the study is to determine the relationship between health and novel and traditional bacterial indicators of water quality. One novel focus of this study will be differentiating the risk of swimmers' exposure to human versus non-human sources of bacteria. Mission Bay is a heavily used aquatic park in San Diego with more than three million visitors annually. Mission Bay suffers from impaired water quality with more than 100 beach postings or closures during 1998. Potential sources of bacterial contamination within its urban watershed are numerous and include dry and wet weather runoff, the sanitary sewerage system, and vessel discharges. Similarly, natural sources within the open lands of the watershed also contribute bacteria, including bacteria from native animals in the chaparral habitat upstream of the Bay and wildlife sanctuaries that line portions of the Bays' shoreline. Currently, health officials and local municipalities are attempting to identify the specific sources of bacterial contamination in the watershed.

Most previous epidemiological studies of exposure to marine waters have focused almost exclusively on swimming waters contaminated by sanitary sewage treatment plants. There has been only one epidemiological study conducted in California to identify the risk of swimming related diseases (Haile, 1999). The Santa Monica Bay Study focused on risks associated with swimming near a storm drain and was used to guide regulations for body contact recreation under California Assembly Bill 411.

While a landmark study because of its focus on runoff, the findings of the Haile study may not be directly applicable to the risks associated with swimming in distinctly different environments such as those found in Mission Bay. Unlike Santa Monica Bay, Mission Bay is not impacted by a single point source of pollution, and much of the pollution may be non-human in nature. Since most human illnesses and infections are transmitted from person to person, non-human waste may not pose as much of a health risk.

It is anticipated that this study will provide health officials and recreational water quality managers valuable information on which to base their decisions about what specific risks are associated with swimming in Mission Bay and related marine environments.

4. Subjects

The target population for the proposed study is Mission Bay beach-goers and swimmers. The study will enroll both adult and children beach-goers at the six most heavily used beaches.

No restrictions will be made based on race, sex, age or other demographic characteristics. English and Spanish speaking beach-goers will be enrolled.

The enrollment goal is to complete surveys on at least 6,000 subjects and up to 7,500 subjects. At least 5,000 subjects will be “swimmers”, defined as those who submerge their head under water during their visit to the beach. The remaining 1,000-2,500 subjects will be “non-swimmers”, defined as those who did not enter the water during their visit to the beach.

We expect that the demographic makeup of our study population will mirror that of beach-goers at all of Mission Bay. A survey of swimmers conducted by the Southern California Coastal Water Research Project (SCCWRP) in 2001 found the following racial distribution among beach-goers:

	Percent	Anticipated Number
Black:	7%	420
White:	52%	3120
Hispanic:	39%	2340
Asian/Pacific Islander:	2%	120

The beach-going population was found to be 49% male and 51% female. The overall average age was 17 years old, and ranged from 1 to 95 years. The age distribution and anticipated numbers enrolled is summarized below:

	Percent	Anticipated Number
0-10:	48%	2880
11-20:	17%	1020
21-30:	9%	480
31-40:	11%	660
41-50:	5%	300
51-60:	4%	240
61-70:	2%	120
71-80:	3%	180
81-90:	2%	120
91-100:	1%	60

We anticipate that 98% of the beach-going population will be either English or Spanish speaking.

5. Recruitment

Recruitment of beach-goers will occur on weekends during the summer of 2003, beginning Memorial Day weekend and continuing through Labor Day weekend. Beach-goers will be approached by a bilingual staff of interviewers between 12:00 pm and 5:00 pm each weekend day. Interviewers will briefly describe the nature of the study and determine whether or not the individual is interested in participating. In the case where a family or a household group is attending the beach together, an adult “head of household” will be asked to participate on behalf of other household members. If an individual or household agrees to participate, the interviewers will obtain written consent for the individual or all participating adult members of the household. Adults will give consent for children under 18. For unaccompanied minors, attempts will be made to contact their parents by phone to obtain consent before they are enrolled. If the parents cannot be contacted, the unaccompanied minor will not be enrolled.

The consent process will detail what we are asking subjects to do and will describe the general nature and goals of the study (see section 13, Written Materials, for the consent forms and the language used to recruit beach-goers). If a subject is interested in participating in the study, the interviewers will ask some questions about how much they have swam recently and how much they intend to swim in the next week. Since one goal of the study is to relate measures of microbial water quality to swimming on a specific day, if a subject has swam in the ocean in the past week, they will be excluded. Also, if the subject definitely plans on swimming in the ocean during the next one-week, they will be excluded. This will allow us to accurately assign water quality measures to each swimmer based on a single daily exposure to ocean water.

If a subject is eligible and consents to participating in the study, we will request that they provide us with the names of all eligible and consenting family members; phone number or phone numbers where they can be contacted during the next three days and again in two weeks time; and their city and state of residence.

6. Screening Procedures

All beach-goers are eligible to participate provided that they did not swim in the ocean during the previous seven days. If the reply to this question is “yes”, then the interview will go no further and the subject will be excluded from the study. If the subject did not swim during the past seven days, they will then be asked if they definitely plan on swimming in the ocean during the next seven days. If the answer to this is “yes”, then the subject is not eligible and will be excluded from the study. In the case of minors, an adult household member will be asked these questions on their behalf. No demographic or other information will be collected until their eligibility is determined.

Once the beach-goers eligibility is determined, they will be taken through the consent process. Only after informed consent is obtained will subjects be asked questions relating to the goals of the study.

A script of the screening dialogue is attached in Section 13, Written Materials.

7. Procedures

Consenting subjects and households will be interviewed at three different times. Screening will take place on the beach at the time of enrollment. Subjects will be asked for phone numbers where they can be contacted within three days and once again ten to fourteen days after the beach interview. Names of all participants will be recorded, and each subject will be assigned a non-informative subject ID. At each beach, a study center will be set up where one or more interviewers will be stationed. Participants will be asked to stop by the study center when they are leaving the beach to complete a self-administered Beach Survey. If a consenting subject fails to return to the study center at the end of the day, study staff will follow up with a telephone call to complete the interview. The Screening Interview is attached in section 13.

Participating households will be asked to complete a self-administered Beach Survey as they are leaving the beach for the day. The head of household will complete the survey for other household members. This survey will consist of the following categories of questions: 1) Swimming during the day (how long, approximate times, and what activities); 2) Food and beverages consumed during the day; 3) Illnesses experienced in the past 3 days. Participants will not be asked about existing immunocompromising conditions (i.e. cancer or HIV/AIDS) during the beach interview. These surveys will be self-administered, but interviewers staffing the study centers will be available to answer questions. Participants, who are unable to return to the study center to complete the interview, may be telephoned the next day as necessary, and the interview

will be completed on the phone. The Beach Survey will take no more than 10-15 minutes to complete. Parents or guardians will answer for children under 18.

Ten to fourteen days following the beach visit, participants will be telephoned and asked to complete the 10-15 minute Illness Interview. This interview will consist of the following types of questions: 1) Demographic information, including race, income, education level; 2) Swimming exposure since the interview day; 3) Existing health problems potentially related to the study outcomes (e.g. chronic diarrhea); 4) Types of food consumed since the beach interview ; 5) Prescription and non-prescription medications; 6) Acute health conditions (GI, respiratory, skin, eye or ear) experienced since the visit to the beach; and 7) General immunocompromising conditions (i.e. cancer or HIV/AIDS). Data will be collected during this interview through “computer-assisted telephone interview” (CATI) at the UC Berkeley Survey Research Center. As with the previous interviews, the head of household will answer for children under 18 and other household members.

The Screening Interview, Beach Survey and Illness Interview are attached in Section 13, Written Materials.

8. Benefits

There are no direct benefits to subjects participating in this research project. We hope that this research will indirectly benefit all of those who use the beach for swimming by helping to provide a better understanding of the risks associated with swimming in Mission Bay and similar ocean waters. Research of this type may ultimately provide safer recreational waters by encouraging appropriate legislation and action by recreational water managers.

9. Risks

Since this is strictly an observational study, there will be minimal risk to participants. Subjects will not be asked to modify their behavior in any way, and will not be encouraged or discouraged from swimming in the ocean.

10. Confidentiality

There will be a slight risk of the loss of the confidentiality of certain health conditions. Extensive precautions will be made to ensure this does not occur. No information will be collected on specific immunocompromising conditions. Identifying information will be stored separately from health information at all times. Health data will be identified with a non-informative subject ID. All information collected as a part of this research project will be kept in a locked file in a secure location, or in password protected computer files. The key to the code of the individual subject identities will be kept in a separate locked file, away from the data. No individual subject will be identifiable in any presentation or publication of the data.

11. Informed Consent

The consent process will be as follows: Beach-goers will be approached and their eligibility to participate will be determined. Those interested and eligible for the study will be given a consent form to read. Interviewers will be present to answer any questions. Each adult in the household will read and sign the consent form, and an adult household member will consent for children under 18. The consent form is attached in section 14, Written Materials.

12. Financial Aspects

When subjects complete the Beach Survey, they will be given a t-shirt with the study logo on it to show our appreciation for their participation.

13. Written Materials

The following written materials and interview scripts are attached:

Introduction script

Screening

Beach Survey

Illness Survey

Consent

ID #: _____
A B C D

Mission Bay BEACH SCREENER

Date: _____
Int #: _____

Hi, my name is _____. I am conducting the Mission Bay Water Evaluation Survey.

Here is a pamphlet describing the study. **(GIVE RESPONDENT THE CONSENT TRI-FOLD PAMPHLET)**

This summer, we're asking beachgoers here at Mission Bay to help us with an important research project. The purpose is to develop better guidelines and methods to insure safe beach water quality and to better understand how bacteria and viruses in the water might affect the health of swimmers. [It takes very little time. First, I would gather a little information right now and give you a consent form to sign (and a copy to keep for your records.) Then you would stop at our tent on the way out to fill out a questionnaire about your activities at the beach today. We'll give you a beach ball and water bottle, and we'll call you in 10 days to two weeks to ask some questions about your health since you visited the beach today.]

I would like to ask you a few questions to see if you're eligible.

1. Have you already participated in our study this summer? (We've been interviewing people since Memorial Day.)

No

Yes (THANK YOU FOR YOUR HELP)

2. What is your age? _____

IF UNDER 18: Is there an adult family member 18 or older here with you today?

Yes (***GO TO ADULT***)

REPEAT Q1 AND Q2

No → (THANKS A LOT, WE NEED TO SPEAK TO PEOPLE WHO ARE OVER 18.)

3. Are you from the San Diego Area or are you visiting?

From area

Visiting

→ Where are you from? _____
State Country

(MUST BE FROM US, CANADA OR MEXICO)

4. A. How many family members who live with you are at the beach today?

_____ Members

None → ***SKIP TO 6A***

5. Whenever possible, we like to include all family members. A parent or guardian can answer questions for the other family members. Are you the parent or guardian?

Yes

No → ***IF NO:*** Ask to speak to parent/guardian ***GO TO Q1***
 Enroll respondent as an individual ***GO TO Q6***

6. A. Not counting today, in the last 7 days, have you been swimming in the ocean or at a lake where you got your face or head under the water?

Yes (***NOT ELIGIBLE***)

No

- B. ***IF PARENT OR GUARDIAN:*** How about the other family members here with you today?

Yes all (***NOT ELIGIBLE***)

Yes (***SOME ELIGIBLE***)

No (***ALL ELIGIBLE***)

7. A. Do you plan to swim and put your head or face under the water in the next week?

- Yes No

B. How about other family members.

- Yes No

You/your family members who have not been swimming in the last week are eligible to participate.

Here's what we'll be asking you to do:

We'll collect a little information from you now.

Then, we will ask you to stop by our tent when you leave the beach today and fill out a questionnaire about your and your family's activities today. It just takes a couple of minutes (roughly 2 minutes per person) You can complete the questions for your family members or other adults can complete for themselves... whichever is most convenient. Each participant will receive a beach ball and water bottle as a thank you gift.

We'll call you in 10 days to 2 weeks and conduct a brief phone interview about your general health and any health problems you or your family members might have experienced after swimming in the ocean.

8. We would really appreciate it if you (and your family) can help us out.

- Yes No



IF NO: Why do you think R refused?

- Too busy No longer interested Will not be available
 Other reason? (PLEASE SPECIFY: _____)

Take a moment to read and sign the consent form and print the names of the other family members who are here with you today who will be participating. (All adults 18 and older must sign for themselves. Children 13 to 17 initial the form if they wish.)

Then, we'll be calling you in about 10 days to ask some questions about your health since you visited the beach.

9. A. What phone number should we call?

- () _____ No phone (NOT ELIGIBLE)

B. Is this your home, vacation, or cell phone number?

- Home Phone Vacation Phone Cell Phone Other (SPECIFY: _____)

C. Is there another number we should try if we don't reach you?

- Yes (→) _ No E-MAIL _____

10. What's generally the best time to reach you?

	<u>Morning</u>	<u>Afternoon</u>	<u>Evening</u>
Weekday	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Saturday.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sunday.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you very much for your help. Remember to stop by the study center over there (points out study center) to complete the beach survey and pick up your beach ball(s) and water bottle(s). We'll call you in 10 days or so.

MISSION BAY WET
Primary Adult Questionnaire

1. How much time did you spend at the beach today?

_____ hours _____ minutes

2. A. Did you wade, swim, or play in the water today?

- Yes
- No → Go to Q7

B. Did you get water in your face?

- Yes
- No → Go to Q3

C. Did you get in the water up to your shoulders today?

- Yes
- No

D. Did you put your face or head under the water?

- Yes
- No

E. Did you get water in your mouth?

- Yes
- No → Go to Q3

F. Did you gag or cough after getting water in your mouth?

- Yes
- No

G. Did you swallow any water?

- Yes
- No

H. How many mouthfuls do you think you swallowed?

3. Were you in the water at any of the following times today? (CHECK ALL THAT APPLY)

- Before 10 AM 10 AM - Noon
- Noon - 2 2 - 4
- After 4 PM Did not go in the water

4. What was the total time you were actually in the water today?

_____ hours _____ minutes

5. Did you engage in any of the following water-related activities while at the beach today? (CHECK ALL THAT APPLY)

- Sailing or boating Swimming near shore
- Windsurfing Kayaking or rowing
- Jetskiing or waterskiing
- Wakeboarding or kiteboarding
- Rafting/tubing/floating on air mattress
- None of these activities

6. Did you wear any of the following items while you were in the water today? (CHECK ALL THAT APPLY)

- Ear plugs Nose plugs
- A wet suit Eye goggles or a face mask
- None of these items

7. Did you do any of the following activities while at the beach today? (CHECK ALL THAT APPLY)

- Collect sea shells, rocks, feathers, etc.
- Dig in the sand or build sand castles
- Have your body buried in sand
- Play with algae or seaweed
- Go crabbing or fishing
- None of these activities

8. Did you wear any of the following at the beach today? (CHECK ALL THAT APPLY)

- Insect repellent
- Sunscreen/sunblock
- Hat or other protective clothing
- None

9. A. Did you use protective equipment such as a canopy, umbrella or other type of sunshade?

¹ Yes

² No

B. Not counting the time you spent indoors or under umbrellas, what do you think your total time in direct sunlight was?

¹ Less than one hour ² 1-2 hours

³ 3-4 hours ⁴ 5-6 hours

⁵ More than 6 hours

10. Did you eat food at the beach today?

¹ Yes → **Where did you get the food?**
(CHECK ALL THAT APPLY)

¹ From home

¹ From vending machines or a vender at the beach

¹ From a vender outside the beach

² No

11. Did you drink alcohol at the beach today (including beer, wine, hard liquor or any drink made with alcohol)?

¹ Yes → **How many drinks with alcohol did you have today?** (A drink is: 1 glass of wine or a wine cooler, 1 can/bottle of beer, 1 shot of liquor or 1 mixed drink)

¹ Less than 1 ² 1 - 2

³ 3 - 4 ⁴ 5 or more

² No

12. Did you cut yourself today or have an open cut when you came to the beach?

¹ Yes

² No

13. Did you take a shower before leaving the beach?

¹ Yes

² No

14. Did you use the bathroom facilities at the beach today?

¹ Yes

² No

15. In the past 48 hours, have you eaten any of the following? (CHECK ALL THAT APPLY)

¹ Dairy products such as milk, cheese or ice cream

¹ Raw or runny eggs

¹ Chicken

¹ Meat that was red in the center

¹ Hot dogs

¹ Any food containing mayonnaise

¹ Raw seafood

¹ None of these foods

16. In the last 48 hours have you done the following? (CHECK ALL THAT APPLY)

¹ Touched or come into contact with any animal or it's feces

¹ Come into contact with someone who has complained of diarrhea, vomiting, or stomach illness

¹ None of the above

17. Have you been sick in the past 3 days with: (CHECK ALL THAT APPLY)

¹ Diarrhea or loose bowels

¹ Throwing up or vomiting

¹ Sore throat or cough

¹ Earache, ear infection or discharge

¹ Eye infection, irritation, or redness

¹ Rash or itchy skin

¹ Sunburn

¹ None

18. Have any household members not present at the beach today been sick in the past 3 days with: (CHECK ALL THAT APPLY)

¹ Diarrhea or loose bowels

¹ Throwing up or vomiting

¹ Sore throat or cough

¹ Earache, ear infection or discharge

¹ Eye infection, irritation, or redness

¹ Rash or itchy skin

¹ None

ID #: _____

MISSION BAY WET
Family Member Questionnaire

First Name: _____

Male

Female

Please answer the following questions about _____

1. **How much time did he/she spend at the beach today?**

_____ hours _____ minutes

2. A. **Did he/she wade, swim, or play in the water today?**

- Yes
 No → **Go to Q7**

B. **Did he/she get water in his/her face?**

- Yes
 No → **Go to Q3**

C. **Did he/she get in the water up to his/her shoulders today?**

- Yes
 No

D. **Did he/she put his/her face or head under the water?**

- Yes
 No

E. **Did he/she get water in his/her mouth?**

- Yes
 No → **Go to Q3**

F. **Did he/she gag or cough after getting water in his/her mouth?**

- Yes
 No

G. **Did he/she swallow any water?**

- Yes
 No

H. **How many mouthfuls do you think he/she swallowed?**

3. **Were he/she in the water at any of the following times today?**
(CHECK ALL THAT APPLY)

- Before 10 AM 10 AM - Noon
 Noon - 2 2 - 4
 After 4 PM Did not go in the water

4. **What was the total time he/she was actually in the water today?**

_____ hours _____ minutes

5. **Did he/she engage in any of the following water-related activities while at the beach today?** *(CHECK ALL THAT APPLY)*

- Sailing or boating Swimming near shore
 Windsurfing Kayaking or rowing
 Jetskiing or waterskiing
 Wakeboarding or kiteboarding
 Rafting/tubing/floating on air mattress
 None of these activities

6. **Did he/she wear any of the following items while he/she was in the water today?**
(CHECK ALL THAT APPLY)

- Ear plugs Nose plugs
 A wet suit Eye goggles or a face mask
 None of these items

7. **Did he/she do any of the following activities while at the beach today?**
(CHECK ALL THAT APPLY)

- Collect sea shells, rocks, feathers, etc.
 Dig in the sand or build sand castles
 Has his/her body buried in sand
 Play with algae or seaweed
 Go crabbing or fishing
 None of these activities

8. **Did he/she wear any of the following at the beach today?** *(CHECK ALL THAT APPLY)*

- Insect repellent
 Sunscreen/sunblock

- ¹ Hat or other protective clothing
- ¹ None
9. A. **Did he/she use protective equipment such as a canopy, umbrella or other type of sunshade?**
- ¹ Yes
- ² No
- B. **Not counting the time he/she spent indoors or under umbrellas, what do you think his/her total time in direct sunlight was?**
- ¹ Less than one hour ² 1-2 hours
- ³ 3-4 hours ⁴ 5-6 hours
- ⁵ More than 6 hours
10. **Did he/she eat food at the beach today?**
- ¹ Yes → **Where did he/she get the food?**
(CHECK ALL THAT APPLY)
- ¹ From home
- ¹ From vending machines or a vender at the beach
- ¹ From a vender outside the beach
- ² No
11. **Did he/she drink alcohol at the beach today (including beer, wine, hard liquor or any drink made with alcohol)?**
- ¹ Yes → **How many drinks with alcohol did he/she have today?** (A drink is: 1 glass of wine or a wine cooler, 1 can/bottle of beer, 1 shot of liquor or 1 mixed drink)
- ¹ Less than 1 ² 1 - 2
- ³ 3 - 4 ⁴ 5 or more
- ² No
12. **Did he/she cut himself/herself today or have an open cut when he/she came to the beach?**
- ¹ Yes
- ² No

13. **Did he/she take a shower before leaving the beach?**
- ¹ Yes
- ² No
14. **Did he/she use the bathroom facilities at the beach today?**
- ¹ Yes
- ² No
15. **In the past 48 hours, has he/she eaten any of the following? (CHECK ALL THAT APPLY)**
- ¹ Dairy products such as milk, cheese or ice cream
- ¹ Raw or runny eggs
- ¹ Chicken
- ¹ Meat that was red in the center
- ¹ Hot dogs
- ¹ Any food containing mayonnaise
- ¹ Raw seafood
- ¹ None of these foods
16. **In the last 48 hours has he/she done the following? (CHECK ALL THAT APPLY)**
- ¹ Touched or come into contact with any animal or it's feces
- ¹ Come into contact with someone who has complained of diarrhea, vomiting, or stomach illness
- ¹ None of the above
17. **Has he/she been sick in the past 3 days with: (CHECK ALL THAT APPLY)**
- ¹ Diarrhea or loose bowels
- ¹ Throwing up or vomiting
- ¹ Sore throat or cough
- ¹ Earache, ear infection or discharge
- ¹ Eye infection, irritation, or redness
- ¹ Rash or itchy skin
- ¹ Sunburn
- ¹ None

Completed by: _____
First Name

SAN DIEGO WET CATI FOLLOW-UP INTERVIEW

INTRODUCTION We have some follow-up health questions about you and the other family members who participated in our study at the beach on (date). According to our records (list names) participated.

First I have some general health questions.

Q. Do you have Allergies other than drug allergies? YES NO
How about... (List other household members)

Do you have skin problems such as psoriasis or eczema? YES NO
How about...(List other household members)

Do you have Chronic respiratory diseases such as asthma or emphysema? YES NO
How about..(List other household members)

Do you have Gastrointestinal problems such as Crohn's disease or irritable bowel syndrome?
YES NO How about (List other household members)

Do you have any immunocompromising condition such as cancer or HIV/AIDS?
YES NO How about...(List other household members)

Q. V1 14 years and older (link to illness questions)

Are you currently working outside the home or going to school for 20 hours a week or more?
YES NO How about (others 14 and over)

V2 13 and younger (link to illness questions)

Is (name) currently in school, camp or other activity 20 hours a week or more? YES NO
How about (List other household members)

Now I have some questions about your health since we interviewed you at the beach on (date)

Q. Are you currently pregnant? (Ask for all women 14 and above))

Q. Since we interviewed you at the beach, have you taken any prescription medications? YES NO
(List other household members)
How about non-prescription medications? YES NO
(List other household members)

Q Since your visit to the beach on (Date) have you had any of the following problems or symptoms: (List for all household members)

How about a Fever? Yes No

- If yes, on what date did your/his/her fever begin?
- Did you see a doctor or visit a hospital for this condition?
- Did you miss work or school for this condition? (if applicable)
- If yes, how many days?
- Did you limit your (other) regular activities because of this condition? If yes, how many days?
- Did you take any medications because of this condition?

How about Chills Yes No

- If yes, repeat follow-up questions

How about redness or eye irritation Yes No

- If yes, repeat follow-up questions

How about an earache? Yes No

- If yes, repeat follow-up questions

How about discharge or draining from the ear: YesNo

- If yes, repeat follow-up questions

How about a skin rash Yes No

- If yes, repeat follow-up questions

How about cuts or scrapes that became infected? Yes No

- If yes, repeat follow-up questions

How about Nausea? Yes No

- Repeat follow-up questions
- Was this because of your pregnancy? (if pregnant)

How about vomiting? Yes No

- If yes, repeat follow-up questions

How about diarrhea? Yes No

- If yes, repeat follow-up questions
-

How about stomach pain or cramps Yes No

- If yes, repeat follow-up questions

How about coughing with phlegm or congestion? Yes No

- If yes, repeat follow-up questions

How about coughing without congestion? Yes No

- If yes, repeat follow-up questions

How about nasal congestion or a runny nose? Yes No

- If yes repeat follow-up questions

How about a Sore throat? Yes No

- If yes, repeat follow-up questions

Q. (Ask if other members were not present at the beach interview) **Now I have a few health questions about the household members who were not at the beach with you on the day you were interviewed. Since your beach interview on (date), has/have any of these other household member(s) had**

- A fever? Yes No
- How about Chills Yes No
- How about redness or eye irritation? Yes No
- An earache? Yes No

- How about discharge or draining from the ear ? Yes No
- How about a skin rash? Yes No
- How about cuts or scrapes that became infected? Yes No
- How about Nausea? Yes No
- How about vomiting ? Yes No
- How about diarrhea? Yes No
- How about stomach pain or cramps Yes No
- Coughing with phlegm or congestion? Yes No
- How about coughing without congestion? Yes No
- How about nasal congestion or a runny nose? Yes No
- How about a Sore throat? Yes No

Now I have some questions about swimming activities since we interviewed you at the beach on (date)

Q. Have you, (list other household members) visited a beach since that time? Yes No

If yes: Did you, (list other household members) go to the same beach at Mission Bay since your last interview? Yes No

If yes: Did you, (list other household members) go to a different ocean beach since your beach interview?

If yes: Did you, (list other household members) go to a lake or river beach since your interview? Yes No

For each reported beach ask for each household member:

- Did (you/person) go swimming at (beach name)? Yes No dk
- On which dates did you/person swim since your beach interview ? _____
- Did you/he she get your face wet or put your/his/her head under water?

Q Since your beach interview, did you swim in a private pool?... Yes No
How about (list other household members)? *IF YES* Did you/ he/she get his/her face wet or put his/her head underwater?

Q . Since your beach interview, did you swim in a public pool?... Yes No
How about (list other household members)? *IF YES* Did you/he/she get his/her face wet or put his/her head underwater?

Q. Since your beach interview, did you use a private hot tub or spa?... YesNo
How about (list other household members) ? *IF YES* Did you/he/she get his/her face wet or put his/her head underwater?

Q. Since your beach interview, did you use a public hot tub or spa?... Yes No
How about (list other household members) ? *IF YES* Did you/ he/she get his/her face wet or put his/her head underwater?

Q. (Ask of R and about family members 15 and older) How concerned are you about the quality of the water you use for recreational purposes? Would you say:
Very concerned Somewhat concerned Not very concerned Not at all concerned

Now I have a few quick questions about other activities since we interviewed you at the beach.

Q. Since the day of the beach interview, have you eaten in a restaurant (including fast food restaurants)? YES NO (ask for all household members)

Q Since the day of the interview, have you eaten any of the following? YES NO (ask for all household members)

- Raw or runny eggs
- Soft cheeses
- Meat that was red in the center
- Raw seafood

Q Since the day of the interview, did you drink any alcohol? (including beer, wine, hard liquor or any drink made with alcohol)? YES NO (ask for all household members)

For the purpose of this study, a drink is 1 glass of wine or a wine cooler, 1 can/bottle of beer, 1 shot of liquor or 1 mixed drink)

Q Since we interviewed you/other household member at the beach, how many drinks containing alcohol have you had per day on average? Would you say less than 1 per day, 1-2 per day 3-4 per day 5 or more per day?

Q Since your beach interview, what is the highest number of drinks containing alcohol you have had in a 24 hour period? _____

Q Since your beach interview, have you taken a trip where you spent at least one night away from home? YES NO (Ask for all household members)

- If yes, did you travel to an area outside the United States? YES NO
- If yes, did you visit an area where you were told not to drink untreated water?
YES NO

Q Since your beach interview, did you touch any animals that were not familiar to you such as farm animals or animals at a petting zoo? YES NO (Ask for all household members)

Q. Since your beach interview, have you visited a children's day care center? YES NO (ask for all household members)

(for anyone who reports a job) Do you work at (or volunteer) at a children's daycare center?

Q. Since your beach interview, have you changed a child's diaper? YES NO (ask for 3 years and above)

Q. Have you ever been concerned about the health effects of swimming in the ocean or in lakes or rivers? No Yes...Were you concerned about it before you did this study?
Follow-up (ask for age 16 and above)

Demographic questions:

What race or ethnicity do you consider yourself...(Insert Census list)

Are you Hispanic or Latino? (Ask sub groups Mexican, etc. to be decided)

Ask for all participants with option for "same"

What is your household's approximate annual income? (Insert standard language and income ranges in increments)

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BERKELEY, CALIFORNIA 94720-5100

ID:

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CONSENT FORM MISSION BAY EPIDEMIOLOGY STUDY

Jack Colford, MD, Ph.D, Associate Professor
School of Public Health, University of California, Berkeley

My name is Dr. Jack Colford of the University of California at Berkeley School of Public Health. My research team and I are working with the Southern California Coastal Water Research Project on a research study of the health of swimmers in Mission Bay.

We would like to ask you and your family members to help us in this study by answering a few questions today. We will also ask you to answer a few more questions on the phone in two weeks time. The interviews will take between 10 and 15 minutes each. Most of the questions will be about illnesses you and your family have experienced recently, like diarrhea, nausea, vomiting, or skin rashes. We will also ask you a few questions about your day at the beach, like what types of food you ate and whether or not you went swimming.

Your participation is voluntary and you may stop the interview at any time. You may refuse to answer any question you don't feel comfortable answering. Your responses to the questions will be confidential and your address and other contact information will be destroyed after you complete both interviews.

For helping us with this study, we will give you a t-shirt, water bottle, beach tote, towel or other item with the study logo on it when you finish the beach interview at the end of the day.

There are no direct benefits to you and your family, but we hope that this study and others like will help scientists understand what the health risks are, if any, of swimming in oceans. However, there are no foreseeable risks to you or your family from participating in this research.

If you have any questions about your rights as a research subject, you may talk to the Committee for the Protection of Human Subjects at (510) 642-7461, or by email at subjects@uclink.berkeley.edu. If you or your family have any questions about the research, before or during the study, you may call our program manager, Catherine Wright, at (510) 643-5378 (collect if necessary).

I have read this form and understand this study. I have had a chance to ask questions, and all my questions have been answered. I have discussed the research with all the members of my household. I agree to take part in the research.

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Name Print: _____ Age: _____ Gender: M F

Signature: _____ Date: _____

Appendix 2

Results of Analyses of Health Outcomes vs Water Exposure

Age Categories

1 = 0 – 5 years

2 = 5 – 12 years

3 = 12 – 30 years

4 = 30 years and older

Mission Bay Beaches

1 = Visitor's Center

2 = Tecalote Shores

3 = Leisure Lagoon

4 = De Anza Cove

5 = Crown Point

6 = Bonita Cove

Health Outcomes Analyzed

Gastrointestinal Outcomes:

HCGI1:

HCGI2:

Diarrhea

Nausea

Vomiting

Cramps

Skin Outcomes:

Skin Rash

Respiratory Outcomes:

SRD: xxDefinition

Cough

Fever

Sore Throat

Eye Outcomes:

Eye Irritation

Ear Outcomes:

Earache
Ear Discharge

Water Exposures Analyzed

Any Water Exposure
Water up to Shoulder
Water on Face
Face Under Water
Water in Mouth
Swallow Water

GASTROINTESTINAL OUTCOMES vs WATER EXPOSURE

Page number refers to page in output "hcgiswimonly.doc"

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Table 1. HCGI1 vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.26	0.95, 1.66	0.103	3
Final Adjusted	0.96	0.68, 1.37	0.831	2
Final Adjusted - Age Category 1	0.86	0.45, 1.59	0.632	3
Final Adjusted - Age Category 2	1.33	0.56, 3.14	0.517	4
Final Adjusted - Age Category 3	0.73	0.36, 1.44	0.362	5
Final Adjusted - Age Category 4	1.37	0.60, 3.15	0.458	5
Final Adjusted - Beach 1	1.80	0.26, 12.51	0.552	6
Final Adjusted - Beach 2	0.59	0.24, 1.45	0.250	7
Final Adjusted - Beach 3	0.98	0.52, 1.85	0.954	8
Final Adjusted - Beach 4	0.69	0.25, 1.88	0.470	8
Final Adjusted - Beach 5	1.52	0.57, 4.06	0.405	9
Final Adjusted - Beach 6	1.31	0.52, 3.27	0.565	10

Table 2. HCGI1 vs Water Up To Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.38	1.03, 1.86	0.032	94
Final Adjusted	0.98	0.66, 1.44	0.903	94
Final Adjusted - Age Category 1	1.03	0.54, 1.98	0.930	95
Final Adjusted - Age Category 2	1.27	0.52, 3.06	0.599	96
Final Adjusted - Age Category 3	0.80	0.37, 1.75	0.581	96
Final Adjusted - Age Category 4	0.66	0.19, 2.29	0.517	97
Final Adjusted - Beach 1	1.55	0.19, 12.94	0.686	98
Final Adjusted - Beach 2	0.50	0.18, 1.38	0.181	99
Final Adjusted - Beach 3	1.06	0.54, 2.05	0.874	99
Final Adjusted - Beach 4	0.53	0.15, 1.87	0.321	100
Final Adjusted - Beach 5	1.52	0.51, 4.55	0.452	101
Final Adjusted - Beach 6	1.53	0.54, 4.33	0.424	101

Table 3. HCGI1 vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.40	1.05, 1.86	0.021	51
Final Adjusted	1.03	0.71, 1.50	0.877	50
Final Adjusted - Age Category 1	1.07	0.57, 2.00	0.837	51
Final Adjusted - Age Category 2	1.24	0.52, 2.98	0.631	52
Final Adjusted - Age Category 3	0.84	0.40, 1.77	0.641	53
Final Adjusted - Age Category 4	0.93	0.31, 2.77	0.897	54
Final Adjusted - Beach 1	1.58	0.19, 13.39	0.675	54
Final Adjusted - Beach 2	0.54	0.20, 1.44	0.215	55
Final Adjusted - Beach 3	1.14	0.59, 2.18	0.702	56
Final Adjusted - Beach 4	0.68	0.21, 2.18	0.522	56
Final Adjusted - Beach 5	1.41	0.48, 4.13	0.528	57
Final Adjusted - Beach 6	1.60	0.59, 4.34	0.355	58

Table 4. HCGI1 vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.33	0.98, 1.80	0.068	140
Final Adjusted	0.99	0.66, 1.49	0.969	140
Final Adjusted - Age Category 1	0.73	0.36, 1.50	0.390	141
Final Adjusted - Age Category 2	1.51	0.62, 3.68	0.365	142
Final Adjusted - Age Category 3	1.02	0.46, 2.23	0.965	142
Final Adjusted - Age Category 4	0.92	0.28, 2.97	0.887	143
Final Adjusted - Beach 1	1.57	0.12, 20.32	0.731	144
Final Adjusted - Beach 2	0.59	0.21, 1.68	0.320	145
Final Adjusted - Beach 3	1.14	0.57, 2.27	0.709	146
Final Adjusted - Beach 4	0.83	0.24, 2.88	0.767	146
Final Adjusted - Beach 5	1.20	0.37, 3.84	0.759	147
Final Adjusted - Beach 6	1.37	0.45, 4.19	0.580	148

Table 5. HCGI1 vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.48	1.07, 2.05	0.017	191
Final Adjusted	0.98	0.64, 1.49	0.917	190
Final Adjusted - Age Category 1	0.80	0.38, 1.67	0.551	191
Final Adjusted - Age Category 2	1.40	0.56, 3.47	0.471	192
Final Adjusted - Age Category 3	0.80	0.33, 1.94	0.620	193
Final Adjusted - Age Category 4	1.75	0.54, 5.71	0.354	193
Final Adjusted - Beach 1	2.23	0.21, 24.23	0.510	194
Final Adjusted - Beach 2	0.44	0.14, 1.44	0.174	195
Final Adjusted - Beach 3	1.10	0.55, 2.21	0.785	196
Final Adjusted - Beach 4	0.44	0.10, 1.90	0.273	196
Final Adjusted - Beach 5	1.54	0.47, 5.07	0.477	197
Final Adjusted - Beach 6	1.58	0.47, 5.35	0.459	198

Table 6. HCGI1 vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.58	1.07, 2.35	0.022	235
Final Adjusted	1.01	0.62, 1.66	0.960	234
Final Adjusted - Age Category 1	0.61	0.25, 1.49	0.280	235
Final Adjusted - Age Category 2	1.72	0.65, 4.59	0.276	236
Final Adjusted - Age Category 3	1.34	0.49, 3.67	0.573	237
Final Adjusted - Age Category 4	0.70	0.08, 6.29	0.752	238
Final Adjusted - Beach 1	2.16	0.08, 58.82	0.649	238
Final Adjusted - Beach 2	0.43	0.10, 1.79	0.245	239
Final Adjusted - Beach 3	1.15	0.52, 2.54	0.728	240
Final Adjusted - Beach 4	0.55	0.10, 2.93	0.483	241
Final Adjusted - Beach 5	0.74	0.16, 3.45	0.705	241
Final Adjusted - Beach 6	3.21	0.80, 12.89	0.101	242

Table 7. HCGI2 vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.72	1.01, 2.88	0.039	12
Final Adjusted	0.93	0.49, 1.75	0.812	11
Final Adjusted - Age Category 1	0.74	0.31, 1.75	0.491	12
Final Adjusted - Age Category 2	2.26	0.28, 18.45	0.445	13
Final Adjusted - Age Category 3	0.64	0.15, 2.74	0.546	14
Final Adjusted - Age Category 4	2.10	0.3, 14.73	0.456	14
Final Adjusted - Beach 1	tf*			15
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 8. HCGI2 vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.14	1.26, 3.64	0.005	104
Final Adjusted	1.09	0.56, 2.12	0.801	103
Final Adjusted - Age Category 1	1.07	0.44, 2.56	0.888	104
Final Adjusted - Age Category 2	1.94	0.23, 16.09	0.540	105
Final Adjusted - Age Category 3	0.98	0.23, 4.19	0.973	106
Final Adjusted - Age Category 4	0.74	0.05, 10.29	0.824	106
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 9. HCGI2 vs WATER ON FACE

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.13	1.26, 3.59	0.005	60
Final Adjusted	1.10	0.57, 2.13	0.782	60
Final Adjusted - Age Category 1	0.95	0.40, 2.28	0.911	61
Final Adjusted - Age Category 2	248.00	0.30, 20.33	0.398	62
Final Adjusted - Age Category 3	0.95	0.21, 4.27	0.951	62
Final Adjusted - Age Category 4	0.53	0.03, 8.01	0.645	63
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 10. HCGI2 vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.86	1.06, 3.24	0.029	150
Final Adjusted	0.99	0.49, 2.01	0.974	150
Final Adjusted - Age Category 1	0.80	0.29, 2.18	0.657	151
Final Adjusted - Age Category 2	1.38	0.16, 12.08	0.768	152
Final Adjusted - Age Category 3	1.73	0.35, 8.56	0.504	153
Final Adjusted - Age Category 4	0.35	0.02, 7.90	0.508	154
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 11. HCGI2 vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.26	1.27, 4.02	0.006	200
Final Adjusted	1.05	0.51, 2.18	0.894	200
Final Adjusted - Age Category 1	0.73	0.26, 2.04	0.551	201
Final Adjusted - Age Category 2	3.03	0.36, 25.68	0.310	202
Final Adjusted - Age Category 3	0.52	0.08, 3.54	0.505	202
Final Adjusted - Age Category 4	0.54	0.02, 13.99	0.713	203
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 12. HCGI2 vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.39	1.21, 4.72	0.012	244
Final Adjusted	1.12	0.51, 2.45	0.785	244
Final Adjusted - Age Category 1	0.74	0.23, 2.36	0.611	245
Final Adjusted - Age Category 2	2.83	0.32, 24.83	0.349	245
Final Adjusted - Age Category 3	0.92	0.13, 6.46	0.931	246
Final Adjusted - Age Category 4	3.15	0.18, 54.04	0.428	247
Final Adjusted - Beach 1	tf*			247
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 13. Diarrhea vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.33	1.06, 1.68	0.013	17
Final Adjusted	1.36	1.04, 1.78	0.025**	16
Final Adjusted - Age Category 1	0.75	0.40, 1.40	0.374	17
Final Adjusted - Age Category 2	2.80	1.07, 7.27	0.035**	18
Final Adjusted - Age Category 3	1.71	0.96, 3.05	0.070	18
Final Adjusted - Age Category 4	1.28	0.85, 1.93	0.238	18
Final Adjusted - Beach 1	2.27	0.61, 8.49	0.223	19
Final Adjusted - Beach 2	0.94	0.46, 1.92	0.870	19
Final Adjusted - Beach 3	1.00	0.61, 1.65	0.994	20
Final Adjusted - Beach 4	1.66	0.91, 3.01	0.098	20
Final Adjusted - Beach 5	3.82	1.62, 9.01	0.002**	21
Final Adjusted - Beach 6	1.50	0.76, 2.96	0.242	21

** p<0.05

Table 14. Diarrhea vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.40	1.09, 1.79	0.007	109
Final Adjusted	1.51	1.13, 2.00	0.005**	108
Final Adjusted - Age Category 1	0.95	0.51, 1.78	0.879	109
Final Adjusted - Age Category 2	3.42	1.31, 8.94	0.012**	109
Final Adjusted - Age Category 3	1.64	0.89, 3.01	0.112	110
Final Adjusted - Age Category 4	1.38	0.84, 2.25	0.201	110
Final Adjusted - Beach 1	1.53	0.33, 7.22	0.589	111
Final Adjusted - Beach 2	1.05	0.49, 2.26	0.891	111
Final Adjusted - Beach 3	1.22	0.73, 2.02	0.447	112
Final Adjusted - Beach 4	1.89	0.96, 3.73	0.065	112
Final Adjusted - Beach 5	4.37	1.95, 9.82	0.00**	112
Final Adjusted - Beach 6	1.22	0.60, 2.47	0.584	113

** p<0.05

Table 15. Diarrhea vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.37	1.08, 1.75	0.009	65
Final Adjusted	1.54	1.16, 2.06	0.003**	65
Final Adjusted - Age Category 1	0.92	0.49, 1.74	0.803	66
Final Adjusted - Age Category 2	3.11	1.19, 8.15	0.021**	66
Final Adjusted - Age Category 3	2.40	1.31, 4.38	0.005**	67
Final Adjusted - Age Category 4	1.15	0.69, 1.90	0.597	67
Final Adjusted - Beach 1	2.03	0.46, 9.03	0.351	68
Final Adjusted - Beach 2	1.08	0.51, 2.25	0.847	68
Final Adjusted - Beach 3	1.21	0.72, 2.03	0.475	68
Final Adjusted - Beach 4	2.00	1.03, 3.89	0.04**	69
Final Adjusted - Beach 5	4.32	1.77, 10.50	0.001**	69
Final Adjusted - Beach 6	1.71	0.81, 3.59	0.160	70

** p<0.05

Table 16. Diarrhea vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.38	1.08, 1.78	0.011	157
Final Adjusted	1.61	1.19, 2.17	0.002**	156
Final Adjusted - Age Category 1	0.82	0.42, 1.61	0.569	157
Final Adjusted - Age Category 2	3.83	1.46, 10.02	0.006**	158
Final Adjusted - Age Category 3	1.67	0.90, 3.10	0.106	158
Final Adjusted - Age Category 4	1.47	0.89, 2.42	0.133	159
Final Adjusted - Beach 1	0.91	0.15, 5.59	0.922	159
Final Adjusted - Beach 2	1.62	0.71, 3.72	0.252	160
Final Adjusted - Beach 3	1.38	0.81, 2.34	0.240	160
Final Adjusted - Beach 4	1.98	0.96, 4.11	0.065	161
Final Adjusted - Beach 5	4.02	1.70, 9.48	0.001**	161
Final Adjusted - Beach 6	1.20	0.56, 2.60	0.635	162

** p<0.05

Table 17. Diarrhea vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.59	1.21, 2.07	0.001	206
Final Adjusted	1.71	1.24, 2.36	0.001**	205
Final Adjusted - Age Category 1	0.79	0.40, 1.59	0.514	206
Final Adjusted - Age Category 2	4.28	1.61, 11.38	0.004**	207
Final Adjusted - Age Category 3	1.78	0.89, 3.56	0.101	207
Final Adjusted - Age Category 4	1.54	0.87, 2.72	0.138	208
Final Adjusted - Beach 1	4.07	0.80, 20.74	0.091	208
Final Adjusted - Beach 2	2.13	0.87, 5.21	0.097	209
Final Adjusted - Beach 3	1.30	0.74, 2.30	0.365	209
Final Adjusted - Beach 4	1.73	0.80, 3.73	0.163	210
Final Adjusted - Beach 5	4.59	1.85, 11.41	0.001**	210
Final Adjusted - Beach 6	1.22	0.50, 2.96	0.657	211

** p<0.05

Table 18. Diarrhea vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.85	1.35, 2.53	0.000	249
Final Adjusted	1.89	1.34, 2.66	0.000**	248
Final Adjusted - Age Category 1	0.97	0.47, 2.01	0.941	249
Final Adjusted - Age Category 2	5.30	1.96, 14.33	0.001**	250
Final Adjusted - Age Category 3	1.76	0.79, 3.91	0.164	250
Final Adjusted - Age Category 4	1.78	0.86, 3.66	0.120	250
Final Adjusted - Beach 1	1.36	0.15, 12.78	0.787	251
Final Adjusted - Beach 2	1.56	0.61, 4.01	0.357	251
Final Adjusted - Beach 3	1.62	0.92, 2.85	0.097	252
Final Adjusted - Beach 4	1.95	0.84, 4.51	0.121	252
Final Adjusted - Beach 5	4.09	1.52, 10.98	0.005**	252
Final Adjusted - Beach 6	1.96	0.80, 4.82	0.140	253

** p<0.05

Table 19. Nausea vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.89	0.67, 1.18	0.411	23
Final Adjusted	0.88	0.64, 1.23	0.468	23
Final Adjusted - Age Category 1	1.90	0.62, 5.83	0.261	23
Final Adjusted - Age Category 2	1.40	0.52, 3.79	0.504	24
Final Adjusted - Age Category 3	0.46	0.26, 0.83	0.01**	24
Final Adjusted - Age Category 4	1.11	0.63, 1.95	0.710	25
Final Adjusted - Beach 1	5.95	0.68, 51.81	0.107	25
Final Adjusted - Beach 2	0.89	0.41, 1.93	0.773	26
Final Adjusted - Beach 3	0.66	0.35, 1.25	0.204	26
Final Adjusted - Beach 4	0.40	0.15, 1.06	0.067	27
Final Adjusted - Beach 5	1.08	0.53, 2.23	0.825	27
Final Adjusted - Beach 6	0.90	0.40, 2.04	0.802	27

** p<0.05

Table 20. Nausea vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.05	0.78, 1.42	0.748	115
Final Adjusted	1.10	0.75, 1.61	0.623	114
Final Adjusted - Age Category 1	2.15	0.78, 5.99	0.141	115
Final Adjusted - Age Category 2	1.21	0.46, 3.20	0.695	116
Final Adjusted - Age Category 3	0.55	0.27, 1.12	0.098	117
Final Adjusted - Age Category 4	1.43	0.69, 2.94	0.333	117
Final Adjusted - Beach 1	9.27	1.10, 77.74	0.04**	118
Final Adjusted - Beach 2	1.05	0.40, 2.78	0.922	118
Final Adjusted - Beach 3	0.84	0.41, 1.70	0.622	119
Final Adjusted - Beach 4	0.40	0.12, 1.29	0.125	119
Final Adjusted - Beach 5	1.59	0.69, 3.65	0.279	120
Final Adjusted - Beach 6	1.01	0.39, 2.63	0.978	120

** p<0.05

Table 21. Nausea vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.02	0.76, 1.37	0.879	72
Final Adjusted	1.11	0.77, 1.61	0.577	71
Final Adjusted - Age Category 1	1.97	0.72, 5.42	0.189	72
Final Adjusted - Age Category 2	1.35	0.52, 3.51	0.536	73
Final Adjusted - Age Category 3	0.59	0.30, 1.16	0.124	73
Final Adjusted - Age Category 4	1.31	0.65, 2.63	0.451	74
Final Adjusted - Beach 1	6.90	0.87, 54.38	0.067	75
Final Adjusted - Beach 2	1.34	0.54, 3.28	0.527	75
Final Adjusted - Beach 3	0.83	0.41, 1.68	0.613	76
Final Adjusted - Beach 4	0.42	0.14, 1.30	0.133	76
Final Adjusted - Beach 5	1.49	0.67, 3.33	0.329	77
Final Adjusted - Beach 6	0.97	0.38, 2.48	0.952	77

Table 22. Nausea vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.73, 1.36	0.989	164
Final Adjusted	1.07	0.70, 1.63	0.748	163
Final Adjusted - Age Category 1	2.17	0.62, 7.66	0.228	164
Final Adjusted - Age Category 2	1.55	0.54, 4.43	0.410	165
Final Adjusted - Age Category 3	0.61	0.29, 1.28	0.190	166
Final Adjusted - Age Category 4	1.06	0.44, 2.61	0.890	166
Final Adjusted - Beach 1	24.49	1.23, 486.86	0.036**	167
Final Adjusted - Beach 2	1.01	0.37, 2.74	0.986	168
Final Adjusted - Beach 3	0.77	0.35, 1.67	0.504	168
Final Adjusted - Beach 4	0.47	0.13, 1.73	0.253	169
Final Adjusted - Beach 5	1.92	0.74, 5.00	0.181	170
Final Adjusted - Beach 6	0.83	0.24, 2.85	0.769	170

** p<0.05

Table 23. Nausea vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.29	0.94, 1.78	0.116	213
Final Adjusted	1.38	0.92, 2.05	0.117	213
Final Adjusted - Age Category 1	2.22	0.76, 6.47	0.144	213
Final Adjusted - Age Category 2	1.80	0.68, 4.77	0.236	214
Final Adjusted - Age Category 3	0.56	0.25, 1.27	0.168	214
Final Adjusted - Age Category 4	2.09	0.98, 4.45	0.058	215
Final Adjusted - Beach 1	10.68	1.38, 82.53	0.023**	216
Final Adjusted - Beach 2	1.44	0.53, 3.94	0.473	216
Final Adjusted - Beach 3	1.22	0.59, 2.50	0.591	216
Final Adjusted - Beach 4	0.43	0.12, 1.55	0.197	217
Final Adjusted - Beach 5	1.97	0.83, 4.66	0.122	217
Final Adjusted - Beach 6	0.98	0.33, 2.92	0.968	218

** p<0.05

Table 24. Nausea vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.34	0.91, 2.00	0.142	255
Final Adjusted	1.41	0.91, 2.17	0.123	254
Final Adjusted - Age Category 1	2.27	0.76, 6.81	0.142	255
Final Adjusted - Age Category 2	2.29	0.84, 6.23	0.106	256
Final Adjusted - Age Category 3	0.56	0.21, 1.46	0.233	256
Final Adjusted - Age Category 4	2.08	0.81, 5.33	0.127	256
Final Adjusted - Beach 1	5.60	0.44, 71.62	0.186	257
Final Adjusted - Beach 2	1.10	0.34, 3.55	0.877	257
Final Adjusted - Beach 3	1.31	0.62, 2.77	0.472	258
Final Adjusted - Beach 4	0.71	0.19, 2.69	0.612	258
Final Adjusted - Beach 5	1.58	0.61, 4.11	0.348	258
Final Adjusted - Beach 6	1.52	0.47, 4.95	0.483	259

Table 25. Vomiting vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.18	0.85, 1.64	0.324	29
Final Adjusted	0.85	0.58, 1.26	0.424	29
Final Adjusted - Age Category 1	0.58	0.31, 1.10	0.098	30
Final Adjusted - Age Category 2	1.59	0.54, 4.68	0.402	31
Final Adjusted - Age Category 3	0.68	0.31, 1.47	0.326	31
Final Adjusted - Age Category 4	1.45	0.64, 3.30	0.377	32
Final Adjusted - Beach 1	0.57	0.08, 4.21	0.585	32
Final Adjusted - Beach 2	0.61	0.22, 1.71	0.349	33
Final Adjusted - Beach 3	0.93	0.48, 1.81	0.834	33
Final Adjusted - Beach 4	0.33	0.09, 1.16	0.083	34
Final Adjusted - Beach 5	1.06	0.42, 2.66	0.898	34
Final Adjusted - Beach 6	1.06	0.40, 2.85	0.902	35

Table 26. Vomiting vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.32	0.93, 1.87	0.126	123
Final Adjusted	0.89	0.57, 1.41	0.629	122
Final Adjusted - Age Category 1	0.83	0.40, 1.71	0.610	123
Final Adjusted - Age Category 2	1.81	0.51, 6.37	0.357	124
Final Adjusted - Age Category 3	0.72	0.30, 1.75	0.468	125
Final Adjusted - Age Category 4	0.88	0.20, 3.87	0.864	125
Final Adjusted - Beach 1	6.18	0.26, 148.12	0.261	126
Final Adjusted - Beach 2	0.37	0.11, 1.31	0.124	127
Final Adjusted - Beach 3	0.87	0.42, 1.81	0.702	128
Final Adjusted - Beach 4	0.32	0.07, 1.49	0.146	128
Final Adjusted - Beach 5	1.62	0.52, 5.00	0.403	129
Final Adjusted - Beach 6	2.05	0.54, 7.75	0.292	130

Table 27. Vomiting vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.31	0.93, 1.85	0.118	79
Final Adjusted	0.92	0.61, 1.37	0.670	79
Final Adjusted - Age Category 1	0.75	0.39, 1.42	0.373	80
Final Adjusted - Age Category 2	1.64	0.55, 4.89	0.375	80
Final Adjusted - Age Category 3	0.84	0.39, 1.83	0.659	81
Final Adjusted - Age Category 4	0.97	0.34, 2.79	0.960	82
Final Adjusted - Beach 1	0.97	0.12, 7.91	0.977	82
Final Adjusted - Beach 2	0.52	0.18, 1.54	0.237	83
Final Adjusted - Beach 3	1.02	0.52, 2.00	0.956	83
Final Adjusted - Beach 4	0.37	0.09, 1.45	0.153	84
Final Adjusted - Beach 5	1.18	0.45, 3.06	0.738	84
Final Adjusted - Beach 6	1.22	0.46, 3.23	0.695	85

Table 28. Vomiting vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.27	0.88, 1.82	0.198	173
Final Adjusted	0.93	0.58, 1.49	0.753	172
Final Adjusted - Age Category 1	0.67	0.30, 1.49	0.327	173
Final Adjusted - Age Category 2	2.04	0.58, 7.26	0.269	174
Final Adjusted - Age Category 3	0.82	0.32, 2.05	0.664	175
Final Adjusted - Age Category 4	0.96	0.21, 4.41	0.963	176
Final Adjusted - Beach 1	8.62E+07	0	1.000	177
Final Adjusted - Beach 2	0.36	0.09, 1.38	0.136	177
Final Adjusted - Beach 3	1.01	0.47, 2.18	0.975	178
Final Adjusted - Beach 4	0.54	0.11, 2.65	0.448	179
Final Adjusted - Beach 5	1.01	0.30, 3.41	0.990	180
Final Adjusted - Beach 6	2.01	0.51, 7.99	0.321	180

Table 29. Vomiting vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.25	0.84, 1.87	0.277	220
Final Adjusted	0.74	0.46, 1.19	0.207	220
Final Adjusted - Age Category 1	0.48	0.21, 1.07	0.073	221
Final Adjusted - Age Category 2	2.16	0.61, 7.69	0.234	221
Final Adjusted - Age Category 3	0.45	0.16, 1.26	0.129	222
Final Adjusted - Age Category 4	1.66	0.47, 5.93	0.434	222
Final Adjusted - Beach 1	1.42	0.12, 16.76	0.778	222
Final Adjusted - Beach 2	0.29	0.07, 1.17	0.082	223
Final Adjusted - Beach 3	0.82	0.38, 1.76	0.615	223
Final Adjusted - Beach 4	0.33	0.06, 1.77	0.195	224
Final Adjusted - Beach 5	1.14	0.35, 3.70	0.830	224
Final Adjusted - Beach 6	1.62	0.45, 5.78	0.457	225

Table 30. Vomiting vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.43	0.89, 2.32	0.139	261
Final Adjusted	0.86	0.49, 1.52	0.610	261
Final Adjusted - Age Category 1	0.41	0.14, 1.18	0.099	261
Final Adjusted - Age Category 2	2.15	0.57, 8.13	0.257	262
Final Adjusted - Age Category 3	1.27	0.43, 3.77	0.665	263
Final Adjusted - Age Category 4	1.13	0.13, 10.12	0.912	263
Final Adjusted - Beach 1	1.12	0.05, 26.15	0.943	264
Final Adjusted - Beach 2	0.43	0.08, 2.32	0.329	264
Final Adjusted - Beach 3	0.91	0.38, 2.17	0.823	265
Final Adjusted - Beach 4	0.49	0.08, 2.92	0.434	265
Final Adjusted - Beach 5	0.54	0.10, 3.02	0.485	266
Final Adjusted - Beach 6	3.64	0.80, 16.51	0.094	266

Table 31. Cramps vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.14	0.92, 1.41	0.246	37
Final Adjusted	1.07	0.81, 1.42	0.630	37
Final Adjusted - Age Category 1	1.20	0.53, 2.70	0.665	38
Final Adjusted - Age Category 2	1.61	0.77, 3.37	0.207	38
Final Adjusted - Age Category 3	0.57	0.34, 0.94	0.027**	39
Final Adjusted - Age Category 4	1.51	0.93, 2.43	0.093	39
Final Adjusted - Beach 1	1.49	0.26, 8.46	0.651	40
Final Adjusted - Beach 2	1.00	0.50, 1.99	0.998	41
Final Adjusted - Beach 3	0.90	0.54, 1.48	0.673	41
Final Adjusted - Beach 4	0.87	0.39, 1.94	0.725	42
Final Adjusted - Beach 5	2.03	0.95, 4.33	0.069	42
Final Adjusted - Beach 6	0.89	0.45, 1.76	0.736	43

**p<0.05

Table 32. Cramps vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.24	0.99, 1.57	0.066	132
Final Adjusted	1.18	0.87, 1.60	0.283	131
Final Adjusted - Age Category 1	1.60	0.70, 3.66	0.262	132
Final Adjusted - Age Category 2	1.79	0.85, 3.75	0.125	133
Final Adjusted - Age Category 3	0.57	0.33, 0.99	0.046**	134
Final Adjusted - Age Category 4	1.46	0.81, 2.62	0.203	134
Final Adjusted - Beach 1	0.86	0.12, 6.35	0.884	135
Final Adjusted - Beach 2	1.12	0.54, 2.31	0.767	135
Final Adjusted - Beach 3	1.04	0.62, 1.76	0.875	136
Final Adjusted - Beach 4	0.63	0.25, 1.58	0.326	137
Final Adjusted - Beach 5	3.15	1.40, 7.12	0.006**	137
Final Adjusted - Beach 6	0.94	0.43, 2.05	0.873	138

**p<0.05

Table 33. Cramps vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.19	0.94, 1.49	0.142	87
Final Adjusted	1.14	0.86, 1.51	0.37	86
Final Adjusted - Age Category 1	1.51	0.67, 3.40	0.323	87
Final Adjusted - Age Category 2	1.84	0.88, 3.83	0.104	88
Final Adjusted - Age Category 3	0.61	0.36, 1.03	0.062	88
Final Adjusted - Age Category 4	1.23	0.73, 2.06	0.434	89
Final Adjusted - Beach 1	1.25	0.26, 6.11	0.781	89
Final Adjusted - Beach 2	1.18	0.60, 2.35	0.630	90
Final Adjusted - Beach 3	1.01	0.62, 1.66	0.962	91
Final Adjusted - Beach 4	0.60	0.25, 1.42	0.245	91
Final Adjusted - Beach 5	2.55	1.22, 5.32	0.013**	92
Final Adjusted - Beach 6	1.06	0.52, 2.19	0.866	92

**p<0.05

Table 34. Cramps vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.30	1.03, 1.65	0.029	182
Final Adjusted	1.28	0.93, 1.75	0.130	182
Final Adjusted - Age Category 1	2.04	0.85, 4.90	0.111	183
Final Adjusted - Age Category 2	2.11	0.99, 4.47	0.052	184
Final Adjusted - Age Category 3	0.57	0.32, 1.03	0.065	184
Final Adjusted - Age Category 4	1.34	0.72, 2.48	0.353	185
Final Adjusted - Beach 1	1.59	0.20, 12.40	0.661	186
Final Adjusted - Beach 2	1.06	0.50, 2.24	0.887	186
Final Adjusted - Beach 3	1.37	0.79, 2.38	0.267	187
Final Adjusted - Beach 4	0.65	0.25, 1.66	0.365	187
Final Adjusted - Beach 5	2.82	1.23, 6.51	0.015**	188
Final Adjusted - Beach 6	1.11	0.48, 2.55	0.803	188

**p<0.05

Table 35. Cramps vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.40	1.08, 1.80	0.010	227
Final Adjusted	1.25	0.91, 1.70	0.164	227
Final Adjusted - Age Category 1	1.59	0.72, 3.50	0.250	228
Final Adjusted - Age Category 2	1.87	0.91, 3.86	0.089	228
Final Adjusted - Age Category 3	0.52	0.28, 0.97	0.040**	229
Final Adjusted - Age Category 4	1.59	0.85, 2.95	0.145	229
Final Adjusted - Beach 1	1.41	0.19, 10.58	0.737	230
Final Adjusted - Beach 2	0.94	0.41, 2.15	0.890	230
Final Adjusted - Beach 3	1.30	0.78, 2.19	0.316	231
Final Adjusted - Beach 4	0.69	0.27, 1.76	0.436	231
Final Adjusted - Beach 5	2.62	1.20, 5.72	0.015*	232
Final Adjusted - Beach 6	0.70	0.28, 1.74	0.441	232

**p<0.05

Table 36. Cramps vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.70	1.26, 2.29	0.001	268
Final Adjusted	1.53	1.08, 2.15	0.016**	268
Final Adjusted - Age Category 1	2.05	0.88, 4.78	0.096	269
Final Adjusted - Age Category 2	2.51	1.18, 5.33	0.017**	270
Final Adjusted - Age Category 3	0.52	0.23, 1.18	0.120	270
Final Adjusted - Age Category 4	1.83	0.85, 3.92	0.120	271
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

**p<0.05

SKIN OUTCOMES vs WATER EXPOSURE

Page numbers refer to pages in output "skinswimonly.doc"

QA completed by C. Wright 1/10/05

Table 37. Skin Rash vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.44	1.81, 3.27	0.000	3
Final Adjusted	2.25	1.60, 3.16	0.000**	2
Final Adjusted - Age Category 1	5.86	1.81, 19.0	0.003**	3
Final Adjusted - Age Category 2	3.26	1.30, 8.15	0.011**	3
Final Adjusted - Age Category 3	1.60	0.89, 2.86	0.114	4
Final Adjusted - Age Category 4	1.84	1.04, 3.25	0.037**	4
Final Adjusted - Beach 1	2.74	0.53, 14.34	0.231	5
Final Adjusted - Beach 2	3.11	1.41, 6.89	0.005**	5
Final Adjusted - Beach 3	2.59	1.43, 4.68	0.002**	6
Final Adjusted - Beach 4	1.59	0.62, 4.12	0.335	6
Final Adjusted - Beach 5	2.11	0.81, 5.53	0.127	7
Final Adjusted - Beach 6	1.27	0.49, 3.29	0.618	7

**p<0.05

Table 38. Skin Rash vs Water to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.89	2.12, 3.92	0.000	16
Final Adjusted	2.36	1.69, 3.30	0.000**	16
Final Adjusted - Age Category 1	6.72	2.05, 22.02	0.002**	17
Final Adjusted - Age Category 2	3.76	1.50, 9.42	0.005**	17
Final Adjusted - Age Category 3	1.38	0.78, 2.45	0.272	18
Final Adjusted - Age Category 4	2.43	1.33, 4.43	0.004**	18
Final Adjusted - Beach 1	4.35	0.96, 19.76	0.057	19
Final Adjusted - Beach 2	4.18	1.83, 9.55	0.001**	19
Final Adjusted - Beach 3	2.24	1.28, 3.90	0.004**	20
Final Adjusted - Beach 4	1.41	0.50, 3.97	0.510	20
Final Adjusted - Beach 5	2.88	1.13, 7.37	0.027**	21
Final Adjusted - Beach 6	1.37	0.51, 3.68	0.534	21

**p<0.05

Table 39. Skin Rash vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.88	2.13, 3.89	0.000	10
Final Adjusted	2.39	1.72, 3.31	0.000**	10
Final Adjusted - Age Category 1	6.96	2.14, 22.62	0.001**	11
Final Adjusted - Age Category 2	3.67	1.47, 9.17	0.005**	11
Final Adjusted - Age Category 3	1.49	0.86, 2.57	0.153	11
Final Adjusted - Age Category 4	2.19	1.21, 3.95	0.010**	12
Final Adjusted - Beach 1	3.70	0.82, 16.67	0.089	12
Final Adjusted - Beach 2	4.18	1.86, 9.42	0.001**	13
Final Adjusted - Beach 3	2.35	1.36, 4.07	0.002**	13
Final Adjusted - Beach 4	1.43	0.52, 3.89	0.489	14
Final Adjusted - Beach 5	2.86	1.13, 7.26	0.027**	14
Final Adjusted - Beach 6	1.26	0.48, 3.33	0.640	15

**p<0.05

Table 40. Skin Rash vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	2.88	2.11, 3.93	0.000	23
Final Adjusted	2.35	1.68, 3.29	0.000**	23
Final Adjusted - Age Category 1	6.20	1.87, 20.61	0.003**	23
Final Adjusted - Age Category 2	3.85	1.53, 9.66	0.004**	24
Final Adjusted - Age Category 3	1.50	0.84, 2.66	0.168	24
Final Adjusted - Age Category 4	2.34	1.26, 4.34	0.007**	25
Final Adjusted - Beach 1	5.32	1.15, 24.57	0.032**	25
Final Adjusted - Beach 2	4.43	1.93, 10.15	0.000**	26
Final Adjusted - Beach 3	2.29	1.31, 3.99	0.004**	26
Final Adjusted - Beach 4	2.00	0.73, 5.48	0.176	27
Final Adjusted - Beach 5	2.33	0.88, 6.14	0.088	27
Final Adjusted - Beach 6	0.98	0.32, 2.97	0.967	28

**p<0.05

Table 41. Skin Rash vs Water in Mouth

Model	OR exposure	CI	p-value	Page No.
Unadjusted	3.09	2.22, 4.28	0.000	29
Final Adjusted	2.50	1.76, 3.57	0.000**	29
Final Adjusted - Age Category 1	7.47	2.23, 24.97	0.001**	30
Final Adjusted - Age Category 2	4.08	1.61, 10.35	0.003**	30
Final Adjusted - Age Category 3	1.30	0.66, 2.56	0.452	31
Final Adjusted - Age Category 4	2.28	1.11, 4.70	0.025**	31
Final Adjusted - Beach 1	3.02	0.57, 16.12	0.195	32
Final Adjusted - Beach 2	5.52	2.35, 12.96	0.000**	32
Final Adjusted - Beach 3	2.35	1.31, 4.22	0.004**	33
Final Adjusted - Beach 4	1.47	0.48, 4.49	0.496	33
Final Adjusted - Beach 5	3.34	1.23, 9.08	0.018**	34
Final Adjusted - Beach 6	0.73	0.18, 2.90	0.653	34

**p<0.05

Table 42. Skin Rash vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	3.12	2.13, 4.57	0.000	36
Final Adjusted	2.11	1.37, 3.24	0.001**	35
Final Adjusted - Age Category 1	10.42	2.34, 46.40	0.002**	36
Final Adjusted - Age Category 2	4.10	1.39, 12.09	0.011**	37
Final Adjusted - Age Category 3	1.15	0.46, 2.86	0.762	37
Final Adjusted - Age Category 4	1.32	0.39, 4.46	0.660	38
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* too few to analyze

** p<0.05

RESPIRATORY OUTCOMES

Page number refers to page in output "respswimonly.doc"

QA completed by L. Carlton and C. Wright 3/8/05

Table 43. SRD vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.12	0.89, 1.41	0.329	3
Final Adjusted	1.08	0.80, 1.45	0.618	2
Final Adjusted - Age Category 1	0.63	0.32, 1.22	0.167	3
Final Adjusted - Age Category 2	1.23	0.57, 2.66	0.604	4
Final Adjusted - Age Category 3	1.01	0.58, 1.75	0.968	4
Final Adjusted - Age Category 4	1.43	0.86, 2.35	0.165	5
Final Adjusted - Beach 1	2.20	0.46, 10.46	0.323	6
Final Adjusted - Beach 2	1.35	0.58, 3.15	0.481	6
Final Adjusted - Beach 3	1.18	0.64, 2.20	0.597	7
Final Adjusted - Beach 4	0.78	0.34, 1.80	0.562	7
Final Adjusted - Beach 5	1.55	0.77, 3.13	0.221	8
Final Adjusted - Beach 6	0.66	0.34, 1.30	0.233	9

Table 44. SRD vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.09	0.85, 1.39	0.509	38
Final Adjusted	1.03	0.75, 1.43	0.842	37
Final Adjusted - Age Category 1	0.57	0.29, 1.14	0.114	39
Final Adjusted - Age Category 2	1.29	0.58, 2.84	0.534	39
Final Adjusted - Age Category 3	0.99	0.55, 1.79	0.983	40
Final Adjusted - Age Category 4	1.39	0.76, 2.53	0.289	41
Final Adjusted - Beach 1	2.05	0.27, 15.27	0.485	41
Final Adjusted - Beach 2	1.16	0.47, 2.87	0.742	42
Final Adjusted - Beach 3	1.16	0.60, 2.22	0.661	43
Final Adjusted - Beach 4	1.24	0.51, 2.97	0.636	44
Final Adjusted - Beach 5	1.39	0.67, 2.89	0.372	44
Final Adjusted - Beach 6	0.59	0.27, 1.29	0.186	45

Table 45. SRD vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.11	0.78, 1.59	0.557	175
Final Adjusted	0.99	0.62, 1.57	0.953	174
Final Adjusted - Age Category 1	0.62	0.24, 1.57	0.312	175
Final Adjusted - Age Category 2	1.18	0.46, 3.03	0.734	176
Final Adjusted - Age Category 3	1.03	0.41, 2.55	0.951	177
Final Adjusted - Age Category 4	0.71	0.15, 3.25	0.656	178
Final Adjusted - Beach 1	tf*			178
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 46. Cough vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.79	0.59, 1.05	0.102	10
Final Adjusted	0.74	0.54, 1.02	0.070	10
Final Adjusted - Age Category 1	0.52	0.27, 1.01	0.054	11
Final Adjusted - Age Category 2	0.84	0.38, 1.87	0.670	12
Final Adjusted - Age Category 3	0.78	0.41, 1.49	0.451	12
Final Adjusted - Age Category 4	0.84	0.49, 1.45	0.526	13
Final Adjusted - Beach 1	1.63	0.48, 5.52	0.431	13
Final Adjusted - Beach 2	0.69	0.32, 1.46	0.329	13
Final Adjusted - Beach 3	0.78	0.40, 1.52	0.472	14
Final Adjusted - Beach 4	0.37	0.14, 0.95	0.040**	14
Final Adjusted - Beach 5	0.74	0.33, 1.69	0.480	15
Final Adjusted - Beach 6	0.88	0.41, 1.92	0.753	15

** p<0.05

Table 47. Cough vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.81	0.60, 1.10	0.180	47
Final Adjusted	0.77	0.54, 1.11	0.164	47
Final Adjusted - Age Category 1	0.42	0.20, 0.89	0.023**	48
Final Adjusted - Age Category 2	0.93	0.41, 2.10	0.865	48
Final Adjusted - Age Category 3	0.80	0.39, 1.68	0.560	49
Final Adjusted - Age Category 4	0.99	0.51, 1.90	0.970	49
Final Adjusted - Beach 1	2.02	0.50, 8.05	0.321	50
Final Adjusted - Beach 2	0.76	0.33, 1.77	0.525	50
Final Adjusted - Beach 3	0.64	0.31, 1.34	0.237	51
Final Adjusted - Beach 4	0.43	0.14, 1.26	0.124	51
Final Adjusted - Beach 5	0.98	0.39, 2.43	0.961	52
Final Adjusted - Beach 6	1.06	0.45, 2.48	0.891	52
**p<0.05				

Table 48. Cough vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.01	0.65, 1.55	0.981	180
Final Adjusted	0.82	0.47, 1.41	0.465	180
Final Adjusted - Age Category 1	0.44	0.15, 1.32	0.142	181
Final Adjusted - Age Category 2	1.34	0.48, 3.70	0.576	182
Final Adjusted - Age Category 3	1.50	0.53, 4.27	0.450	182
Final Adjusted - Age Category 4	tf			183
Final Adjusted - Beach 1	tf			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze by Beach				

Table 49. Fever vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.28	1.00, 1.63	0.047	18
Final Adjusted	0.96	0.70, 1.32	0.797	17
Final Adjusted - Age Category 1	0.68	0.39, 1.16	0.158	18
Final Adjusted - Age Category 2	1.67	0.67, 4.15	0.271	19
Final Adjusted - Age Category 3	0.83	0.44, 1.56	0.566	19
Final Adjusted - Age Category 4	1.44	0.73, 2.84	0.297	20
Final Adjusted - Beach 1	1.06	0.15, 7.69	0.951	21
Final Adjusted - Beach 2	0.78	0.32, 1.89	0.576	22
Final Adjusted - Beach 3	0.91	0.50, 1.67	0.766	22
Final Adjusted - Beach 4	0.81	0.32, 2.05	0.652	23
Final Adjusted - Beach 5	1.21	0.54, 2.71	0.642	24
Final Adjusted - Beach 6	0.87	0.40, 1.90	0.731	24

Table 50. Fever vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.81	1.29, 2.53	0.001	185
Final Adjusted	1.15	0.76, 1.75	0.513	185
Final Adjusted - Age Category 1	0.73	0.36, 1.45	0.363	186
Final Adjusted - Age Category 2	2.36	0.88, 6.28	0.087	186
Final Adjusted - Age Category 3	1.51	0.64, 3.55	0.343	187
Final Adjusted - Age Category 4	1.04	0.22, 4.91	0.956	188
Final Adjusted - Beach 1	0.90	0.08, 10.52	0.931	188
Final Adjusted - Beach 2	0.95	0.29, 3.11	0.933	189
Final Adjusted - Beach 3	1.27	0.64, 2.51	0.487	190
Final Adjusted - Beach 4	0.47	0.09, 2.45	0.369	190
Final Adjusted - Beach 5	1.43	0.46, 4.43	0.533	191
Final Adjusted - Beach 6	1.62	0.49, 5.34	0.425	191

Table 51. Sore Throat vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.88	0.71, 1.08	0.215	27
Final Adjusted	0.89	0.69, 1.16	0.402	26
Final Adjusted - Age Category 1	0.74	0.33, 1.69	0.481	27
Final Adjusted - Age Category 2	1.21	0.57, 2.57	0.612	28
Final Adjusted - Age Category 3	0.82	0.51, 1.30	0.395	28
Final Adjusted - Age Category 4	0.90	0.61, 1.35	0.623	29
Final Adjusted - Beach 1	1.87	0.59, 5.95	0.292	29
Final Adjusted - Beach 2	0.63	0.31, 1.27	0.195	30
Final Adjusted - Beach 3	0.94	0.56, 1.55	0.795	30
Final Adjusted - Beach 4	0.83	0.38, 1.78	0.626	31
Final Adjusted - Beach 5	1.03	0.57, 1.83	0.932	31
Final Adjusted - Beach 6	0.73	0.37, 1.43	0.358	32

Table 52. Sore Throat vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.84	0.59, 1.19	0.321	194
Final Adjusted	0.87	0.56, 1.34	0.523	193
Final Adjusted - Age Category 1	0.81	0.26, 2.50	0.717	194
Final Adjusted - Age Category 2	1.03	0.42, 2.52	0.945	195
Final Adjusted - Age Category 3	0.90	0.38, 2.10	0.803	195
Final Adjusted - Age Category 4	0.69	0.25, 1.86	0.462	196
Final Adjusted - Beach 1	0.89	0.08, 10.46	0.928	197
Final Adjusted - Beach 2	0.32	0.07, 1.50	0.150	197
Final Adjusted - Beach 3	1.08	0.53, 2.19	0.840	198
Final Adjusted - Beach 4	0.83	0.24, 2.88	0.766	199
Final Adjusted - Beach 5	1.1	0.41, 2.94	0.843	199
Final Adjusted - Beach 6	0.82	0.19, 3.56	0.794	200

EAR SYMPTOMS vs WATER EXPOSURE

Page Numbers refer to pages in output "earswimonly.doc"

QA completed 1/10/05 by C. Wright

Table 53. Earache vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.27	0.94, 1.72	0.125	3
Final Adjusted	0.96	0.65, 1.44	0.862	2
Final Adjusted - Age Category 1	0.86	0.31, 2.39	0.776	3
Final Adjusted - Age Category 2	1.14	0.37, 3.49	0.815	4
Final Adjusted - Age Category 3	0.62	0.30, 1.25	0.181	5
Final Adjusted - Age Category 4	1.47	0.73, 2.96	0.274	5
Final Adjusted - Beach 1	2.22	0.41, 12.15	0.357	6
Final Adjusted - Beach 2	1.10	0.37, 3.24	0.869	7
Final Adjusted - Beach 3	0.64	0.31, 1.34	0.237	8
Final Adjusted - Beach 4	1.21	0.34, 4.28	0.767	8
Final Adjusted - Beach 5	1.02	0.41, 2.57	0.960	9
Final Adjusted - Beach 6	0.83	0.27, 2.53	0.737	10

Table 54. Earache vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.32	0.95, 1.83	0.103	33
Final Adjusted	0.98	0.62, 1.54	0.915	33
Final Adjusted - Age Category 1	0.67	0.21, 2.14	0.494	34
Final Adjusted - Age Category 2	0.98	0.31, 3.08	0.968	35
Final Adjusted - Age Category 3	0.74	0.34, 1.65	0.468	36
Final Adjusted - Age Category 4	2.08	0.90, 4.82	0.086	36
Final Adjusted - Beach 1	5.48	0.65, 46.31	0.118	37
Final Adjusted - Beach 2	0.93	0.28, 3.06	0.899	38
Final Adjusted - Beach 3	0.71	0.32, 1.57	0.397	39
Final Adjusted - Beach 4	1.64	0.38, 7.07	0.509	39
Final Adjusted - Beach 5	0.86	0.29, 2.57	0.790	40
Final Adjusted - Beach 6	0.88	0.23, 3.39	0.855	41

Table 55. Earache vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.31	0.95, 1.80	0.101	18
Final Adjusted	1.00	0.64, 1.56	0.987	18
Final Adjusted - Age Category 1	0.57	0.18, 1.79	0.332	19
Final Adjusted - Age Category 2	1.15	0.37, 3.60	0.808	20
Final Adjusted - Age Category 3	0.68	0.31, 1.48	0.328	21
Final Adjusted - Age Category 4	2.16	0.97, 4.83	0.061	22
Final Adjusted - Beach 1	2.53	0.25, 25.21	0.428	23
Final Adjusted - Beach 2	1.56	0.50, 4.92	0.446	23
Final Adjusted - Beach 3	0.73	0.33, 1.62	0.443	24
Final Adjusted - Beach 4	1.26	0.30, 5.38	0.755	25
Final Adjusted - Beach 5	0.81	0.28, 2.38	0.705	26
Final Adjusted - Beach 6	0.75	0.19, 2.90	0.679	27

Table 56. Earache vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.47	0.94, 2.30	0.088	71
Final Adjusted	1.10	0.63, 1.93	0.742	70
Final Adjusted - Age Category 1	0.25	0.03, 2.18	0.208	71
Final Adjusted - Age Category 2	2.09	0.65, 6.78	0.218	72
Final Adjusted - Age Category 3	0.78	0.26, 2.28	0.645	73
Final Adjusted - Age Category 4	0.89	0.18, 4.30	0.886	73
Final Adjusted - Beach 1	2.86	0.15, 52.89	0.481	74
Final Adjusted - Beach 2	0.89	0.19, 4.24	0.886	74
Final Adjusted - Beach 3	0.82	0.34, 2.02	0.673	75
Final Adjusted - Beach 4	1.83	0.36, 9.44	0.470	76
Final Adjusted - Beach 5	1.02	0.24, 4.24	0.983	76
Final Adjusted - Beach 6	0.90	0.09, 8.54	0.924	77

Table 57. Ear Discharge vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.60	0.31, 1.16	0.130	12
Final Adjusted	0.40	0.16, 1.01	0.053	11
Final Adjusted - Age Category 1	0.12	0.01, 1.66	0.114	12
Final Adjusted - Age Category 2	0.22	0.03, 1.59	0.133	13
Final Adjusted - Age Category 3	0.58	0.14, 2.37	0.452	13
Final Adjusted - Age Category 4	0.63	0.10, 3.86	0.620	14
Final Adjusted - Beach 1	tf*			14
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 58. Ear Discharge vs Water up to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.58	0.27, 1.23	0.155	43
Final Adjusted	0.44	0.18, 1.05	0.065	43
Final Adjusted - Age Category 1	*tf			
Final Adjusted - Age Category 2	tf			
Final Adjusted - Age Category 3	tf			
Final Adjusted - Age Category 4	tf			
Final Adjusted - Beach 1	tf			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

*Too few to analyze by age or Beach

Table 59. Ear Discharge vs Water on Face

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.61	0.30, 1.25	0.174	29
Final Adjusted	0.47	0.19, 1.13	0.090	28
Final Adjusted - Age Category 1	0.20	0.02, 2.39	0.202	29
Final Adjusted - Age Category 2	0.33	0.05, 2.24	0.257	30
Final Adjusted - Age Category 3	0.46	0.11, 1.98	0.300	30
Final Adjusted - Age Category 4	0.97	0.20, 4.64	0.971	31
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by Beach

Table 60. Ear Discharge vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.89	0.33, 2.37	0.811	79
Final Adjusted	0.82	0.22, 3.00	0.763	79
Final Adjusted - Age Category 1	tf*			79
Final Adjusted - Age Category 2	tf			
Final Adjusted - Age Category 3	tf			
Final Adjusted - Age Category 4	tf			
Final Adjusted - Beach 1	tf			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze by age or Beach

Eye Irritation vs Water Exposure

Page numbers refer to pages in output "eyeswimonly.doc"

QA completed 2/9/05 - C. Wright

Table 61. Eye Irritation vs Any Water Exposure

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.29	1.05, 1.59	0.017	3
Final Adjusted	1.19	0.93, 1.52	0.162	2
Final Adjusted - Age Category 1	0.53	0.27, 1.04	0.064	3
Final Adjusted - Age Category 2	1.84	0.94, 3.61	0.074	4
Final Adjusted - Age Category 3	1.21	0.81, 1.82	0.345	4
Final Adjusted - Age Category 4	1.23	0.80, 1.88	0.341	5
Final Adjusted - Beach 1	4.20	1.15, 15.34	0.030**	5
Final Adjusted - Beach 2	2.41	1.19, 4.89	0.014**	6
Final Adjusted - Beach 3	1.25	0.79, 1.98	0.333	6
Final Adjusted - Beach 4	0.84	0.46, 1.54	0.567	7
Final Adjusted - Beach 5	1.67	0.90, 3.10	0.107	7
Final Adjusted - Beach 6	0.58	0.31, 1.10	0.096	8

** p<0.05

Table 62. Eye Irritation vs Water to Shoulders

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.44	1.15, 1.80	0.002	18
Final Adjusted	1.32	1.00, 1.74	0.054	18
Final Adjusted - Age Category 1	0.77	0.37, 1.57	0.466	19
Final Adjusted - Age Category 2	1.69	0.86, 3.33	0.131	19
Final Adjusted - Age Category 3	1.46	0.92, 2.32	0.113	20
Final Adjusted - Age Category 4	1.26	0.71, 2.21	0.428	20
Final Adjusted - Beach 1	4.08	0.86, 19.28	0.076	21
Final Adjusted - Beach 2	2.25	1.02, 4.95	0.044**	21
Final Adjusted - Beach 3	1.30	0.80, 2.13	0.294	22
Final Adjusted - Beach 4	1.01	0.49, 2.10	0.976	22
Final Adjusted - Beach 5	2.01	0.95, 4.23	0.067	23
Final Adjusted - Beach 6	0.75	0.36, 1.57	0.444	24

** p<0.05

Table 63. Eye Irritation vs Face Under Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.42	1.13, 1.78	0.003	26
Final Adjusted	1.34	1.01, 1.77	0.039**	25
Final Adjusted - Age Category 1	0.62	0.30, 1.30	0.207	26
Final Adjusted - Age Category 2	1.90	0.96, 3.75	0.066	27
Final Adjusted - Age Category 3	1.32	0.83, 2.11	0.241	27
Final Adjusted - Age Category 4	1.35	0.78, 2.32	0.281	28
Final Adjusted - Beach 1	3.36	0.65, 17.30	0.147	28
Final Adjusted - Beach 2	2.88	1.33, 6.22	0.007**	29
Final Adjusted - Beach 3	1.33	0.81, 2.18	0.266	29
Final Adjusted - Beach 4	1.22	0.59, 2.53	0.581	30
Final Adjusted - Beach 5	1.99	0.99, 4.01	0.053	30
Final Adjusted - Beach 6	0.60	0.28, 1.30	0.193	31

** p<0.05

Table 64. Eye Irritation vs Swallow Water

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.85	1.39, 2.47	0.000	40
Final Adjusted	1.69	1.23, 2.30	0.001**	40
Final Adjusted - Age Category 1	0.89	0.41, 1.92	0.768	41
Final Adjusted - Age Category 2	2.87	1.44, 5.71	0.003**	41
Final Adjusted - Age Category 3	1.48	0.82, 2.67	0.196	42
Final Adjusted - Age Category 4	1.53	0.72, 3.25	0.271	42
Final Adjusted - Beach 1	4.02	0.68, 23.61	0.124	43
Final Adjusted - Beach 2	5.55	2.55, 12.05	0.000**	43
Final Adjusted - Beach 3	1.69	1.01, 2.81	0.046**	44
Final Adjusted - Beach 4	0.47	0.15, 1.45	0.187	44
Final Adjusted - Beach 5	2.07	0.86, 4.96	0.103	44
Final Adjusted - Beach 6	1.15	0.45, 2.97	0.772	45

** p<0.05

Appendix 3

Health Outcomes vs. Water Quality Indicator Water Exposures Analyses

Age Categories

- 1 = 0 – 5 years
- 2 = 5 – 12 years
- 3 = 12 – 30 years
- 4 = 30 years and older

Mission Bay Beaches

- 1 = Visitor's Center
- 2 = Tecalote Shores
- 3 = Leisure Lagoon
- 4 = De Anza Cove
- 5 = Crown Point
- 6 = Bonita Cove

Health Outcomes Analyzed

Gastrointestinal Outcomes (Tables 1 – 107):

- HCGI1: xxDefinition
- HCGI2: xxDefinition
- Diarrhea
- Nausea
- Vomiting
- Cramps

Skin Outcomes (Tables 108 – 126):

- Skin Rash

Respiratory Outcomes (Tables 127 – 198):

- SRD: xxDefinition
- Cough
- Fever
- Sore Throat

Eye Outcomes (Tables 199 – 234):

- Eye Irritation

Ear Outcomes (Tables 235 – 252):

- Earache
- Ear Discharge

Water Exposures Analyzed (only selected exposures are presented in this appendix)

Any Water Exposure

Water up to Shoulder

Water on Face

Face Under Water

Water in Mouth

Swallow Water

Indicator Variable List and Definitions (only selected exposures are presented in this appendix):

Indicator Variable Name	Definition
lg_mean_beach_entero	natural log geometric mean for enterococcus – beach level
lg_mean_station_entero	natural log geometric mean for enterococcus – station level
lresult_entero_comp	natural log result enterococcus – composite sample
lmax_beach_entero	natural log maximum enterococcus – beach level
lmax_station_entero	natural log maximum enterococcus – station level
mlresult_entero_time	enterococcus, averaged by time of swimming (mean natural log)
lg_mean_beach_fecalcoli	natural log geometric mean fecal coliform – beach level
lg_mean_statio_fecalcoli	natural log geometric mean fecal coliform – station level
lmax_beach_fecalcoli	natural log maximum fecal coliform – beach level
lmax_station_fecalcoli	natural log maximum fecal coliform – station level
mlresult_fecalcoli_time	fecal coliform, averaged by time of swimming (mean natural log)
lg_mean_beach_totalcoli	natural log geometric mean total coliform – beach level
lg_mean_station_totalcoli	natural log geometric mean total coliform – station level
lmax_beach_totalcoli	natural log maximum total coliform – beach level
lmax_station_totalcoli	natrual log maximum total coliform – station level
mlresult_totalcoli_time	total coliform, averaged by time of swimming (mean natural log)
m_lentpcr_beach	natural log enterococcus PCR - beach level (modified)
m_lentpcr_station	natural log etnerococcus PCR – station level (updated)
m_lbactpcr_beach	natural log bacteriodes PCR – beach level (modified)
m_lbactpcr_station	natural log bacteriodes PCR – station level (updated)
lresult_ecoli_comp	log result ecoli – composite sample
result_phage_m	result male-specific phage
lresult_phage_m	log result male-specific phage
result_phage_s	result somatic phage
lresult_phage_s	log result somatic phage

mophagecat	xx
mophagecat2	xx
result_104_entero_comp	regulatory cutoff of 104 for enterococcus composite sample
result_35_entero_comp	regulatory cutoff of 35 for enterococcus composite sample
g_mean_beach_entero35	Geometric mean enterococcus (regulatory cutoff of 35) – beach level
g_mean_beach_entero104	Geometric mean enterococcus (regulatory cutoff of 104) – beach level
max_beach_entero35	Maximum enterococcus (regulatory cutoff of 35) – beach level
max_beach_entero104	Maximum enterococcus (regulatory cutoff of 104) – beach level
g_mean_station_entero35	Geometric mean enterococcus (regulatory cutoff of 35) – station level
g_mean_beach_entero104	Geometric mean enterococcus (regulatory cutoff of 104) – station level
totfeccat	xx

GASTROINTESTINAL SYMPTOMS

Page numbers refer to analysis output "backselecthcgj.doc"

QA completed by K. Melody and C. Wright 3/9/05

Table 1. Outcome: HCGI1

Water Exposure: Water

Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.40	0.18, 0.88	0.024	11
Final Adjusted	0.35	0.15, 0.79	0.012	10
Final Adjusted - Age Category 1	0.15	0.03, 0.73	0.019	11
Final Adjusted - Age Category 2	0.74	0.22, 2.5	0.635	12
Final Adjusted - Age Category 3	0.19	0.02, 1.77	0.145	12
Final Adjusted - Age Category 4	0.29	0.03, 2.8	0.285	12
Final Adjusted - Beach 1	1.04	0.01, 156.77	0.988	13
Final Adjusted - Beach 2	0.20	0.01, 4.3	0.306	13
Final Adjusted - Beach 3	0.59	0.18, 1.93	0.384	14
Final Adjusted - Beach 4	0.09	0.00, 1.88	0.122	14
Final Adjusted - Beach 5	0.34	0.02, 7.18	0.491	14
Final Adjusted - Beach 6	0.15	0.02, 1.1	0.063	15

Table 2. Outcome: HCGI1

Water Exposure: Water

Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.62	0.37, 1.03	0.063	34
Final Adjusted	No change			
Unadjusted - Age Category 1	0.37	0.15, 0.91	0.030	35
Unadjusted - Age Category 2	1.12	0.48, 2.57	0.796	35
Unadjusted - Age Category 3	0.48	0.13, 1.72	0.262	35
Unadjusted - Age Category 4	0.55	0.15, 2.08	0.379	36
Unadjusted - Beach 1	3.14	0.13, 78.16	0.485	36
Unadjusted - Beach 2	1.10	0.22, 5.52	0.904	37
Unadjusted - Beach 3	0.58	0.26, 1.32	0.194	37
Unadjusted - Beach 4	0.31	0.05, 1.76	0.186	37
Unadjusted - Beach 5	0.57	0.14, 2.38	0.444	38
Unadjusted - Beach 6	0.56	0.15, 2.20	0.410	38

Table 3. Outcome: HCGI1
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.58	0.23, 1.47	0.253	3
Final Adjusted	0.76	0.28, 2.04	0.589	3
Final Adjusted - Age Category 1	0.73	0.14, 3.93	0.718	4
Final Adjusted - Age Category 2	1.12	0.22, 5.65	0.892	4
Final Adjusted - Age Category 3	0.40	0.03, 4.67	0.468	5
Final Adjusted - Age Category 4	0.45	0.02, 8.33	0.590	6
Final Adjusted - Beach 1	0.69	0.00, 491.51	0.913	6
Final Adjusted - Beach 2	0.59	0.04, 7.99	0.691	7
Final Adjusted - Beach 3	2.28	0.38, 13.61	0.367	7
Final Adjusted - Beach 4	0.03	0.00, 1.84	0.094	8
Final Adjusted - Beach 5	0.28	0.00, 45.20	0.623	8
Final Adjusted - Beach 6	0.95	0.07, 13.37	0.968	9

Table 4. Outcome: HCGI1
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.91	0.64, 1.29	0.604	25
Final Adjusted	1.00	0.68, 1.47	0.998	24
Final Adjusted - Age Category 1	0.98	0.52, 1.86	0.954	25
Final Adjusted - Age Category 2	1.41	0.75, 2.62	0.283	26
Final Adjusted - Age Category 3	0.61	0.21, 1.79	0.369	27
Final Adjusted - Age Category 4	0.70	0.18, 2.75	0.607	28
Final Adjusted - Beach 1	15.04	0.10, 2153.29	0.285	29
Final Adjusted - Beach 2	2.81	0.78, 10.13	0.114	30
Final Adjusted - Beach 3	0.98	0.54, 1.79	0.956	30
Final Adjusted - Beach 4	0.17	0.02, 1.51	0.111	31
Final Adjusted - Beach 5	0.97	0.24, 3.96	0.969	32
Final Adjusted - Beach 6	0.73	0.11, 4.70	0.741	33

Table 5. Outcome: HCGI1
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.37	0.19, 0.71	0.003	40
Final Adjusted	No Change			
Unadjusted - Age Category 1	0.18	0.05, 0.62	0.007	40
Unadjusted - Age Category 2	0.96	0.36, 2.58	0.940	40
Unadjusted - Age Category 3	0.32	0.06, 1.75	0.189	41
Unadjusted - Age Category 4	0.11	0.01, 0.97	0.046	41
Unadjusted - Beach 1	0.08	0.00 ,7.39	0.271	42
Unadjusted - Beach 2	0.44	0.05, 3.75	0.450	42
Unadjusted - Beach 3	0.65	0.27, 1.57	0.338	42
Unadjusted - Beach 4	0.14	0.01, 1.57	0.110	43
Unadjusted - Beach 5	0.12	0.01, 2.53	0.172	43
Unadjusted - Beach 6	0.22	0.04, 1.01	0.065	44

Table 6. Outcome: HCGI1
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.19	1.02, 1.40	0.032	853
Final Adjusted	1.26	1.06, 1.48	0.008	853
Final Adjusted - Age Category 1	1.55	1.19, 2.01	0.001	854
Final Adjusted - Age Category 2	1.23	0.88, 1.72	0.222	854
Final Adjusted - Age Category 3	0.53	0.01, 22.29	0.742	855
Final Adjusted - Age Category 4	0.00	.	.	855
Final Adjusted - Beach 1	0.00	.	.	856
Final Adjusted - Beach 2	21.67	0.00, 7.6e5	0.565	856
Final Adjusted - Beach 3	0.00	.	.	857
Final Adjusted - Beach 4	tf*			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

*too few to analyze

Table 7. Outcome: HCG11
Water Exposure: Water
Indicator: Iresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.05	1.00, 1.11	0.064	859
Final Adjusted	1.07	1.01, 1.13	0.018	859
Final Adjusted - Age Category 1	1.13	1.04, 1.23	0.003	860
Final Adjusted - Age Category 2	1.08	0.96, 1.21	0.198	860
Final Adjusted - Age Category 3	0.91	0.54, 1.51	0.706	860
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	861
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	861
Final Adjusted - Beach 2	1.52	0.48, 4.79	0.472	862
Final Adjusted - Beach 3	0.26	0.25, 0.26	0.000	862
Final Adjusted - Beach 4	0.99	0.95, 1.03	0.520	863
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	863
Final Adjusted - Beach 6	1.08	1.02, 1.14	0.012	864

Table 8. Outcome: HCG11
Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.00	0.395	866
Final Adjusted	1.00	0.99, 1.00	0.279	865
Final Adjusted - Age Category 1	0.99	0.97, 1.01	0.273	866
Final Adjusted - Age Category 2	1.00	0.99, 1.01	0.482	867
Final Adjusted - Age Category 3	0.99	0.97, 1.01	0.514	867
Final Adjusted - Age Category 4	0.96	0.90, 1.02	0.236	868
Final Adjusted - Beach 1	0.00	.	.	868
Final Adjusted - Beach 2	0.98	0.93, 1.03	0.334	869
Final Adjusted - Beach 3	0.99	0.98, 1.01	0.399	869
Final Adjusted - Beach 4	1.00	0.99, 1.01	0.872	870
Final Adjusted - Beach 5	0.98	0.94, 1.01	0.212	870
Final Adjusted - Beach 6	1.00	0.98, 1.02	0.920	871

Table 9. Outcome: HCGI1
Water Exposure: Water
Indicator: Iresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.98, 1.00	0.176	873
Final Adjusted	0.99	0.98, 1.00	0.098	872
Final Adjusted - Age Category 1	0.98	0.96, 1.00	0.102	873
Final Adjusted - Age Category 2	1.01	0.99, 1.03	0.301	874
Final Adjusted - Age Category 3	0.97	0.94, 1.00	0.085	874
Final Adjusted - Age Category 4	0.97	0.94, 1.01	0.176	875
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	875
Final Adjusted - Beach 2	0.99	0.95, 1.03	0.601	876
Final Adjusted - Beach 3	0.98	0.96, 1.00	0.024	876
Final Adjusted - Beach 4	1.02	0.98, 1.05	0.324	877
Final Adjusted - Beach 5	0.98	0.95, 1.02	0.344	877
Final Adjusted - Beach 6	0.99	0.97, 1.02	0.737	878

Table 10. Outcome: HCGI1
Water Exposure: Water Swallow
Indicator: Ig_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.41	0.09, 1.92	0.260	1434
Final Adjusted	0.31	0.06, 1.69	0.178	1434
Final Adjusted - Age Category 1	0.04	0.00, 2.48	0.124	1435
Final Adjusted - Age Category 2	0.64	0.07, 5.92	0.693	1436
Final Adjusted - Age Category 3	0.25	0.01, 7.94	0.430	1436
Final Adjusted - Age Category 4	1.24	0.01, 113.73	0.927	1437
Final Adjusted - Beach 1	144.03	0.00, 2.09e08	0.492	1437
Final Adjusted - Beach 2	0.80	0.00, 391.56	0.944	1438
Final Adjusted - Beach 3	0.19	0.01, 2.76	0.224	1438
Final Adjusted - Beach 4	10.22	0.05, 2293.92	0.400	1438
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	1439
Final Adjusted - Beach 6	0.15	0.00, 13.04	0.403	1439

Table 11. Outcome: HCGI1**Water Exposure: Water Swallow****Indicator: lmax_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.65	0.25, 1.68	0.369	1553
Final Adjusted	0.58	0.20, 1.65	0.308	1553
Final Adjusted - Age Category 1	0.18	0.02, 1.87	0.150	1554
Final Adjusted - Age Category 2	1.05	0.27, 4.14	0.940	1554
Final Adjusted - Age Category 3	0.40	0.05, 3.33	0.396	1555
Final Adjusted - Age Category 4	0.94	0.01, 131.91	0.981	1555
Final Adjusted - Beach 1	6.21	0.00, 45140.61	0.687	1556
Final Adjusted - Beach 2	0.49	0.01, 40.22	0.752	1556
Final Adjusted - Beach 3	0.30	0.05, 1.81	0.191	1557
Final Adjusted - Beach 4	6.63	0.07, 640.38	0.417	1557
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	1558
Final Adjusted - Beach 6	0.75	0.04, 15.38	0.852	1559

Table 12. Outcome: HCGI1**Water Exposure: Water Swallow****Indicator: lg_mean_Beach_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.08	0.17, 6.88	0.939	1400
Final Adjusted	1.64	0.23, 11.77	0.622	1399
Final Adjusted - Age Category 1	1.45	0.03, 70.54	0.852	1400
Final Adjusted - Age Category 2	1.74	0.11, 28.94	0.698	1401
Final Adjusted - Age Category 3	2.88	0.04, 235.92	0.637	1401
Final Adjusted - Age Category 4	0.00	0.00, 4301.94	0.431	1402
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	1402
Final Adjusted - Beach 2	1.01	0.00, 459.03	0.998	1403
Final Adjusted - Beach 3	6.75	0.22, 205.87	0.273	1403
Final Adjusted - Beach 4	0.17	0.00, 732.92	0.677	1404
Final Adjusted - Beach 5	0.00	0.00, 2090.12	0.291	1404
Final Adjusted - Beach 6	0.22	0.00, 70.64	0.605	1405

Table 13. Outcome: HCGI1**Water Exposure: Water Swallow****Indicator: lmax_Beach_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.07	0.54, 2.10	0.847	1520
Final Adjusted	1.10	0.54, 2.24	0.801	1519
Final Adjusted - Age Category 1	1.10	0.27, 4.13	0.933	1520
Final Adjusted - Age Category 2	1.35	0.45, 4.06	0.591	1521
Final Adjusted - Age Category 3	0.84	0.18, 3.93	0.820	1521
Final Adjusted - Age Category 4	0.04	0.00, 91.64	0.414	1522
Final Adjusted - Beach 1	2237.93	0.00, 1.56e12	0.458	1522
Final Adjusted - Beach 2	0.82	0.04, 16.93	0.898	1523
Final Adjusted - Beach 3	1.31	0.49, 3.55	0.592	1523
Final Adjusted - Beach 4	2.15	0.02, 246.01	0.752	1524
Final Adjusted - Beach 5	0.40	0.02, 7.10	0.533	1524
Final Adjusted - Beach 6	0.22	0.00, 13.57	0.470	1525

Table 14. Outcome: HCGI1**Water Exposure: Water Swallow****Indicator: mlresult_entero_time**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.34	0.09, 1.25	0.104	1588
Final Adjusted	0.26	0.07, 1.05	0.058	1588
Final Adjusted - Age Category 1	0.07	0.00, 1.74	0.106	1589
Final Adjusted - Age Category 2	0.60	0.09, 3.81	0.588	1589
Final Adjusted - Age Category 3	0.22	0.01, 4.28	0.319	1590
Final Adjusted - Age Category 4	0.06	0.00, 127.00	0.467	1590
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	1591
Final Adjusted - Beach 2	0.27	0.00, 42.20	0.608	1591
Final Adjusted - Beach 3	0.30	0.05, 1.93	0.207	1592
Final Adjusted - Beach 4	2.16	0.03, 185.40	0.735	1592
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	1593
Final Adjusted - Beach 6	0.23	0.01, 6.41	0.387	1593

Table 15. Outcome: HCGI1
Water Exposure: Water Face Under
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.18	0.00, 117.71	0.607	4312
Final Adjusted	0.23	0.00, 48.77	0.590	4311
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	4312
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	4313
Final Adjusted - Age Category 3	0.78	0.08, 7.42	0.827	4313
Final Adjusted - Age Category 4	0.00	.	.	4314
Final Adjusted - Beach 1	0.00	.	.	4314
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze				

Table 16. Outcome: HCGI1
Water Exposure: Water Swallow
Indicator: lresult_phage_m

Not Analyzed

Model	OR exposure	CI	p-value	Page No.
Unadjusted				
Final Adjusted				
Final Adjusted - Age Category 1				
Final Adjusted - Age Category 2				
Final Adjusted - Age Category 3				
Final Adjusted - Age Category 4				
Final Adjusted - Beach 1				
Final Adjusted - Beach 2				
Final Adjusted - Beach 3				
Final Adjusted - Beach 4				
Final Adjusted - Beach 5				
Final Adjusted - Beach 6				

Table 17. Outcome: HCGI1

Water Exposure: Water Swallow

Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.00	0.362	4330
Final Adjusted	0.99	0.98, 1.01	0.323	4329
Final Adjusted - Age Category 1	1.00	0.98, 1.01	0.673	4330
Final Adjusted - Age Category 2	0.99	0.98, 1.01	0.538	4331
Final Adjusted - Age Category 3	1.00	0.97, 1.02	0.704	4331
Final Adjusted - Age Category 4	0.85	0.59, 1.23	0.392	4332
Final Adjusted - Beach 1	0.00	.	.	4332
Final Adjusted - Beach 2	0.96	0.87, 1.06	0.415	4333
Final Adjusted - Beach 3	0.99	0.97, 1.01	0.262	4334
Final Adjusted - Beach 4	1.00	0.99, 1.01	0.994	4334
Final Adjusted - Beach 5	0.97	0.92, 1.03	0.344	4335
Final Adjusted - Beach 6	1.00	0.98, 1.03	0.826	4335

Table 18. Outcome: HCGI1

Water Exposure: Water Swallow

Indicator: Iresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.34	0.09, 1.25	0.104	1588
Final Adjusted	0.26	0.07, 1.05	0.058	1588
Final Adjusted - Age Category 1	0.07	0.00, 1.74	0.106	1589
Final Adjusted - Age Category 2	0.60	0.09, 3.81	0.588	1589
Final Adjusted - Age Category 3	0.22	0.01, 4.28	0.319	1590
Final Adjusted - Age Category 4	0.06	0.00, 127.00	0.467	1590
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	1591
Final Adjusted - Beach 2	0.27	0.00, 42.20	0.608	1591
Final Adjusted - Beach 3	0.30	0.05, 1.93	0.207	1592
Final Adjusted - Beach 4	2.16	0.03, 185.40	0.735	1592
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	1593
Final Adjusted - Beach 6	0.23	0.01, 6.41	0.387	1593

Table 19. Outcome: HCGI2
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.32	0.08, 1.28	0.107	52
Final Adjusted	0.23	0.05, 0.98	0.048	51
Final Adjusted - Age Category 1	0.53	0.08, 3.51	0.511	52
Final Adjusted - Age Category 2	0.17	0.01, 2.75	0.210	53
Final Adjusted - Age Category 3	0.05	0.00, 10.75	0.272	53
Final Adjusted - Age Category 4	0.01	0.00, 7.13	0.182	54
Final Adjusted - Beach 1	16.93	0.00, 2342624	0.640	54
Final Adjusted - Beach 2	0.36	0.01, 20.16	0.616	55
Final Adjusted - Beach 3	0.09	0.01, 1.44	0.089	55
Final Adjusted - Beach 4	0.52	0.00, 148.21	0.821	56
Final Adjusted - Beach 5	0.15	0.00, 23.59	0.458	56
Final Adjusted - Beach 6	0.55	0.04, 7.78	0.656	56

Table 20. Outcome: HCGI2
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.49	0.21, 1.16	0.106	71
Final Adjusted	0.44	0.18, 1.07	0.071	70
Final Adjusted - Age Category 1	0.58	0.17, 2.02	0.397	71
Final Adjusted - Age Category 2	0.77	0.16, 3.68	0.744	72
Final Adjusted - Age Category 3	0.14	0.01, 2.66	0.192	72
Final Adjusted - Age Category 4	0.06	0.00, 1.54	0.090	73
Final Adjusted - Beach 1	1.47	0.00, 1777.34	0.915	73
Final Adjusted - Beach 2	0.69	0.06, 8.31	0.772	74
Final Adjusted - Beach 3	0.31	0.07, 1.48	0.143	74
Final Adjusted - Beach 4	0.74	0.01, 37.37	0.878	75
Final Adjusted - Beach 5	0.25	0.02, 3.25	0.292	75
Final Adjusted - Beach 6	1.26	0.15, 10.32	0.832	75

Table 21. Outcome: HCGI2
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.90	0.19, 4.21	0.889	46
Final Adjusted	0.97	0.18, 5.23	0.976	45
Final Adjusted - Age Category 1	1.99	0.19, 20.92	0.567	47
Final Adjusted - Age Category 2	1.96	0.10, 38.98	0.660	48
Final Adjusted - Age Category 3	0.00	0.00, 3.25	0.092	48
Final Adjusted - Age Category 4	0.00	0.00, 9.81	0.148	49
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze by Beach				

Table 22. Outcome: HCGI2
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.90	0.50, 1.62	0.723	65
Final Adjusted	1.02	0.54, 1.93	0.960	65
Final Adjusted - Age Category 1	1.25	0.54, 2.92	0.605	66
Final Adjusted - Age Category 2	1.31	0.46, 3.69	0.611	67
Final Adjusted - Age Category 3	0.02	0.00, 0.61	0.025	67
Final Adjusted - Age Category 4	0.25	0.01, 7.72	0.430	68
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze by Beach				

Table 23. Outcome: HCGI2
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.27	0.08, 0.87	0.028	77
Final Adjusted	No Change			
Unadjusted - Age Category 1	0.35	0.07, 1.71	0.195	77
Unadjusted - Age Category 2	0.35	0.05, 2.80	0.325	78
Unadjusted - Age Category 3	0.31	0.01, 13.87	0.544	78
Unadjusted - Age Category 4	0.01	0.00, 5.64	0.162	79
Unadjusted - Beach 1	tf*			
Unadjusted - Beach 2	tf			
Unadjusted - Beach 3	tf			
Unadjusted - Beach 4	tf			
Unadjusted - Beach 5	tf			
Unadjusted - Beach 6	tf			
* Too few to analyze by Beach				

Table 24. Outcome: HCGI2
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.28	1.02, 1.60	0.032	880
Final Adjusted	1.43	1.13, 1.82	0.003	879
Final Adjusted - Age Category 1	1.54	1.05, 2.25	0.027	880
Final Adjusted - Age Category 2	1.53	1.07, 2.19	0.021	881
Final Adjusted - Age Category 3	0.94	0.12, 7.27	0.949	881
Final Adjusted - Age Category 4	0.00	.	.	882
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze by Beach				

Table 25. Outcome: HCGI2

Water Exposure: Water

Indicator: Iresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.08	1.00, 1.16	0.050	885
Final Adjusted	1.11	1.03, 1.21	0.007	884
Final Adjusted - Age Category 1	1.12	0.99, 1.27	0.073	885
Final Adjusted - Age Category 2	1.17	1.04, 1.32	0.011	886
Final Adjusted - Age Category 3	1.03	0.70, 1.51	0.873	886
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	887
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
*Too few to analyze by Beach				

Table 26. Outcome: HCGI2

Water Exposure: Water

Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.97, 1.01	0.206	889
Final Adjusted	0.99	0.97, 1.01	0.272	889
Final Adjusted - Age Category 1	0.99	0.97, 1.02	0.609	890
Final Adjusted - Age Category 2	1.00	0.97, 1.03	0.822	890
Final Adjusted - Age Category 3	0.82	0.55, 1.22	0.332	891
Final Adjusted - Age Category 4	0.99	0.94, 1.04	0.649	891
Final Adjusted - Beach 1	0.00	.	.	892
Final Adjusted - Beach 2	0.96	0.86, 1.08	0.485	892
Final Adjusted - Beach 3	1.00	0.97, 1.02	0.697	893
Final Adjusted - Beach 4	0.96	0.78, 1.19	0.737	893
Final Adjusted - Beach 5	0.98	0.92, 1.03	0.374	893
Final Adjusted - Beach 6	1.00	0.97, 1.03	0.789	894

Table 27. Outcome: HCGI2
Water Exposure: Water
Indicator: Iresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.98	0.96, 1.00	0.097	895
Final Adjusted	No Change			
Final Adjusted - Age Category 1	0.98	0.95, 1.01	0.224	896
Unadjusted - Age Category 2	1.00	0.96, 1.04	0.861	896
Unadjusted - Age Category 3	0.93	0.83, 1.04	0.191	896
Unadjusted - Age Category 4	0.99	0.93, 1.04	0.663	897
Unadjusted - Beach 1	0.00	0.00, 0.00	0.000	897
Unadjusted - Beach 2	0.98	0.92, 1.04	0.550	898
Unadjusted - Beach 3	0.97	0.93, 1.01	0.149	898
Unadjusted - Beach 4	1.01	0.92, 1.10	0.901	898
Unadjusted - Beach 5	0.98	0.93, 1.02	0.356	899
Unadjusted - Beach 6	0.98	0.93, 1.03	0.508	899
All Numbers are Unadjusted				

Table 28. Outcome: HCGI2
Exposure: Swallow Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	6.60	0.00, 465600.8	0.740	1654
Final Adjusted	No Change			
Unadjusted - Age Category 1	0.00	0.00, 2.91	0.095	1654
Unadjusted - Age Category 2	0.40	0.01, 17.82	0.637	1655
Unadjusted - Age Category 3	0.81	0.01, 102.60	0.934	1655
Unadjusted - Age Category 4	1.90	0.01, 412.62	0.815	1656
Unadjusted - Beach 1	36.78	0.00, 2.06e07	0.594	1656
Unadjusted - Beach 2	0.00	0.00, 8483465	0.364	1657
Unadjusted - Beach 3	0.03	0.00, 4.98	0.178	1657
Unadjusted - Beach 4	2.00	0.00, 5529.18	0.864	1658
Unadjusted - Beach 5	0.00	0.00, 0.00	0.000	1658
Unadjusted - Beach 6	0.62	0.00, 104.95	0.856	1658
All numbers are Unadjusted				

Table 29. Outcome: HCGI2
Exposure: Swallow Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	37.70	0.01, 168614.5	0.397	1755
Final Adjusted	No Change			
Unadjusted - Age Category 1	0.03	0.00, 0.92	0.044	1756
Unadjusted - Age Category 2	1.12	0.13, 9.52	0.916	1756
Unadjusted - Age Category 3	0.27	0.00, 17.82	0.544	1757
Unadjusted - Age Category 4	0.94	0.01, 127.69	0.982	1757
Unadjusted - Beach 1	1.80	0.00, 11724.49	0.896	1757
Unadjusted - Beach 2	0.02	0.00, 145.29	0.389	1758
Unadjusted - Beach 3	0.17	0.01, 2.59	0.201	1758
Unadjusted - Beach 4	0.89	0.00, 336.25	0.970	1759
Unadjusted - Beach 5	0.00	0.00, 0.00	0.000	1759
Unadjusted - Beach 6	0.68	0.01, 55.27	0.863	1780
All numbers are Unadjusted				

Table 30. Outcome: HCGI2
Exposure: Swallow Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.34	0.07, 25.14	0.843	1618
Final Adjusted	1.65	0.09, 31.24	0.738	1618
Final Adjusted - Age Category 1	0.34	0.00, 52.99	0.677	1619
Final Adjusted - Age Category 2	17.80	0.22, 1448.74	0.200	1620
Final Adjusted - Age Category 3	0.24	0.00, 875.76	0.734	1620
Final Adjusted - Age Category 4	0.00	0.00, 11610.57	0.395	1621
Final Adjusted - Beach 1	1.41E+75	0.00, .	0.977	1622
Final Adjusted - Beach 2	2.56	0.00, 223479.8	0.871	1622
Final Adjusted - Beach 3	3.68	0.02, 543.29	0.609	1623
Final Adjusted - Beach 4	0.00	0.00, 3838.71	0.368	1624
Final Adjusted - Beach 5	0.00	0.00, 2.71e08	0.400	1624
Final Adjusted - Beach 6	3.71	0.00, 18252.38	0.763	1625

Table 31. Outcome: HCGI2
Exposure: Swallow Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.67	0.21, 2.10	0.489	1723
Final Adjusted	0.70	0.23, 2.19	0.544	1722
Final Adjusted - Age Category 1	0.42	0.06, 3.26	0.410	1723
Final Adjusted - Age Category 2	1.91	0.35, 10.30	0.453	1724
Final Adjusted - Age Category 3	0.30	0.01, 6.82	0.450	1725
Final Adjusted - Age Category 4	0.02	0.00, 93.11	0.360	1725
Final Adjusted - Beach 1	72590.80	0.00, 7.66e18	0.497	1726
Final Adjusted - Beach 2	1.26	0.00, 396.95	0.938	1726
Final Adjusted - Beach 3	0.71	0.13, 3.88	0.694	1727
Final Adjusted - Beach 4	0.18	0.00, 52.59	0.552	1727
Final Adjusted - Beach 5	0.15	0.00, 21.55	0.455	1728
Final Adjusted - Beach 6	1.20	0.00, 1218.24	0.959	1728

Table 32. Outcome: HCGI2
Exposure: Swallow Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	10.04	0.00, 66893.73	0.608	1775
Final Adjusted	No Change			
Unadjusted - Age Category 1	0.00	0.00, 0.00	0.000	1776
Unadjusted - Age Category 2	0.47	0.02, 9.76	0.627	1776
Unadjusted - Age Category 3	1.51	0.06, 37.59	0.803	1777
Unadjusted - Age Category 4	0.45	0.00, 661.51	0.830	1777
Unadjusted - Beach 1	tf*			
Unadjusted - Beach 2	tf			
Unadjusted - Beach 3	tf			
Unadjusted - Beach 4	tf			
Unadjusted - Beach 5	tf			
Unadjusted - Beach 6	tf			
* Too few to analyze All numbers are Unadjusted				

Table 33. Outcome: HCGI2
Exposure: Water_face_Under
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.56	0.02, 12.54	0.712	4348
Final Adjusted	0.66	0.03, 12.63	0.785	4348
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	4349
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	4350
Final Adjusted - Age Category 3	1.06	0.15, 7.78	0.951	4350
Final Adjusted - Age Category 4	0.00	.	.	4351
Final Adjusted - Beach 1	tf*			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze by Beach				

Table 34. Outcome: HCGI2
Exposure: Swallow Water Not Analyzed
Indicator: lresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted				
Final Adjusted				
Final Adjusted - Age Category 1				
Final Adjusted - Age Category 2				
Final Adjusted - Age Category 3				
Final Adjusted - Age Category 4				
Final Adjusted - Beach 1				
Final Adjusted - Beach 2				
Final Adjusted - Beach 3				
Final Adjusted - Beach 4				
Final Adjusted - Beach 5				
Final Adjusted - Beach 6				

Table 35. Outcome: HCGI2
Exposure: Swallow Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.97, 1.01	0.386	4368
Final Adjusted	0.99	0.98, 1.01	0.444	4368
Final Adjusted - Age Category 1	1.00	0.98, 1.02	0.874	4369
Final Adjusted - Age Category 2	1.00	0.97, 1.03	0.932	4369
Final Adjusted - Age Category 3	0.17	0.00, 82.85	0.577	4370
Final Adjusted - Age Category 4	0.92	0.61, 1.40	0.712	4370
Final Adjusted - Beach 1	0.00	.	.	4371
Final Adjusted - Beach 2	0.00	0.00, 0.00	0.000	4371
Final Adjusted - Beach 3	0.99	0.97, 1.02	0.651	4372
Final Adjusted - Beach 4	0.96	0.72, 1.29	0.804	4372
Final Adjusted - Beach 5	0.95	0.84, 1.06	0.361	4373
Final Adjusted - Beach 6	1.01	0.98, 1.04	0.602	4373

Table 36. Outcome: HCGI2
Exposure: Face Under Water Not Analyzed
Indicator: lresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted				
Final Adjusted				
Final Adjusted - Age Category 1				
Final Adjusted - Age Category 2				
Final Adjusted - Age Category 3				
Final Adjusted - Age Category 4				
Final Adjusted - Beach 1				
Final Adjusted - Beach 2				
Final Adjusted - Beach 3				
Final Adjusted - Beach 4				
Final Adjusted - Beach 5				
Final Adjusted - Beach 6				

Table 37. Outcome: Diarrhea
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.60	0.33, 1.12	0.110	89
Final Adjusted	0.57	0.30, 1.07	0.078	89
Final Adjusted - Age Category 1	0.10	0.02, 0.59	0.011	90
Final Adjusted - Age Category 2	0.66	0.21, 2.02	0.464	90
Final Adjusted - Age Category 3	1.42	0.41, 4.89	0.577	90
Final Adjusted - Age Category 4	0.66	0.21, 2.07	0.478	91
Final Adjusted - Beach 1	0.11	0.00, 8.41	0.314	91
Final Adjusted - Beach 2	0.27	0.03, 2.88	0.279	91
Final Adjusted - Beach 3	1.11	0.41, 3.00	0.840	92
Final Adjusted - Beach 4	1.20	0.30, 4.76	0.795	92
Final Adjusted - Beach 5	0.35	0.03, 3.90	0.391	93
Final Adjusted - Beach 6	0.21	0.05, 1.01	0.051	93

Table 38. Outcome: Diarrhea
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.67	0.45, 1.02	0.061	115
Final Adjusted	0.67	0.45, 1.02	0.060	114
Final Adjusted - Age Category 1	0.20	0.07, 0.55	0.002	115
Final Adjusted - Age Category 2	0.90	0.43, 1.90	0.787	116
Final Adjusted - Age Category 3	1.00	0.39, 2.55	0.995	116
Final Adjusted - Age Category 4	0.83	0.40, 1.74	0.622	117
Final Adjusted - Beach 1	0.29	0.02, 4.49	0.378	117
Final Adjusted - Beach 2	0.36	0.08, 1.70	0.199	117
Final Adjusted - Beach 3	0.84	0.40, 1.75	0.639	118
Final Adjusted - Beach 4	1.09	0.39, 3.00	0.874	118
Final Adjusted - Beach 5	0.59	0.18, 1.87	0.367	119
Final Adjusted - Beach 6	0.39	0.11, 1.39	0.148	120

Table 39. Outcome: Diarrhea
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.53	0.25, 1.15	0.110	81
Final Adjusted	0.77	0.33, 1.80	0.544	81
Final Adjusted - Age Category 1	0.23	0.03, 1.55	0.131	82
Final Adjusted - Age Category 2	0.51	0.11, 2.33	0.387	82
Final Adjusted - Age Category 3	3.38	0.48, 23.95	0.223	83
Final Adjusted - Age Category 4	0.98	0.19, 5.05	0.982	84
Final Adjusted - Beach 1	0.03	0.00, 9.93	0.230	84
Final Adjusted - Beach 2	4.74	0.42, 53.72	0.209	85
Final Adjusted - Beach 3	1.52	0.27, 8.47	0.635	85
Final Adjusted - Beach 4	0.51	0.07, 3.96	0.523	86
Final Adjusted - Beach 5	0.28	0.00, 21.03	0.566	87
Final Adjusted - Beach 6	0.65	0.05, 8.94	0.748	87

Table 40. Outcome: Diarrhea
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.84	0.63, 1.13	0.252	105
Final Adjusted	0.99	0.71, 1.38	0.958	104
Final Adjusted - Age Category 1	0.55	0.25, 1.20	0.133	106
Final Adjusted - Age Category 2	1.11	0.60, 2.07	0.741	106
Final Adjusted - Age Category 3	1.40	0.70, 2.80	0.336	107
Final Adjusted - Age Category 4	1.06	0.57, 1.99	0.852	108
Final Adjusted - Beach 1	24.16	0.03, 21242.41	0.357	109
Final Adjusted - Beach 2	13.93	4.25, 45.63	0.000	110
Final Adjusted - Beach 3	0.93	0.53, 1.63	0.799	111
Final Adjusted - Beach 4	1.13	0.30, 4.31	0.854	111
Final Adjusted - Beach 5	0.48	0.15, 1.50	0.206	112
Final Adjusted - Beach 6	0.97	0.16, 5.67	0.969	113

Table 41. Outcome: Diarrhea
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.50	0.30, 0.83	0.008	121
Final Adjusted	0.54	0.33, 0.90	0.019	121
Final Adjusted - Age Category 1	0.10	0.02, 0.46	0.003	122
Final Adjusted - Age Category 2	1.28	0.56, 2.94	0.553	122
Final Adjusted - Age Category 3	0.59	0.18, 1.92	0.380	123
Final Adjusted - Age Category 4	0.49	0.19, 1.24	0.133	123
Final Adjusted - Beach 1	0.39	0.02, 7.60	0.533	124
Final Adjusted - Beach 2	0.13	0.02, 0.95	0.044	124
Final Adjusted - Beach 3	0.66	0.29, 1.50	0.316	124
Final Adjusted - Beach 4	0.91	0.32, 2.57	0.860	125
Final Adjusted - Beach 5	0.62	0.10, 3.75	0.603	125
Final Adjusted - Beach 6	0.29	0.08, 1.08	0.064	126

Table 42. Outcome: Diarrhea
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.11	0.95, 1.31	0.190	901
Final Adjusted	1.14	0.97, 1.35	0.123	901
Final Adjusted - Age Category 1	1.56	1.19, 2.05	0.001	902
Final Adjusted - Age Category 2	0.00	.	.	902
Final Adjusted - Age Category 3	1.17	0.84, 1.63	0.340	902
Final Adjusted - Age Category 4	0.30	0.00, 151.92	0.707	903
Final Adjusted - Beach 1	0.00	.	.	903
Final Adjusted - Beach 2	0.00	.	.	904
Final Adjusted - Beach 3	0.00	.	.	904
Final Adjusted - Beach 4	tf*			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

*too few to analyze

Table 43. Outcome: Diarrhea
Water Exposure: Water
Indicator: Iresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.03	0.97, 1.08	0.314	907
Final Adjusted	1.03	0.98, 1.09	0.226	906
Final Adjusted - Age Category 1	1.14	1.05, 1.24	0.002	907
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	908
Final Adjusted - Age Category 3	1.05	0.94, 1.17	0.380	908
Final Adjusted - Age Category 4	0.81	0.43, 1.54	0.530	908
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	909
Final Adjusted - Beach 2	0.00	0.00, 0.00	0.000	909
Final Adjusted - Beach 3	0.27	0.26, 0.27	0.000	910
Final Adjusted - Beach 4	0.97	0.94, 0.99	0.008	910
Final Adjusted - Beach 5	0.95	0.42, 2.15	0.907	911
Final Adjusted - Beach 6	1.06	1.00, 1.12	0.067	911

Table 44. Outcome: Diarrhea
Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.407	113
Final Adjusted	1.00	1.00, 1.01	0.315	913
Final Adjusted - Age Category 1	0.98	0.95, 1.00	0.083	914
Final Adjusted - Age Category 2	1.00	0.98, 1.01	0.581	914
Final Adjusted - Age Category 3	1.00	0.99, 1.02	0.481	915
Final Adjusted - Age Category 4	1.00	1.00, 1.01	0.006	915
Final Adjusted - Beach 1	0.76	0.32, 1.82	0.543	916
Final Adjusted - Beach 2	0.97	0.92, 1.02	0.246	916
Final Adjusted - Beach 3	0.99	0.98, 1.01	0.429	917
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.204	917
Final Adjusted - Beach 5	0.98	0.96, 1.01	0.226	918
Final Adjusted - Beach 6	1.01	0.99, 1.02	0.411	918

Table 45. Outcome: Diarrhea
Water Exposure: Water
Indicator: Iresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.989	920
Final Adjusted	1.00	0.99, 1.01	0.878	920
Final Adjusted - Age Category 1	0.99	0.96, 1.01	0.283	921
Final Adjusted - Age Category 2	1.00	0.98, 1.02	0.997	922
Final Adjusted - Age Category 3	0.99	0.96, 1.02	0.409	922
Final Adjusted - Age Category 4	1.02	1.00, 1.04	0.059	923
Final Adjusted - Beach 1	0.92	0.67, 1.25	0.582	924
Final Adjusted - Beach 2	0.99	0.96, 1.02	0.643	925
Final Adjusted - Beach 3	0.99	0.97, 1.01	0.194	925
Final Adjusted - Beach 4	1.03	1.00, 1.05	0.023	926
Final Adjusted - Beach 5	1.00	0.97, 1.03	0.827	927
Final Adjusted - Beach 6	1.01	0.98, 1.04	0.575	928

Table 46. Outcome: Diarrhea
Exposure: Water Swallowed
Indicator: Ig_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.29	0.08, 1.05	0.059	1842
Final Adjusted	0.21	0.05, 0.85	0.029	1842
Final Adjusted - Age Category 1	0.03	0.00, 1.52	0.080	1843
Final Adjusted - Age Category 2	0.28	0.04, 2.03	0.209	1843
Final Adjusted - Age Category 3	0.45	0.02, 8.13	0.588	1844
Final Adjusted - Age Category 4	0.21	0.01, 6.95	0.378	1844
Final Adjusted - Beach 1	0.00	0, 2.5e5	0.378	1844
Final Adjusted - Beach 2	0.12	0.00, 67.56	0.512	1845
Final Adjusted - Beach 3	0.11	0.01, 1.29	0.079	1845
Final Adjusted - Beach 4	0.33	0.02, 6.25	0.460	1846
Final Adjusted - Beach 5	0.17	0.00, 27.29	0.494	1847
Final Adjusted - Beach 6	0.13	0.00, 6.90	0.314	1847

Table 47. Outcome: Diarrhea
Exposure: Water Face Under
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.68	0.41, 1.13	0.138	1917
Final Adjusted	0.69	0.40, 1.19	0.181	1916
Final Adjusted - Age Category 1	0.09	0.02, 0.41	0.002	1917
Final Adjusted - Age Category 2	0.91	0.39, 2.12	0.830	1918
Final Adjusted - Age Category 3	0.71	0.21, 2.45	0.588	1918
Final Adjusted - Age Category 4	1.46	0.51, 4.16	0.481	1919
Final Adjusted - Beach 1	1912.49	0.21, 1.72e07	0.104	1919
Final Adjusted - Beach 2	0.48	0.06, 3.93	0.498	1920
Final Adjusted - Beach 3	0.61	0.26, 1.43	0.255	1920
Final Adjusted - Beach 4	1.70	0.41, 6.99	0.461	1921
Final Adjusted - Beach 5	0.42	0.08, 2.24	0.310	1921
Final Adjusted - Beach 6	0.64	0.09, 4.37	0.646	1922

Table 48. Outcome: Diarrhea
Exposure: Water Swallowed
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.18	0.04, 0.86	0.031	1810
Final Adjusted	0.31	0.06, 1.59	0.160	1809
Final Adjusted - Age Category 1	0.06	0.00, 2.69	0.147	1810
Final Adjusted - Age Category 2	0.10	0.01, 1.19	0.068	1811
Final Adjusted - Age Category 3	9.23	0.15, 554.93	0.288	1811
Final Adjusted - Age Category 4	2.12	0.02, 277.10	0.762	1812
Final Adjusted - Beach 1	0.00	0, 1.14e+18	0.486	1812
Final Adjusted - Beach 2	0.16	0.00, 13.14	0.412	1813
Final Adjusted - Beach 3	1.04	0.06, 19.02	0.977	1813
Final Adjusted - Beach 4	0.19	0.00, 10.22	0.412	1814
Final Adjusted - Beach 5	0.01	0.00, 29.60	0.236	1814
Final Adjusted - Beach 6	0.03	0.00, 10.88	0.242	1814

Table 49. Outcome: Diarrhea
Exposure: Water Face Under
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.84	0.58, 1.19	0.323	1893
Final Adjusted	0.94	0.63, 1.38	0.737	1893
Final Adjusted - Age Category 1	0.31	0.11, 0.92	0.035	1894
Final Adjusted - Age Category 2	1.12	0.59, 2.16	0.725	1895
Final Adjusted - Age Category 3	1.52	0.70, 3.30	0.294	1895
Final Adjusted - Age Category 4	1.02	0.45, 2.30	0.965	1896
Final Adjusted - Beach 1	9.00E+179	2.1e+177, 3.8e+182	0.000	1897
Final Adjusted - Beach 2	1.20	0.27, 5.21	0.811	1898
Final Adjusted - Beach 3	1.04	0.58, 1.84	0.900	1898
Final Adjusted - Beach 4	1.33	0.25, 7.04	0.736	1899
Final Adjusted - Beach 5	0.50	0.13, 2.01	0.331	1900
Final Adjusted - Beach 6	1.18	0.14, 9.95	0.877	1901

Table 50. Outcome: Diarrhea
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.62	0.33, 1.14	0.122	1939
Final Adjusted	0.65	0.34, 1.25	0.198	1939
Final Adjusted - Age Category 1	0.07	0.01, 0.54	0.011	1940
Final Adjusted - Age Category 2	1.53	0.61, 3.85	0.364	1940
Final Adjusted - Age Category 3	0.46	0.09, 2.24	0.334	1941
Final Adjusted - Age Category 4	0.66	0.17, 2.60	0.556	1941
Final Adjusted - Beach 1	356.22	0.02, 5.97e6	0.236	1942
Final Adjusted - Beach 2	0.06	0.00, 1.43	0.082	1943
Final Adjusted - Beach 3	0.65	0.25, 1.65	0.361	1943
Final Adjusted - Beach 4	1.20	0.25, 5.81	0.821	1943
Final Adjusted - Beach 5	0.61	0.08, 4.73	0.637	1944
Final Adjusted - Beach 6	0.67	0.11, 4.19	0.670	1944

Table 51. Outcome: Diarrhea
Exposure: Water Face Under
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.45	0.05, 3.99	0.470	4387
Final Adjusted	0.38	0.03, 4.59	0.449	4387
Final Adjusted - Age Category 1	0.69	0.02, 24.68	0.840	4388
Final Adjusted - Age Category 2	0.00	.	.	
Final Adjusted - Age Category 3	0.60	0.02, 15.88	0.761	4389
Final Adjusted - Age Category 4	0.54	0.03, 9.57	0.678	4390
Final Adjusted - Beach 1	0.00	.	.	
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze				

Table 52. Outcome: Diarrhea
Exposure: Water in Mouth
Indicator: lresult_phage_m

Not Analyzed

Model	OR exposure	CI	p-value	Page No.
Unadjusted				
Final Adjusted				
Final Adjusted - Age Category 1				
Final Adjusted - Age Category 2				
Final Adjusted - Age Category 3				
Final Adjusted - Age Category 4				
Final Adjusted - Beach 1				
Final Adjusted - Beach 2				
Final Adjusted - Beach 3				
Final Adjusted - Beach 4				
Final Adjusted - Beach 5				
Final Adjusted - Beach 6				

Table 53. Outcome: Diarrhea
Exposure: Water in Mouth
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.62	0.33, 1.14	0.122	1939
Final Adjusted	0.65	0.34, 1.25	0.198	1939
Final Adjusted - Age Category 1	0.07	0.01, 0.54	0.011	1940
Final Adjusted - Age Category 2	1.53	0.61, 3.85	0.364	1940
Final Adjusted - Age Category 3	0.46	0.09, 2.24	0.343	1941
Final Adjusted - Age Category 4	0.66	0.17, 2.60	0.556	1941
Final Adjusted - Beach 1	356.22	0.02, 5.9e6	0.236	1942
Final Adjusted - Beach 2	0.06	0.00, 1.43	0.082	1943
Final Adjusted - Beach 3	0.65	0.25, 1.64	0.361	1943
Final Adjusted - Beach 4	1.20	0.25, 5.81	0.821	1943
Final Adjusted - Beach 5	0.61	0.08, 4.73	0.637	1944
Final Adjusted - Beach 6	0.67	0.11, 4.19	0.670	1944

Table 54. Outcome: Diarrhea
Exposure: Water in Mouth
Indicator: Iresult_phage_s

Not Analyzed

Model	OR exposure	CI	p-value	Page No.
Unadjusted				
Final Adjusted				
Final Adjusted - Age Category 1				
Final Adjusted - Age Category 2				
Final Adjusted - Age Category 3				
Final Adjusted - Age Category 4				
Final Adjusted - Beach 1				
Final Adjusted - Beach 2				
Final Adjusted - Beach 3				
Final Adjusted - Beach 4				
Final Adjusted - Beach 5				
Final Adjusted - Beach 6				

Table 55. Outcome: Nausea
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.49	0.21, 1.19	0.116	137
Final Adjusted	0.46	0.18, 1.18	0.107	136
Final Adjusted - Age Category 1	0.14	0.01, 1.56	0.110	137
Final Adjusted - Age Category 2	1.14	0.26, 5.02	0.862	137
Final Adjusted - Age Category 3	0.35	0.04, 2.92	0.330	138
Final Adjusted - Age Category 4	0.50	0.08, 3.02	0.451	138
Final Adjusted - Beach 1	11.00	0.05, 2363.18	0.382	139
Final Adjusted - Beach 2	0.35	0.02, 5.16	0.446	139
Final Adjusted - Beach 3	0.32	0.05, 2.24	0.253	140
Final Adjusted - Beach 4	3.93	0.29, 52.69	0.301	140
Final Adjusted - Beach 5	0.00	0.00, 1.6	0.070	141
Final Adjusted - Beach 6	0.62	0.09, 4.09	0.618	141

Table 56. Outcome: Nausea
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.61	0.34, 1.08	0.089	156
Final Adjusted	0.66	0.37, 1.15	0.144	156
Final Adjusted - Age Category 1	0.35	0.10, 1.27	0.111	157
Final Adjusted - Age Category 2	0.91	0.32, 2.58	0.865	157
Final Adjusted - Age Category 3	0.68	0.19, 2.41	0.554	158
Final Adjusted - Age Category 4	0.73	0.27, 1.96	0.532	158
Final Adjusted - Beach 1	3.66	0.24, 56.22	0.352	158
Final Adjusted - Beach 2	0.37	0.07, 1.95	0.242	159
Final Adjusted - Beach 3	0.44	0.14, 1.39	0.162	159
Final Adjusted - Beach 4	8.40	0.77, 91.36	0.081	160
Final Adjusted - Beach 5	0.14	0.02, 1.05	0.056	160
Final Adjusted - Beach 6	1.67	0.44, 6.40	0.451	160

Table 57. Outcome: Nausea
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.51	0.18, 1.46	0.206	128
Final Adjusted	0.72	0.22, 2.38	0.590	127
Final Adjusted - Age Category 1	0.35	0.03, 4.40	0.415	129
Final Adjusted - Age Category 2	4.21	0.50, 35.85	0.188	129
Final Adjusted - Age Category 3	0.55	0.04, 8.25	0.668	130
Final Adjusted - Age Category 4	0.17	0.01, 2.16	0.173	130
Final Adjusted - Beach 1	45.34	0.19, 10544.02	0.170	131
Final Adjusted - Beach 2	1.25	0.09, 18.16	0.872	132
Final Adjusted - Beach 3	1.61	0.12, 21.20	0.717	133
Final Adjusted - Beach 4	1.99	0.05, 83.14	0.717	133
Final Adjusted - Beach 5	0.09	0.00, 43.52	0.446	134
Final Adjusted - Beach 6	0.30	0.01, 14.98	0.544	135

Table 58. Outcome: Nausea
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.65	0.43, 0.99	0.046	150
Final Adjusted	0.73	0.45, 1.17	0.192	149
Final Adjusted - Age Category 1	0.54	0.19, 1.50	0.237	150
Final Adjusted - Age Category 2	1.11	0.49, 2.53	0.800	151
Final Adjusted - Age Category 3	0.74	0.26, 2.11	0.575	151
Final Adjusted - Age Category 4	0.53	0.20, 1.42	0.204	152
Final Adjusted - Beach 1	24.26	0.57, 1037.67	0.096	152
Final Adjusted - Beach 2	1.28	0.42, 3.89	0.659	152
Final Adjusted - Beach 3	0.65	0.28, 1.50	0.311	153
Final Adjusted - Beach 4	3.06	0.20, 45.55	0.418	154
Final Adjusted - Beach 5	0.55	0.13, 2.38	0.427	154
Final Adjusted - Beach 6	0.80	0.09, 7.49	0.848	154

Table 59. Outcome: Nausea
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.43	0.21, 0.89	0.023	162
Final Adjusted	0.46	0.21, 0.99	0.047	162
Final Adjusted - Age Category 1	0.17	0.03, 1.14	0.068	163
Final Adjusted - Age Category 2	1.26	0.38, 4.11	0.706	163
Final Adjusted - Age Category 3	0.25	0.04, 1.56	0.137	164
Final Adjusted - Age Category 4	0.45	0.10, 2.05	0.303	164
Final Adjusted - Beach 1	0.98	0.03, 30.32	0.991	165
Final Adjusted - Beach 2	0.39	0.05, 2.90	0.356	165
Final Adjusted - Beach 3	0.44	0.11, 1.75	0.245	166
Final Adjusted - Beach 4	2.17	0.27, 17.16	0.464	166
Final Adjusted - Beach 5	0.12	0.00, 3.88	0.235	166
Final Adjusted - Beach 6	0.46	0.08, 2.62	0.379	167

Table 60. Outcome: Nausea
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.30	1.12, 1.51	0.000	932
Final Adjusted	1.34	1.16, 1.55	0.000	932
Final Adjusted - Age Category 1	1.81	1.38, 2.39	0.000	933
Final Adjusted - Age Category 2	0.00	.	.	933
Final Adjusted - Age Category 3	1.50	1.17, 1.92	0.001	934
Final Adjusted - Age Category 4	0.00	.	.	934
Final Adjusted - Beach 1	0.00	.	.	935
Final Adjusted - Beach 2	0.00	.	.	935
Final Adjusted - Beach 3	0.00	.	.	936
Final Adjusted - Beach 4	tf*			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
too few to analyze				

Table 61. Outcome: Nausea
Water Exposure: Water
Indicator: Iresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.08	1.03, 1.14	0.001	938
Final Adjusted	1.09	1.04, 1.15	0.000	938
Final Adjusted - Age Category 1	1.21	1.11, 1.31	0.000	939
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	939
Final Adjusted - Age Category 3	1.14	1.05, 1.23	0.002	939
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	940
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	940
Final Adjusted - Beach 2	0.00	0.00, 0.00	0.000	941
Final Adjusted - Beach 3	0.27	0.27, 0.28	0.000	941
Final Adjusted - Beach 4	0.99	0.95, 1.04	0.786	942
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	942
Final Adjusted - Beach 6	1.11	1.05, 1.17	0.000	943

Table 62. Outcome: Nausea
Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.729	944
Final Adjusted	1.00	0.99, 1.01	0.359	945
Final Adjusted - Age Category 1	0.93	0.85, 1.02	0.130	945
Final Adjusted - Age Category 2	1.00	0.98, 1.02	0.798	946
Final Adjusted - Age Category 3	1.00	0.99, 1.02	0.629	946
Final Adjusted - Age Category 4	1.00	0.98, 1.01	0.775	947
Final Adjusted - Beach 1	0.00	.	.	947
Final Adjusted - Beach 2	0.96	0.89, 1.04	0.321	948
Final Adjusted - Beach 3	0.98	0.96, 1.01	0.223	948
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.303	948
Final Adjusted - Beach 5	1.00	0.98, 1.03	0.809	949
Final Adjusted - Beach 6	0.99	0.96, 1.02	0.420	950

Table 63. Outcome: Nausea
Water Exposure: Water
Indicator: Iresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.881	951
Final Adjusted	0.99	0.98, 1.01	0.264	951
Final Adjusted - Age Category 1	0.97	0.94, 1.01	0.143	952
Final Adjusted - Age Category 2	1.00	0.97, 1.03	0.793	952
Final Adjusted - Age Category 3	0.98	0.95, 1.02	0.371	953
Final Adjusted - Age Category 4	1.01	0.98, 1.04	0.527	953
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	954
Final Adjusted - Beach 2	0.98	0.94, 1.02	0.387	954
Final Adjusted - Beach 3	0.97	0.93, 1.00	0.047	955
Final Adjusted - Beach 4	1.06	1.02, 1.10	0.004	955
Final Adjusted - Beach 5	1.02	0.98, 1.05	0.351	955
Final Adjusted - Beach 6	0.97	0.93, 1.02	0.295	956

Table 64. Outcome: Nausea
Exposure: Face Under Water
Indicator: Ig_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.55	0.20, 1.55	0.260	1987
Final Adjusted	0.73	0.25, 2.16	0.569	1987
Final Adjusted - Age Category 1	0.22	0.01, 3.82	0.300	1988
Final Adjusted - Age Category 2	1.61	0.37, 7.04	0.530	1988
Final Adjusted - Age Category 3	0.38	0.02, 5.87	0.488	1989
Final Adjusted - Age Category 4	0.53	0.04, 7.72	0.646	1989
Final Adjusted - Beach 1	10446.85	0.35, 3.11e+8	0.078	1990
Final Adjusted - Beach 2	0.30	0.01, 13.34	0.537	1990
Final Adjusted - Beach 3	0.42	0.06, 2.90	0.378	1991
Final Adjusted - Beach 4	9.15	0.27, 309.65	0.218	1992
Final Adjusted - Beach 5	0.00	2.13e-06, 9.66	0.168	1992
Final Adjusted - Beach 6	11.84	0.51, 273.92	0.123	1993

Table 65. Outcome: Nausea
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.56	0.27, 1.14	0.108	2051
Final Adjusted	0.67	0.31, 1.44	0.311	2050
Final Adjusted - Age Category 1	0.26	0.04, 1.65	0.152	2051
Final Adjusted - Age Category 2	1.41	0.47, 4.22	0.544	2052
Final Adjusted - Age Category 3	0.29	0.05, 1.89	0.197	2052
Final Adjusted - Age Category 4	0.64	0.10, 3.96	0.629	2053
Final Adjusted - Beach 1	477.58	0.95, 239705.20	0.052	2053
Final Adjusted - Beach 2	0.35	0.03, 4.19	0.407	2054
Final Adjusted - Beach 3	0.51	0.14, 1.84	0.302	2054
Final Adjusted - Beach 4	6.49	0.32, 131.28	0.223	2055
Final Adjusted - Beach 5	0.14	0.01, 2.49	0.181	2055
Final Adjusted - Beach 6	11.93	0.73, 195.09	0.082	2056

Table 66. Outcome: Nausea
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.43	0.12, 1.61	0.212	1964
Final Adjusted	0.72	0.17, 3.12	0.665	1963
Final Adjusted - Age Category 1	0.63	0.02, 16.55	0.782	1964
Final Adjusted - Age Category 2	2.95	0.32, 27.01	0.338	1965
Final Adjusted - Age Category 3	0.16	0.01, 4.95	0.296	1966
Final Adjusted - Age Category 4	0.03	0.00, 2.74	0.131	1966
Final Adjusted - Beach 1	1043.35	0.03, 3.98e+07	0.197	1967
Final Adjusted - Beach 2	0.54	0.02, 15.37	0.716	1968
Final Adjusted - Beach 3	1.54	0.10, 24.64	0.762	1968
Final Adjusted - Beach 4	1.77	0.01, 218.43	0.817	1969
Final Adjusted - Beach 5	0.06	0.00, 66.60	0.439	1969
Final Adjusted - Beach 6	4.80	0.03, 714.40	0.539	1970

Table 67. Outcome: Nausea
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.61	0.37, 1.02	0.059	2029
Final Adjusted	0.63	0.36, 1.10	0.102	2029
Final Adjusted - Age Category 1	0.48	0.13, 1.83	0.285	2030
Final Adjusted - Age Category 2	1.01	0.46, 2.23	0.972	2030
Final Adjusted - Age Category 3	0.41	0.11, 1.60	0.202	2031
Final Adjusted - Age Category 4	0.31	0.07, 1.44	0.134	2031
Final Adjusted - Beach 1	1291.94	0.45, 3720614	0.078	2032
Final Adjusted - Beach 2	0.41	0.06, 2.79	0.359	2032
Final Adjusted - Beach 3	0.65	0.26, 1.61	0.356	2033
Final Adjusted - Beach 4	5.86	0.29, 119.87	0.251	2033
Final Adjusted - Beach 5	0.46	0.09, 2.35	0.354	2033
Final Adjusted - Beach 6	4.29	0.27, 69.33	0.305	2034

Table 68. Outcome: Nausea
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.48	0.20, 1.14	0.096	2067
Final Adjusted	0.56	0.22, 1.40	0.216	2067
Final Adjusted - Age Category 1	0.11	0.01, 1.49	0.098	2068
Final Adjusted - Age Category 2	tf			
Final Adjusted - Age Category 3	tf			
Final Adjusted - Age Category 4	tf			
Final Adjusted - Beach 1	tf			
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

Table 69. Outcome: Nausea
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.13	0.82, 1.56	0.455	4432
Final Adjusted	0.27	0.00, 72.23	0.649	4432
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	4433
Final Adjusted - Age Category 2	0.00	.	.	4433
Final Adjusted - Age Category 3	0.84	0.08, 8.56	0.880	4434
Final Adjusted - Age Category 4	0.00	.	.	4434
Final Adjusted - Beach 1	0.00	.	.	4435
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
*too few to analyze				

Table 70. Outcome: Nausea
Exposure: Face Under Water
Indicator: Iresult_phage_m Not Analyzed

Table 71. Outcome: Nausea
Exposure: Face Under Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.98, 1.01	0.336	4451
Final Adjusted	0.99	0.98, 1.01	0.243	4450
Final Adjusted - Age Category 1	0.90	0.76, 1.06	0.197	4451
Final Adjusted - Age Category 2	1.00	0.98, 1.02	0.678	4452
Final Adjusted - Age Category 3	1.00	0.98, 1.02	0.963	4452
Final Adjusted - Age Category 4	0.99	0.97, 1.02	0.669	4453
Final Adjusted - Beach 1	0.00	.	.	4453
Final Adjusted - Beach 2	0.96	0.89, 1.04	0.358	4454
Final Adjusted - Beach 3	0.88	0.77, 1.01	0.065	4454
Final Adjusted - Beach 4	1.00	0.99, 1.01	0.682	4455
Final Adjusted - Beach 5	1.00	0.97, 1.03	0.854	4455
Final Adjusted - Beach 6	1.00	0.97, 1.03	0.792	4455

Table 72. Outcome: Nausea
Exposure: Face Under Water Not Analyzed
Indicator: Iresult_phage_s

Table 73. Outcome: Vomiting
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.39	0.15, 1.03	0.058	176
Final Adjusted	0.33	0.12, 0.90	0.030	176
Final Adjusted - Age Category 1	0.19	0.03, 1.24	0.083	177
Final Adjusted - Age Category 2	0.62	0.12, 3.12	0.561	177
Final Adjusted - Age Category 3	0.34	0.03, 3.78	0.378	177
Final Adjusted - Age Category 4	0.08	0.00, 2.18	0.134	178
Final Adjusted - Beach 1	83.40	0.05, 140710.40	0.243	178
Final Adjusted - Beach 2	0.28	0.01, 11.77	0.508	179
Final Adjusted - Beach 3	0.20	0.04, 1.07	0.059	179
Final Adjusted - Beach 4	0.49	0.01, 18.23	0.700	180
Final Adjusted - Beach 5	0.38	0.01, 14.35	0.603	180
Final Adjusted - Beach 6	0.19	0.02, 1.70	0.137	181

Table 74. Outcome: Vomiting
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.58	0.32, 1.08	0.086	196
Final Adjusted	0.56	0.30, 1.04	0.065	196
Final Adjusted - Age Category 1	0.37	0.12, 1.10	0.073	197
Final Adjusted - Age Category 2	0.92	0.32, 2.64	0.876	197
Final Adjusted - Age Category 3	0.75	0.18, 3.21	0.702	198
Final Adjusted - Age Category 4	0.28	0.05, 1.57	0.148	198
Final Adjusted - Beach 1	214.56	0.70, 66178.59	0.066	199
Final Adjusted - Beach 2	0.55	0.06, 5.21	0.604	199
Final Adjusted - Beach 3	0.32	0.11, 0.89	0.029	199
Final Adjusted - Beach 4	1.17	0.09, 15.29	0.901	200
Final Adjusted - Beach 5	0.37	0.06, 2.33	0.292	200
Final Adjusted - Beach 6	0.77	0.17, 3.60	0.744	200

Table 75. Outcome: Vomiting
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.64	0.21, 1.97	0.435	169
Final Adjusted	0.69	0.22, 2.22	0.538	169
Final Adjusted - Age Category 1	0.75	0.11, 5.35	0.778	170
Final Adjusted - Age Category 2	1.71	0.24, 12.12	0.590	170
Final Adjusted - Age Category 3	0.25	0.01, 4.27	0.335	171
Final Adjusted - Age Category 4	0.07	0.00, 2.37	0.140	171
Final Adjusted - Beach 1	396.86	0.03, 4671224.00	0.211	172
Final Adjusted - Beach 2	4.22	0.17, 105.59	0.381	172
Final Adjusted - Beach 3	0.41	0.06, 2.96	0.377	173
Final Adjusted - Beach 4	0.11	0.00, 25.66	0.425	173
Final Adjusted - Beach 5	0.40	0.00, 141.48	0.762	174
Final Adjusted - Beach 6	0.25	0.01, 8.44	0.437	174

Table 76. Outcome: Vomiting
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.89	0.58, 1.36	0.597	189
Final Adjusted	0.91	0.57, 1.45	0.691	189
Final Adjusted - Age Category 1	0.94	0.45, 1.99	0.879	190
Final Adjusted - Age Category 2	1.23	0.59, 2.58	0.580	190
Final Adjusted - Age Category 3	0.49	0.13, 1.78	0.277	191
Final Adjusted - Age Category 4	0.54	0.12, 2.44	0.423	191
Final Adjusted - Beach 1	267343.40	20.17, 3.54E+9	0.010	192
Final Adjusted - Beach 2	5.02	1.47, 17.21	0.010	192
Final Adjusted - Beach 3	0.56	0.26, 1.22	0.143	193
Final Adjusted - Beach 4	0.39	0.02, 8.09	0.545	193
Final Adjusted - Beach 5	0.54	0.11, 2.75	0.461	194
Final Adjusted - Beach 6	0.51	0.06, 4.54	0.543	195

Table 77. Outcome: Vomiting
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.39	0.17, 0.86	0.021	202
Final Adjusted	No Change			
Unadjusted - Age Category 1	0.16	0.03, 0.77	0.022	202
Unadjusted - Age Category 2	0.92	0.26, 3.23	0.903	203
Unadjusted - Age Category 3	0.58	0.09, 3.49	0.532	203
Unadjusted - Age Category 4	0.10	0.01, 1.44	0.090	204
Unadjusted - Beach 1	0.54	0.00, 113.80	0.822	204
Unadjusted - Beach 2	0.50	0.03, 8.94	0.634	204
Unadjusted - Beach 3	0.51	0.17, 1.51	0.223	205
Unadjusted - Beach 4	0.33	0.02, 6.94	0.474	205
Unadjusted - Beach 5	0.22	0.01, 5.95	0.370	206
Unadjusted - Beach 6	0.20	0.03, 1.36	0.101	206

Table 78. Outcome: Vomiting
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.13	0.90, 1.41	0.287	958
Final Adjusted	1.21	0.96, 1.53	0.100	958
Final Adjusted - Age Category 1	1.24	0.87, 1.75	0.234	958
Final Adjusted - Age Category 2	1.42	1.01, 2.01	0.046	959
Final Adjusted - Age Category 3	0.68	0.04, 10.90	0.784	959
Final Adjusted - Age Category 4	0.00	.	.	960
Final Adjusted - Beach 1	0.00	.	.	961
Final Adjusted - Beach 2	361.77	0.01, 1.59e+7	0.280	961
Final Adjusted - Beach 3	0.00	.	.	962
Final Adjusted - Beach 4	tf*			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
*too few to analyze				

Table 79. Outcome: Vomiting
Water Exposure: Water
Indicator: lresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.03	0.96, 1.11	0.375	964
Final Adjusted	1.06	0.98, 1.14	0.146	964
Final Adjusted - Age Category 1	1.06	0.94, 1.19	0.369	965
Final Adjusted - Age Category 2	1.13	1.00, 1.26	0.044	965
Final Adjusted - Age Category 3	0.95	0.61, 1.48	0.816	966
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	966
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	967
Final Adjusted - Beach 2	2.02	0.61, 6.67	0.251	967
Final Adjusted - Beach 3	0.26	0.26, 0.27	0.000	968
Final Adjusted - Beach 4	1.02	0.96, 1.08	0.561	968
Final Adjusted - Beach 5	0.00	0.00, 0.00	0.000	969
Final Adjusted - Beach 6	1.08	0.99, 1.17	0.078	969

Table 80. Outcome: Vomiting
Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.523	972
Final Adjusted	0.99	0.98, 1.00	0.279	971
Final Adjusted - Age Category 1	0.99	0.96, 1.01	0.259	972
Final Adjusted - Age Category 2	1.00	0.99, 1.02	0.566	973
Final Adjusted - Age Category 3	0.98	0.94, 1.02	0.275	973
Final Adjusted - Age Category 4	0.99	0.94, 1.03	0.590	974
Final Adjusted - Beach 1	0.00	.	.	974
Final Adjusted - Beach 2	0.97	0.91, 1.04	0.437	975
Final Adjusted - Beach 3	1.00	0.98, 1.01	0.597	976
Final Adjusted - Beach 4	1.00	0.98, 1.01	0.726	976
Final Adjusted - Beach 5	0.95	0.89, 1.02	0.142	977
Final Adjusted - Beach 6	1.00	0.97, 1.02	0.726	977

Table 81. Outcome: Vomiting
Water Exposure: Water
Indicator: Iresult_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.98, 1.01	0.278	979
Final Adjusted	0.99	0.97, 1.00	0.117	979
Final Adjusted - Age Category 1	0.98	0.95, 1.01	0.163	980
Final Adjusted - Age Category 2	1.01	0.98, 1.03	0.648	980
Final Adjusted - Age Category 3	0.93	0.86, 1.00	0.044	981
Final Adjusted - Age Category 4	1.00	0.95, 1.05	0.981	981
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	982
Final Adjusted - Beach 2	0.99	0.94, 1.04	0.655	982
Final Adjusted - Beach 3	0.99	0.96, 1.01	0.250	983
Final Adjusted - Beach 4	1.01	0.95, 1.06	0.838	983
Final Adjusted - Beach 5	0.97	0.93, 1.01	0.190	984
Final Adjusted - Beach 6	0.98	0.93, 1.03	0.388	984

Table 82. Outcome: Vomiting
Exposure: Face Under Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.37	0.11, 1.24	0.108	2117
Final Adjusted	0.40	0.11, 1.42	0.156	2117
Final Adjusted - Age Category 1	0.18	0.02, 2.08	0.168	2118
Final Adjusted - Age Category 2	0.81	0.15, 4.52	0.811	2119
Final Adjusted - Age Category 3	0.30	0.01, 6.60	0.448	2119
Final Adjusted - Age Category 4	0.13	0.00, 55.38	0.505	2120
Final Adjusted - Beach 1	82.38	0.01, 605373.9	0.331	2120
Final Adjusted - Beach 2	0.78	0.01, 69.71	0.914	2121
Final Adjusted - Beach 3	0.15	0.02, 1.13	0.066	2121
Final Adjusted - Beach 4	2.70	0.03, 233.10	0.662	2122
Final Adjusted - Beach 5	0.06	0.00, 35.55	0.381	2122
Final Adjusted - Beach 6	0.76	0.04, 14.09	0.857	2123

Table 83. Outcome: Vomiting
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.46	0.21, 1.03	0.058	2190
Final Adjusted	0.50	0.22, 1.16	0.107	2190
Final Adjusted - Age Category 1	0.20	0.04, 0.94	0.041	2191
Final Adjusted - Age Category 2	1.14	0.35, 3.64	0.831	2191
Final Adjusted - Age Category 3	0.42	0.06, 3.02	0.391	2192
Final Adjusted - Age Category 4	0.18	0.00, 7.21	0.359	2192
Final Adjusted - Beach 1	23.66	0.04, 14785.53	0.335	2193
Final Adjusted - Beach 2	1.30	0.06, 30.88	0.869	2194
Final Adjusted - Beach 3	0.23	0.07, 0.80	0.021	2194
Final Adjusted - Beach 4	3.71	0.09, 149.21	0.487	2194
Final Adjusted - Beach 5	0.08	0.00, 3.72	0.199	2195
Final Adjusted - Beach 6	2.12	0.18, 25.07	0.552	2196

Table 84. Outcome: Vomiting
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.82	0.20, 3.36	0.788	2091
Final Adjusted	1.00	0.22, 4.54	0.995	2090
Final Adjusted - Age Category 1	1.10	0.08, 15.40	0.942	2092
Final Adjusted - Age Category 2	1.30	0.13, 12.76	0.821	2093
Final Adjusted - Age Category 3	0.13	0.00, 6.67	0.308	2093
Final Adjusted - Age Category 4	0.00	0.00, 94.06	0.197	2094
Final Adjusted - Beach 1	6.E+144	0.00, .	0.976	2095
Final Adjusted - Beach 2	1.63	0.01, 277.59	0.853	2096
Final Adjusted - Beach 3	0.62	0.06, 6.56	0.692	2097
Final Adjusted - Beach 4	0.03	1.55e-6, 433.83	0.462	2098
Final Adjusted - Beach 5	0.00	6.23e-08, 134.67	0.286	2099
Final Adjusted - Beach 6	0.52	0.00, 75.15	0.795	2100

Table 85. Outcome: Vomiting
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.88	0.52, 1.49	0.640	2170
Final Adjusted	0.90	0.52, 1.54	0.702	2170
Final Adjusted - Age Category 1	0.82	0.30, 2.2	0.686	2171
Final Adjusted - Age Category 2	1.37	0.62, 3.05	0.438	2171
Final Adjusted - Age Category 3	0.38	0.08, 1.71	0.206	2171
Final Adjusted - Age Category 4	0.67	0.05, 8.2	0.754	2172
Final Adjusted - Beach 1	586.58	0.03, 1.15e+07	0.206	2172
Final Adjusted - Beach 2	1.64	0.26, 10.33	0.596	2173
Final Adjusted - Beach 3	0.67	0.31, 1.44	0.300	2173
Final Adjusted - Beach 4	1.25	0.02, 75.40	0.916	2174
Final Adjusted - Beach 5	0.29	0.03, 3.16	0.312	2174
Final Adjusted - Beach 6	0.92	0.06, 15.02	0.955	2175

Table 86. Outcome: Vomiting
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.49	0.19, 1.26	0.138	2207
Final Adjusted	0.54	0.20, 1.44	0.219	2206
Final Adjusted - Age Category 1	0.29	0.05, 1.77	0.180	2207
Final Adjusted - Age Category 2	1.09	0.28, 4.16	0.903	2208
Final Adjusted - Age Category 3	0.29	0.02, 4.37	0.372	2208
Final Adjusted - Age Category 4	0.23	0.00, 22.35	0.526	2209
Final Adjusted - Beach 1	tf*			2209
Final Adjusted - Beach 2	tf			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
*too few to analyze				

Table 87. Outcome: Vomiting
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.33	0.00, 36.03	0.645	4470
Final Adjusted	0.38	0.00, 31.43	0.670	4470
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	4471
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	4471
Final Adjusted - Age Category 3	0.92	0.12, 7.08	0.935	4472
Final Adjusted - Age Category 4	0.00	.	.	4472
Final Adjusted - Beach 1	0.00	.	.	4473
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
*too few to analyze				

Table 88. Outcome: Vomiting
Exposure: Face Under Water
Indicator: Iresult_phage_m

Not Analyzed

Table 89. Outcome: Vomiting
Exposure: Face Under Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.592	4490
Final Adjusted	0.99	0.98, 1.01	0.378	4489
Final Adjusted - Age Category 1	0.99	0.98, 1.01	0.535	4490
Final Adjusted - Age Category 2	1.00	0.99, 1.02	0.690	4491
Final Adjusted - Age Category 3	0.98	0.93, 1.03	0.339	4491
Final Adjusted - Age Category 4	0.86	0.60, 1.22	0.392	4492
Final Adjusted - Beach 1	0.00	.	.	4493
Final Adjusted - Beach 2	0.00	0.00, 0.00	0.000	4493
Final Adjusted - Beach 3	0.99	0.98, 1.01	0.370	4494
Final Adjusted - Beach 4	1.00	0.99, 1.01	0.930	4494
Final Adjusted - Beach 5	0.97	0.90, 1.03	0.316	4495
Final Adjusted - Beach 6	1.00	0.98, 1.03	0.722	4495

Table 90. Outcome: Vomiting
Exposure: Face Under Water
Indicator: Iresult_phage_s

Not Analyzed

Table 91. Outcome: Cramps
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.87	0.48, 1.56	0.638	215
Final Adjusted	0.91	0.48, 1.71	0.763	215
Final Adjusted - Age Category 1	1.48	0.35, 6.22	0.595	216
Final Adjusted - Age Category 2	1.07	0.42, 2.69	0.889	217
Final Adjusted - Age Category 3	0.38	0.06, 2.32	0.296	217
Final Adjusted - Age Category 4	0.71	0.18, 2.88	0.634	218
Final Adjusted - Beach 1	22.99	0.06, 9175.97	0.305	219
Final Adjusted - Beach 2	0.81	0.11, 5.64	0.827	219
Final Adjusted - Beach 3	1.44	0.58, 3.54	0.428	220
Final Adjusted - Beach 4	2.01	0.32, 12.82	0.458	220
Final Adjusted - Beach 5	0.04	0.00, 1.74	0.095	221
Final Adjusted - Beach 6	0.92	0.17, 5.05	0.923	221

Table 92. Outcome: Cramps
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.93	0.62, 1.38	0.705	241
Final Adjusted	0.97	0.63, 1.52	0.910	241
Final Adjusted - Age Category 1	1.29	0.46, 3.64	0.634	242
Final Adjusted - Age Category 2	1.33	0.69, 2.57	0.400	243
Final Adjusted - Age Category 3	0.57	0.18, 1.78	0.333	243
Final Adjusted - Age Category 4	0.59	0.22, 1.59	0.299	244
Final Adjusted - Beach 1	7.87	0.11, 551.89	0.341	245
Final Adjusted - Beach 2	1.64	0.44, 6.13	0.462	246
Final Adjusted - Beach 3	1.18	0.59, 2.36	0.644	246
Final Adjusted - Beach 4	3.30	0.67, 16.28	0.143	247
Final Adjusted - Beach 5	0.17	0.03, 0.90	0.036	248
Final Adjusted - Beach 6	1.47	0.34, 6.40	0.608	249

Table 93. Outcome: Cramps
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.54	0.25, 1.17	0.119	208
Final Adjusted	0.87	0.38, 2.00	0.738	208
Final Adjusted - Age Category 1	4.43	0.60, 32.49	0.143	209
Final Adjusted - Age Category 2	0.57	0.16, 2.12	0.406	209
Final Adjusted - Age Category 3	0.99	0.12, 7.89	0.990	210
Final Adjusted - Age Category 4	0.34	0.06, 2.03	0.235	210
Final Adjusted - Beach 1	1.54	0.00, 1226.68	0.899	211
Final Adjusted - Beach 2	0.53	0.07, 4.08	0.542	211
Final Adjusted - Beach 3	0.84	0.18, 3.85	0.820	212
Final Adjusted - Beach 4	3.66	0.33, 40.59	0.291	212
Final Adjusted - Beach 5	0.24	0.00, 16.30	0.507	213
Final Adjusted - Beach 6	1.00	0.08, 13.35	0.999	213

Table 94. Outcome: Cramps
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.92	0.69, 1.22	0.551	233
Final Adjusted	1.12	0.82, 1.53	0.475	233
Final Adjusted - Age Category 1	1.60	0.79, 3.27	0.193	234
Final Adjusted - Age Category 2	1.01	0.61, 1.68	0.955	235
Final Adjusted - Age Category 3	0.97	0.45, 2.09	0.934	235
Final Adjusted - Age Category 4	1.07	0.56, 2.05	0.833	236
Final Adjusted - Beach 1	4.44	0.06, 340.98	0.501	236
Final Adjusted - Beach 2	1.89	0.78, 4.61	0.158	237
Final Adjusted - Beach 3	1.12	0.69, 1.82	0.656	237
Final Adjusted - Beach 4	2.70	0.51, 14.31	0.244	238
Final Adjusted - Beach 5	0.51	0.16, 1.61	0.253	238
Final Adjusted - Beach 6	2.44	0.48, 12.35	0.281	239

Table 95. Outcome: Cramps
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.78	0.48, 1.27	0.318	251
Final Adjusted	0.90	0.54, 1.52	0.695	250
Final Adjusted - Age Category 1	0.76	0.21, 2.76	0.674	251
Final Adjusted - Age Category 2	1.30	0.61, 2.76	0.493	252
Final Adjusted - Age Category 3	0.29	0.06, 1.35	0.114	253
Final Adjusted - Age Category 4	0.92	0.30, 2.76	0.875	253
Final Adjusted - Beach 1	7.31	0.02, 2440.87	0.502	254
Final Adjusted - Beach 2	0.52	0.09, 2.89	0.455	255
Final Adjusted - Beach 3	1.12	0.53, 2.37	0.766	255
Final Adjusted - Beach 4	3.79	0.83, 17.31	0.085	256
Final Adjusted - Beach 5	0.13	0.01, 2.27	0.160	256
Final Adjusted - Beach 6	0.34	0.07, 1.67	0.185	257

Table 96. Outcome: Cramps
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.79, 1.25	0.932	987
Final Adjusted	1.04	0.83, 1.32	0.722	987
Final Adjusted - Age Category 1	1.30	0.91, 1.86	0.146	987
Final Adjusted - Age Category 2	0.10	0.00, 470.47	0.597	988
Final Adjusted - Age Category 3	1.27	0.90, 1.78	0.171	989
Final Adjusted - Age Category 4	0.45	0.01, 16.30	0.665	989
Final Adjusted - Beach 1	0.00	.	.	990
Final Adjusted - Beach 2	0.54	0.00, 25521.40	0.910	991
Final Adjusted - Beach 3	0.00	.	.	991
Final Adjusted - Beach 4	tf*			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

*too few to analyze

Table 97. Outcome: Cramps**Water Exposure: Water****Indicator: Iresult_phage_m**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.91, 1.07	0.734	994
Final Adjusted	1.00	0.93, 1.08	0.971	994
Final Adjusted - Age Category 1	1.08	0.95, 1.22	0.230	995
Final Adjusted - Age Category 2	0.76	0.34, 1.73	0.515	996
Final Adjusted - Age Category 3	1.08	0.95, 1.22	0.233	997
Final Adjusted - Age Category 4	0.86	0.54, 1.36	0.517	997
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	999
Final Adjusted - Beach 2	0.92	0.27, 3.11	0.896	999
Final Adjusted - Beach 3	0.27	0.26, 0.27	0.000	1000
Final Adjusted - Beach 4	1.00	0.95, 1.04	0.931	1001
Final Adjusted - Beach 5	0.71	0.23, 2.25	0.563	1002
Final Adjusted - Beach 6	1.03	0.95, 1.12	0.472	1003

Table 98. Outcome: Cramps**Water Exposure: Water****Indicator: result_phage_s**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.00	0.709	1005
Final Adjusted	1.00	0.99, 1.00	0.624	1004
Final Adjusted - Age Category 1	1.00	0.98, 1.01	0.679	1005
Final Adjusted - Age Category 2	1.00	0.98, 1.00	0.467	1006
Final Adjusted - Age Category 3	0.99	0.98, 1.01	0.494	1006
Final Adjusted - Age Category 4	1.00	0.99, 1.01	0.612	1007
Final Adjusted - Beach 1	1.10	0.90, 1.35	0.363	1007
Final Adjusted - Beach 2	0.97	0.92, 1.01	0.158	1008
Final Adjusted - Beach 3	1.00	0.99, 1.01	0.914	1009
Final Adjusted - Beach 4	1.00	0.99, 1.01	0.968	1009
Final Adjusted - Beach 5	1.00	0.97, 1.02	0.656	1010
Final Adjusted - Beach 6	1.00	0.99, 1.02	0.595	1010

Table 99. Outcome: Cramps**Water Exposure: Water****Indicator: Iresult_phage_s**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.519	1012
Final Adjusted	1.00	0.99, 1.01	0.602	1012
Final Adjusted - Age Category 1	1.00	0.98, 1.03	0.832	1013
Final Adjusted - Age Category 2	1.00	0.98, 1.02	0.868	1013
Final Adjusted - Age Category 3	0.99	0.96, 1.01	0.310	1014
Final Adjusted - Age Category 4	1.02	1.00, 1.04	0.060	1014
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	1015
Final Adjusted - Beach 2	0.98	0.95, 1.02	0.362	1015
Final Adjusted - Beach 3	1.01	0.99, 1.02	0.515	1016
Final Adjusted - Beach 4	1.02	0.99, 1.06	0.121	1016
Final Adjusted - Beach 5	1.00	0.98, 1.03	0.753	1016
Final Adjusted - Beach 6	1.00	0.97, 1.03	0.933	1017

Table 100. Outcome: Cramps**Exposure: Face Under Water****Indicator: Ig_mean_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.68	0.34, 1.37	0.275	2251
Final Adjusted	0.88	0.42, 1.82	0.731	2251
Final Adjusted - Age Category 1	2.14	0.45, 10.25	0.341	2252
Final Adjusted - Age Category 2	0.93	0.34, 2.56	0.883	2253
Final Adjusted - Age Category 3	0.21	0.02, 2.23	0.194	2253
Final Adjusted - Age Category 4	0.70	0.12, 4.16	0.694	2254
Final Adjusted - Beach 1	22257.12	0.17, 2.85e+09	0.095	2254
Final Adjusted - Beach 2	0.59	0.07, 5.31	0.641	2255
Final Adjusted - Beach 3	1.51	0.61, 3.75	0.379	2255
Final Adjusted - Beach 4	2.63	0.18, 38.56	0.481	2256
Final Adjusted - Beach 5	0.00	0.00, 0.65	0.035	2257
Final Adjusted - Beach 6	1.62	0.17, 15.19	0.673	2257

Table 101. Outcome: Cramps
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.80	0.49, 1.29	0.352	2331
Final Adjusted	0.98	0.58, 1.65	0.941	2330
Final Adjusted - Age Category 1	1.86	0.54, 6.48	0.326	2332
Final Adjusted - Age Category 2	1.22	0.59, 2.53	0.591	2332
Final Adjusted - Age Category 3	0.28	0.06, 1.27	0.100	2333
Final Adjusted - Age Category 4	0.59	0.15, 2.26	0.440	2334
Final Adjusted - Beach 1	1.80E+149	6.2e+146, 5.3e+151	0.000	2335
Final Adjusted - Beach 2	1.70	0.36, 8.11	0.503	2336
Final Adjusted - Beach 3	1.32	0.64, 2.72	0.447	2337
Final Adjusted - Beach 4	4.10	0.47, 36.06	0.203	2338
Final Adjusted - Beach 5	0.05	0.01, 0.56	0.015	2339
Final Adjusted - Beach 6	1.90	0.23, 15.98	0.553	2339

Table 102. Outcome: Cramps
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.35	0.14, 0.89	0.028	2228
Final Adjusted	0.66	0.24, 1.80	0.420	2227
Final Adjusted - Age Category 1	7.39	0.60, 91.60	0.120	2228
Final Adjusted - Age Category 2	0.36	0.09, 1.51	0.163	2229
Final Adjusted - Age Category 3	0.62	0.05, 8.23	0.715	2229
Final Adjusted - Age Category 4	0.27	0.02, 3.35	0.311	2230
Final Adjusted - Beach 1	37.87	0.00, 2863552	0.526	2230
Final Adjusted - Beach 2	0.21	0.02, 2.18	0.191	2231
Final Adjusted - Beach 3	0.71	0.13, 3.75	0.688	2231
Final Adjusted - Beach 4	10.13	0.43, 240.48	0.152	2232
Final Adjusted - Beach 5	0.10	0.00, 13.58	0.362	2232
Final Adjusted - Beach 6	2.29	0.07, 76.45	0.643	2233

Table 103. Outcome: Cramps
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.81	0.57, 1.14	0.222	2303
Final Adjusted	1.04	0.72, 1.51	0.825	2303
Final Adjusted - Age Category 1	1.23	0.49, 3.09	0.662	2304
Final Adjusted - Age Category 2	0.89	0.52, 1.54	0.687	2305
Final Adjusted - Age Category 3	0.81	0.32, 2.07	0.660	2305
Final Adjusted - Age Category 4	1.43	0.62, 3.32	0.402	2306
Final Adjusted - Beach 1	5874.86	0.01, 4.5e+9	0.209	2307
Final Adjusted - Beach 2	1.57	0.50, 4.95	0.438	2308
Final Adjusted - Beach 3	0.99	0.58, 1.71	0.981	2308
Final Adjusted - Beach 4	4.72	0.48, 46.65	0.184	2309
Final Adjusted - Beach 5	0.45	0.13, 1.62	0.223	2310
Final Adjusted - Beach 6	3.57	0.37, 34.83	0.273	2310

Table 104. Outcome: Cramps
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.89	0.51, 1.54	0.665	2355
Final Adjusted	1.11	0.62, 1.97	0.730	2354
Final Adjusted - Age Category 1	1.20	0.29, 4.88	0.801	2356
Final Adjusted - Age Category 2	1.25	0.56, 2.77	0.583	2356
Final Adjusted - Age Category 3	0.36	0.06, 2.20	0.270	2357
Final Adjusted - Age Category 4	1.31	0.36, 4.78	0.684	2357
Final Adjusted - Beach 1	1.10E+265	0, .	0.975	2358
Final Adjusted - Beach 2	0.74	0.12, 4.70	0.749	2359
Final Adjusted - Beach 3	1.28	0.60, 2.72	0.523	2359
Final Adjusted - Beach 4	16.07	1.65, 156.60	0.017	2360
Final Adjusted - Beach 5	0.08	0.00, 1.79	0.111	2361
Final Adjusted - Beach 6	0.91	0.12, 6.66	0.926	2361

Table 105. Outcome: Cramps
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.04	2.84e-06, 507.41	0.500	4509
Final Adjusted	0.02	1.17e-06, 383.58	0.441	4509
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	4510
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	4510
Final Adjusted - Age Category 3	0.00	0.00, 0.00	0.000	4511
Final Adjusted - Age Category 4	0.60	0.05, 7.18	0.685	4511
Final Adjusted - Beach 1	0.00	.	.	4512
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

*too few to analyze

Table 106. Outcome: Cramps
Exposure: Face Under Water
Indicator: lresult_phage_m

Not Analyzed

Table 107. Outcome: Cramps
Exposure: Face Under Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.00	0.309	4527
Final Adjusted	1.00	0.99, 1.00	0.234	4527
Final Adjusted - Age Category 1	1.00	0.98, 1.01	0.531	4527
Final Adjusted - Age Category 2	0.99	0.98, 1.00	0.126	4528
Final Adjusted - Age Category 3	1.00	0.98, 1.01	0.887	4528
Final Adjusted - Age Category 4	1.00	.99, 1.01	0.955	4529
Final Adjusted - Beach 1	1.11	0.90, 1.37	0.325	4529
Final Adjusted - Beach 2	0.94	0.84, 1.06	0.307	4530
Final Adjusted - Beach 3	1.00	0.99, 1.01	0.994	4530
Final Adjusted - Beach 4	1.00	0.98, 1.01	0.654	4530
Final Adjusted - Beach 5	0.99	0.96, 1.01	0.332	4531
Final Adjusted - Beach 6	1.00	0.98, 1.02	0.895	4531

SKIN RASH

Page numbers refer to analysis output "backselectskin.doc"

QA completed by L. Carlton and C. Wright 3/14/05

Table 109. Outcome: Skin Rash**Water Exposure: Water****Indicator: lg_mean_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.84	0.45, 1.56	0.583	604
Final Adjusted	0.66	0.34, 1.29	0.219	603
Final Adjusted - Age Category 1	0.62	0.17, 2.27	0.470	604
Final Adjusted - Age Category 2	0.99	0.37, 2.65	0.981	605
Final Adjusted - Age Category 3	0.61	0.12, 3.15	0.553	605
Final Adjusted - Age Category 4	0.21	0.03, 1.72	0.145	606
Final Adjusted - Beach 1	33.75	0.35, 3255.71	0.131	606
Final Adjusted - Beach 2	1.07	0.22, 5.08	0.933	607
Final Adjusted - Beach 3	1.03	0.41, 2.61	0.950	607
Final Adjusted - Beach 4	0.05	0.00, 1.21	0.066	608
Final Adjusted - Beach 5	0.82	0.04, 15.34	0.896	608
Final Adjusted - Beach 6	0.27	0.027, 2.78	0.273	609

Table 110. Outcome: Skin Rash**Water Exposure: Water****Indicator: lmax_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.05	0.69, 1.59	0.830	635
Final Adjusted	0.92	0.58, 1.47	0.740	635
Final Adjusted - Age Category 1	0.85	0.35, 2.03	0.707	626
Final Adjusted - Age Category 2	1.09	0.53, 2.26	0.818	626
Final Adjusted - Age Category 3	1.07	0.37, 3.15	0.895	627
Final Adjusted - Age Category 4	0.56	0.14, 2.22	0.405	627
Final Adjusted - Beach 1	5.46	0.28, 104.88	0.260	628
Final Adjusted - Beach 2	1.47	0.42, 5.11	0.546	629
Final Adjusted - Beach 3	1.42	0.75, 2.69	0.284	629
Final Adjusted - Beach 4	0.12	0.02, 0.81	0.030	630
Final Adjusted - Beach 5	1.09	0.27, 4.38	0.907	630
Final Adjusted - Beach 6	0.39	0.06, 2.57	0.326	631

Table 111. Outcome: Skin Rash
Water Exposure: Water
Indicator: Ig_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.86	0.39, 1.92	0.720	594
Final Adjusted	0.84	0.34, 2.04	0.699	594
Final Adjusted - Age Category 1	0.22	0.35, 1.38	0.105	595
Final Adjusted - Age Category 2	1.02	0.25, 4.19	0.974	595
Final Adjusted - Age Category 3	3.47	0.45, 26.97	0.235	596
Final Adjusted - Age Category 4	0.60	0.05, 7.64	0.691	597
Final Adjusted - Beach 1	95.85	0.19, 49380.11	0.152	598
Final Adjusted - Beach 2	0.33	0.05, 2.41	0.276	599
Final Adjusted - Beach 3	1.73	0.36, 8.35	0.496	599
Final Adjusted - Beach 4	0.16	0.00, 8.88	0.369	599
Final Adjusted - Beach 5	0.38	0.00, 68.34	0.714	600
Final Adjusted - Beach 6	0.97	0.03, 33.45	0.987	601

Table 112. Outcome: Skin Rash
Water Exposure: Water
Indicator: Imax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.14	0.85, 1.53	0.375	615
Final Adjusted	1.12	0.81, 1.54	0.485	614
Final Adjusted - Age Category 1	0.70	0.36, 1.34	0.279	615
Final Adjusted - Age Category 2	1.19	0.69, 2.05	0.528	616
Final Adjusted - Age Category 3	1.73	0.91, 3.31	0.095	616
Final Adjusted - Age Category 4	1.26	0.56, 2.87	0.579	617
Final Adjusted - Beach 1	5.21	0.17, 157.43	0.342	618
Final Adjusted - Beach 2	1.16	0.44, 3.04	0.767	618
Final Adjusted - Beach 3	1.33	0.85, 2.08	0.219	619
Final Adjusted - Beach 4	0.32	0.03, 2.98	0.314	620
Final Adjusted - Beach 5	1.03	0.29, 3.70	0.967	620
Final Adjusted - Beach 6	0.35	0.03, 4.40	0.415	621

Table 113. Outcome: Skin Rash
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.05	0.65, 1.69	0.846	631
Final Adjusted	0.96	0.57, 1.64	0.892	631
Final Adjusted - Age Category 1	0.98	0.35, 2.74	0.965	632
Final Adjusted - Age Category 2	1.38	0.62, 3.04	0.428	633
Final Adjusted - Age Category 3	0.28	0.05, 1.40	0.120	634
Final Adjusted - Age Category 4	1.83	0.43, 7.87	0.416	634
Final Adjusted - Beach 1	108.92	0.38, 31127.44	0.104	635
Final Adjusted - Beach 2	0.87	0.16, 4.65	0.872	636
Final Adjusted - Beach 3	1.35	0.67, 2.73	0.397	637
Final Adjusted - Beach 4	0.57	0.06, 5.00	0.611	637
Final Adjusted - Beach 5	1.44	0.13, 15.87	0.767	638
Final Adjusted - Beach 6	0.16	0.02, 1.59	0.118	639

Table 114. Outcome: Skin Rash
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.11	0.94, 1.32	0.230	763
Final Adjusted	1.00	0.77, 1.31	0.981	762
Final Adjusted - Age Category 1	1.12	0.77, 1.63	0.558	764
Final Adjusted - Age Category 2	1.17	0.72, 1.91	0.527	764
Final Adjusted - Age Category 3	0.00	.	.	765
Final Adjusted - Age Category 4	0.64	0.07, 5.45	0.679	766
Final Adjusted - Beach 1	15.63	0.00, 5445046	0.673	767
Final Adjusted - Beach 2	0.00	.	.	768
Final Adjusted - Beach 3	0.00	.	.	769
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 115. Outcome: Skin Rash

Water Exposure: Water

Not Analyzed

Indicator: Iresult_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted				
Final Adjusted				
Final Adjusted - Age Category 1				
Final Adjusted - Age Category 2				
Final Adjusted - Age Category 3				
Final Adjusted - Age Category 4				
Final Adjusted - Beach 1				
Final Adjusted - Beach 2				
Final Adjusted - Beach 3				
Final Adjusted - Beach 4				
Final Adjusted - Beach 5				
Final Adjusted - Beach 6				

Table 116. Outcome: Skin Rash

Water Exposure: Water

Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.373	771
Final Adjusted	1.00	1.00, 1.01	0.181	771
Final Adjusted - Age Category 1	1.00	1.00, 1.01	0.257	772
Final Adjusted - Age Category 2	1.00	0.98, 1.01	0.553	772
Final Adjusted - Age Category 3	1.01	0.99, 1.02	0.327	773
Final Adjusted - Age Category 4	1.00	1.00, 1.01	0.261	773
Final Adjusted - Beach 1	0.86	0.58, 1.29	0.472	774
Final Adjusted - Beach 2	0.87	0.75, 1.02	0.087	774
Final Adjusted - Beach 3	1.01	1.00, 1.02	0.168	775
Final Adjusted - Beach 4	1.01	1.00, 1.01	0.010	775
Final Adjusted - Beach 5	1.00	0.97, 1.02	0.821	776
Final Adjusted - Beach 6	0.99	0.97, 1.01	0.436	776

Table 117. Outcome: Skin Rash**Water Exposure: Water**

Not Analyzed

Indicator: Iresult_phage_s**Table 118. Outcome: Skin Rash****Exposure: Face Under Water****Indicator: Ig_mean_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.85	0.42, 1.71	0.649	881
Final Adjusted	0.77	0.36, 1.63	0.491	880
Final Adjusted - Age Category 1	1.06	0.23, 4.92	0.936	881
Final Adjusted - Age Category 2	1.15	0.41, 3.21	0.792	882
Final Adjusted - Age Category 3	0.65	0.10, 4.19	0.647	883
Final Adjusted - Age Category 4	0.07	0.00, 1.53	0.091	883
Final Adjusted - Beach 1	9.49	0.10, 868.49	0.329	884
Final Adjusted - Beach 2	0.79	0.14, 4.55	0.795	884
Final Adjusted - Beach 3	1.20	0.46, 3.15	0.707	885
Final Adjusted - Beach 4	0.13	0.00, 3.67	0.232	886
Final Adjusted - Beach 5	1.31	0.03, 61.75	0.892	886
Final Adjusted - Beach 6	0.07	0.00, 4.45	0.209	887

Table 119. Outcome: Skin Rash**Exposure: Face Under Water****Indicator: Imax_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.14	0.71, 1.85	0.582	962
Final Adjusted	1.09	0.65, 1.83	0.747	961
Final Adjusted - Age Category 1	1.45	0.48, 4.39	0.509	962
Final Adjusted - Age Category 2	1.22	0.58, 2.56	0.596	963
Final Adjusted - Age Category 3	1.34	0.41, 4.44	0.628	964
Final Adjusted - Age Category 4	0.32	0.06, 1.87	0.207	964
Final Adjusted - Beach 1	4.45	0.18, 111.12	0.364	965
Final Adjusted - Beach 2	1.42	0.38, 5.36	0.605	966
Final Adjusted - Beach 3	1.51	0.76, 3.02	0.240	966
Final Adjusted - Beach 4	0.19	0.02, 1.71	0.139	967
Final Adjusted - Beach 5	1.56	0.25, 9.91	0.638	967
Final Adjusted - Beach 6	0.20	0.01, 3.61	0.275	968

Table 120. Outcome: Skin Rash
Exposure: Face Under Water
Indicator: Ig_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.57	0.22, 1.50	0.256	858
Final Adjusted	0.56	0.20, 1.56	0.269	857
Final Adjusted - Age Category 1	0.19	0.02, 2.00	0.168	858
Final Adjusted - Age Category 2	0.91	0.22, 3.78	0.894	859
Final Adjusted - Age Category 3	1.59	0.14, 17.94	0.707	860
Final Adjusted - Age Category 4	0.09	0.00, 2.09	0.135	860
Final Adjusted - Beach 1	143.05	0.22, 93027.70	0.133	861
Final Adjusted - Beach 2	0.15	0.02, 1.14	0.067	861
Final Adjusted - Beach 3	1.36	0.26, 6.96	0.716	862
Final Adjusted - Beach 4	1.40	0.03, 75.26	0.869	862
Final Adjusted - Beach 5	0.02	0.00, 20.52	0.269	863
Final Adjusted - Beach 6	0.00	0.00, 6.57	0.129	863

Table 121. Outcome: Skin Rash
Exposure: Face Under Water
Indicator: Imax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.03	0.73, 1.45	0.871	934
Final Adjusted	1.05	0.71, 1.54	0.811	933
Final Adjusted - Age Category 1	0.59	0.24, 1.43	0.242	935
Final Adjusted - Age Category 2	1.15	0.63, 2.07	0.650	935
Final Adjusted - Age Category 3	1.45	0.62, 3.37	0.392	936
Final Adjusted - Age Category 4	1.21	0.43, 3.36	0.718	937
Final Adjusted - Beach 1	3.18	0.08, 125.43	0.538	937
Final Adjusted - Beach 2	1.05	0.32, 3.45	0.938	938
Final Adjusted - Beach 3	1.46	0.87, 2.45	0.156	939
Final Adjusted - Beach 4	0.75	0.04, 12.91	0.846	940
Final Adjusted - Beach 5	0.38	0.07, 2.07	0.262	940
Final Adjusted - Beach 6	0.00	0.00, 1.20	0.056	941

Table 122. Outcome: Skin Rash
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.23	0.72, 2.12	0.449	983
Final Adjusted	1.21	0.68, 2.16	0.520	983
Final Adjusted - Age Category 1	1.21	0.35, 4.20	0.766	984
Final Adjusted - Age Category 2	1.66	0.75, 3.64	0.211	985
Final Adjusted - Age Category 3	0.31	0.05, 1.88	0.205	985
Final Adjusted - Age Category 4	1.68	0.33, 8.43	0.532	986
Final Adjusted - Beach 1	*tf			
Final Adjusted - Beach 2	*tf			
Final Adjusted - Beach 3	*tf			
Final Adjusted - Beach 4	*tf			
Final Adjusted - Beach 5	*tf			
Final Adjusted - Beach 6	*tf			
* too few to analyze by Beach				

Table 123. Outcome: Skin Rash
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.20	0.98, 1.48	0.080	1356
Final Adjusted	1.04	0.67, 1.62	0.870	1356
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	1358
Final Adjusted - Age Category 2	1.30	0.74, 2.26	0.357	1358
Final Adjusted - Age Category 3	0.00	.	.	1359
Final Adjusted - Age Category 4	0.74	0.08, 6.89	0.789	1360
Final Adjusted - Beach 1	1.44	0.48, 4.29	0.517	1361
Final Adjusted - Beach 2	*tf			
Final Adjusted - Beach 3	*tf			
Final Adjusted - Beach 4	*tf			
Final Adjusted - Beach 5	*tf			
Final Adjusted - Beach 6	*tf			
* too few to analyze by Beach				

Table 124. Outcome: Skin Rash

Exposure: Face Under Water

Not Analyzed

Indicator: Iresult_phage_m

Table 125. Outcome: Skin Rash

Exposure: Face Under Water

Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.959	1364
Final Adjusted	1.00	1.00, 1.01	0.653	1363
Final Adjusted - Age Category 1	1.00	1.00, 1.01	0.274	1364
Final Adjusted - Age Category 2	0.99	0.98, 1.01	0.310	1365
Final Adjusted - Age Category 3	1.01	1.00, 1.02	0.093	1366
Final Adjusted - Age Category 4	0.99	0.95, 1.02	0.364	1366
Final Adjusted - Beach 1	0.86	0.58, 1.27	0.443	1367
Final Adjusted - Beach 2	0.91	0.77, 1.07	0.259	1368
Final Adjusted - Beach 3	1.01	1.00, 1.02	0.300	1368
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.188	1369
Final Adjusted - Beach 5	1.00	0.97, 1.03	0.984	1370
Final Adjusted - Beach 6	1.00	0.98, 1.03	0.907	1370

Table 126. Outcome: Skin Rash

Exposure: Face Under Water

Not Analyzed

Indicator: Iresult_phage_s

RESPIRATORY SYMPTOMS

Page numbers refer to analysis output "backselectresp.doc"

QA Completed by L. Carlton and C. Wright 3/14/05

Table 127. Outcome: SRD**Water Exposure: Water****Indicator: lg_mean_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.73	0.39, 1.39	0.341	11
Final Adjusted	0.69	0.35, 1.35	0.277	11
Final Adjusted - Age Category 1	1.08	0.27, 4.35	0.912	11
Final Adjusted - Age Category 2	0.37	0.10, 1.42	0.147	12
Final Adjusted - Age Category 3	1.01	0.28, 3.68	0.983	12
Final Adjusted - Age Category 4	0.63	0.15, 2.62	0.521	13
Final Adjusted - Beach 1	0.12	0.00, 6.65	0.302	13
Final Adjusted - Beach 2	0.17	0.01, 2.34	0.185	14
Final Adjusted - Beach 3	1.43	0.51, 3.99	0.493	14
Final Adjusted - Beach 4	0.95	0.12, 7.35	0.959	15
Final Adjusted - Beach 5	0.27	0.02, 3.37	0.307	15
Final Adjusted - Beach 6	1.09	0.27, 4.42	0.909	16

Table 128. Outcome: SRD**Water Exposure: Water****Indicator: lmax_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.75	0.48, 1.16	0.192	32
Final Adjusted	0.68	0.44, 1.07	0.097	32
Final Adjusted - Age Category 1	0.84	0.33, 2.15	0.715	33
Final Adjusted - Age Category 2	0.64	0.28, 1.48	0.299	33
Final Adjusted - Age Category 3	0.59	0.24, 1.48	0.265	34
Final Adjusted - Age Category 4	0.67	0.27, 1.68	0.394	34
Final Adjusted - Beach 1	0.22	0.02, 2.60	0.232	35
Final Adjusted - Beach 2	0.37	0.08, 1.65	0.192	35
Final Adjusted - Beach 3	1.16	0.56, 2.41	0.694	35
Final Adjusted - Beach 4	0.62	0.14, 2.85	0.543	36
Final Adjusted - Beach 5	0.67	0.22, 2.04	0.479	36
Final Adjusted - Beach 6	1.26	0.41, 3.92	0.684	37

Table 129. Outcome: SRD
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.73	0.32, 1.65	0.450	3
Final Adjusted	1.15	0.47, 2.79	0.757	3
Final Adjusted - Age Category 1	3.81	0.61, 23.73	0.152	4
Final Adjusted - Age Category 2	0.38	0.07, 2.10	0.267	4
Final Adjusted - Age Category 3	2.24	0.36, 13.78	0.385	5
Final Adjusted - Age Category 4	0.83	0.13, 5.41	0.847	6
Final Adjusted - Beach 1	0.24	0.00, 37.46	0.582	6
Final Adjusted - Beach 2	3.52	0.33, 37.01	0.295	7
Final Adjusted - Beach 3	3.78	0.60, 23.80	0.157	7
Final Adjusted - Beach 4	0.23	0.01, 5.19	0.356	8
Final Adjusted - Beach 5	5.71	0.10, 334.82	0.402	8
Final Adjusted - Beach 6	0.80	0.08, 8.30	0.851	9

Table 130. Outcome: SRD
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.92	0.68, 1.26	0.612	26
Final Adjusted	1.11	0.80, 1.52	0.541	25
Final Adjusted - Age Category 1	2.13	1.16, 3.93	0.015	26
Final Adjusted - Age Category 2	0.71	0.37, 1.39	0.319	27
Final Adjusted - Age Category 3	1.08	0.57, 2.04	0.807	27
Final Adjusted - Age Category 4	0.85	0.42, 1.72	0.651	28
Final Adjusted - Beach 1	0.16	0.01, 2.92	0.214	28
Final Adjusted - Beach 2	4.86	1.95, 12.13	0.001	29
Final Adjusted - Beach 3	1.15	0.68, 1.94	0.606	29
Final Adjusted - Beach 4	0.67	0.12, 3.88	0.654	30
Final Adjusted - Beach 5	1.22	0.46, 3.23	0.696	30
Final Adjusted - Beach 6	0.72	0.17, 3.10	0.657	31

Table 131. Outcome: SRD
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.75	0.45, 1.26	0.273	39
Final Adjusted	0.83	0.48, 1.44	0.507	38
Final Adjusted - Age Category 1	2.01	0.74, 5.44	0.171	39
Final Adjusted - Age Category 2	0.37	0.12, 1.16	0.089	40
Final Adjusted - Age Category 3	1.60	0.59, 4.38	0.358	40
Final Adjusted - Age Category 4	0.31	0.08, 1.20	0.089	41
Final Adjusted - Beach 1	0.86	0.04, 18.00	0.924	41
Final Adjusted - Beach 2	0.16	0.02, 1.52	0.111	42
Final Adjusted - Beach 3	1.39	0.62, 3.15	0.424	42
Final Adjusted - Beach 4	1.51	0.32, 7.05	0.600	43
Final Adjusted - Beach 5	0.54	0.07, 3.90	0.538	43
Final Adjusted - Beach 6	0.90	0.24, 3.34	0.877	44

Table 132. Outcome: SRD
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.09	0.92, 1.30	0.324	601
Final Adjusted	1.05	0.85, 1.31	0.640	600
Final Adjusted - Age Category 1	1.18	0.83, 1.69	0.351	601
Final Adjusted - Age Category 2	1.06	0.54, 2.05	0.874	602
Final Adjusted - Age Category 3	0.54	0.05, 5.99	0.619	602
Final Adjusted - Age Category 4	1.07	0.77, 1.48	0.699	603
Final Adjusted - Beach 1	0.00	.	.	604
Final Adjusted - Beach 2	0.00	.	.	604
Final Adjusted - Beach 3	1.12	0.48, 2.65	0.791	605
Final Adjusted - Beach 4	tf*			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze

Table 133. Outcome: SRD

Water Exposure: Water
Indicator: Iresult_phage_m

Not Analyzed

Table 134. Outcome: SRD

Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.062	607
Final Adjusted	No Change			
Final Adjusted - Age Category 1	1.01	1.00, 1.01	0.005	607
Final Adjusted - Age Category 2	0.99	0.97, 1.01	0.296	607
Final Adjusted - Age Category 3	1.00	0.99, 1.01	0.433	608
Final Adjusted - Age Category 4	1.00	0.99, 1.01	0.667	608
Final Adjusted - Beach 1	0.91	0.66, 1.27	0.593	609
Final Adjusted - Beach 2	1.00	0.98, 1.02	0.997	609
Final Adjusted - Beach 3	1.00	0.99, 1.01	0.643	609
Final Adjusted - Beach 4	1.01	1.00, 1.01	0.001	610
Final Adjusted - Beach 5	1.00	0.98, 1.02	0.874	610
Final Adjusted - Beach 6	0.99	0.98, 1.01	0.372	610
Adjusted values not available				

Table 135. Outcome: SRD

Water Exposure: Water
Indicator: Iresult_phage_s

Not Analyzed

Table 136. Outcome: SRD
Exposure: Face Under Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.94	0.43, 2.04	0.866	942
Final Adjusted	0.88	0.37, 2.12	0.784	942
Final Adjusted - Age Category 1	2.79	0.53, 14.75	0.226	943
Final Adjusted - Age Category 2	0.28	0.05, 1.59	0.152	944
Final Adjusted - Age Category 3	1.86	0.38, 9.16	0.447	944
Final Adjusted - Age Category 4	0.46	0.04, 5.33	0.534	945
Final Adjusted - Beach 1	37.51	0.02, 61590.69	0.337	946
Final Adjusted - Beach 2	0.23	0.01, 9.98	0.443	947
Final Adjusted - Beach 3	0.82	0.20, 3.41	0.788	947
Final Adjusted - Beach 4	1.72	0.14, 21.33	0.674	948
Final Adjusted - Beach 5	0.01	0.00, 3.24	0.125	949
Final Adjusted - Beach 6	0.74	0.12, 4.56	0.743	949

Table 137. Outcome: SRD
Exposure: Face Under Water Not Analyzed
Indicator: lmax_station_entero

Table 138. Outcome: SRD
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.66	0.22, 1.95	0.454	918
Final Adjusted	1.00	0.30, 3.39	0.998	917
Final Adjusted - Age Category 1	6.13	0.40, 94.78	0.194	919
Final Adjusted - Age Category 2	0.43	0.06, 3.26	0.414	919
Final Adjusted - Age Category 3	4.52	0.35, 57.80	0.246	920
Final Adjusted - Age Category 4	0.07	0.00, 2.47	0.146	921
Final Adjusted - Beach 1	80.97	0.01, 1018404	0.362	922
Final Adjusted - Beach 2	0.16	0.00, 12.86	0.413	923
Final Adjusted - Beach 3	3.97	0.39, 40.30	0.244	924
Final Adjusted - Beach 4	0.13	0.00, 7.86	0.327	925
Final Adjusted - Beach 5	2.35	0.00, 1478.64	0.795	926
Final Adjusted - Beach 6	1.18	0.04, 35.30	0.926	926

Table 139. Outcome: SRD
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.74	0.49, 1.13	0.163	995
Final Adjusted	0.84	0.55, 1.29	0.427	994
Final Adjusted - Age Category 1	1.21	0.49, 2.95	0.680	995
Final Adjusted - Age Category 2	0.71	0.35, 1.48	0.366	996
Final Adjusted - Age Category 3	1.09	0.49, 2.46	0.828	996
Final Adjusted - Age Category 4	0.42	0.13, 1.38	0.154	997
Final Adjusted - Beach 1	2.30	0.01, 366.55	0.748	997
Final Adjusted - Beach 2	1.23	0.26, 5.95	0.795	997
Final Adjusted - Beach 3	1.07	0.57, 2.01	0.843	998
Final Adjusted - Beach 4	0.63	0.09, 4.65	0.655	998
Final Adjusted - Beach 5	0.92	0.23, 3.73	0.904	999
Final Adjusted - Beach 6	0.55	0.08, 3.67	0.540	999

Table 140. Outcome: SRD
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.85	0.44, 1.64	0.633	1037
Final Adjusted	0.91	0.43, 1.93	0.814	1037
Final Adjusted - Age Category 1	4.87	1.29, 18.34	0.019	1038
Final Adjusted - Age Category 2	0.47	0.12, 1.84	0.278	1038
Final Adjusted - Age Category 3	0.63	0.13, 3.07	0.572	1039
Final Adjusted - Age Category 4	0.39	0.04, 3.65	0.407	1040
Final Adjusted - Beach 1	8.96	0.01, 9056.98	0.535	1041
Final Adjusted - Beach 2	0.51	0.02, 12.18	0.674	1042
Final Adjusted - Beach 3	0.72	0.22, 2.33	0.584	1042
Final Adjusted - Beach 4	1.46	0.19, 11.09	0.717	1043
Final Adjusted - Beach 5	0.06	0.00, 2.99	0.158	1044
Final Adjusted - Beach 6	1.62	0.27, 9.76	0.598	1044

Table 141. Outcome: SRD
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.38	0.02, 7.73	0.531	2811
Final Adjusted	0.30	0.01, 10.55	0.506	2810
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	2811
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	2812
Final Adjusted - Age Category 3	0.69	0.10, 4.87	0.714	2812
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	2813
Final Adjusted - Beach 1	0.00	.	.	2813
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			
* Too few to analyze				

Table 142. Outcome: SRD
Exposure: Face Under Water Not Analyzed
Indicator: Iresult_phage_m

Table 143. Outcome: SRD
Exposure: Face Under Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.96	0.92, 1.00	0.046	2837
Final Adjusted	No Change			
Final Adjusted - Age Category 1	1.01	1.00, 1.02	0.003	2838
Final Adjusted - Age Category 2	0.99	0.98, 1.01	0.410	2838
Final Adjusted - Age Category 3	1.00	1.00, 1.01	0.260	2838
Final Adjusted - Age Category 4	1.01	1.00, 1.01	0.128	2839
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	2839
Final Adjusted - Beach 2	1.00	0.97, 1.03	0.951	2840
Final Adjusted - Beach 3	1.00	0.99, 1.02	0.490	2840
Final Adjusted - Beach 4	1.01	1.00, 1.01	0.004	2841
Final Adjusted - Beach 5	1.00	0.98, 1.03	0.802	2841
Final Adjusted - Beach 6	0.99	0.97, 1.01	0.316	2841

All results are Unadjusted

Table 144. Outcome: SRD
Exposure: Face Under Water
Indicator: Iresult_phage_s

Not Analyzed

Table 145. Outcome: Cough
Water Exposure: Water
Indicator: Ig_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.89	0.37, 2.12	0.789	52
Final Adjusted	0.69	0.25, 1.86	0.459	52
Final Adjusted - Age Category 1	0.13	0.01, 1.81	0.127	53
Final Adjusted - Age Category 2	0.40	0.06, 2.48	0.325	53
Final Adjusted - Age Category 3	1.69	0.29, 9.80	0.558	54
Final Adjusted - Age Category 4	2.32	0.35, 15.28	0.380	54
Final Adjusted - Beach 1	0.54	0.01, 21.75	0.744	55
Final Adjusted - Beach 2	0.52	0.02, 13.04	0.690	55
Final Adjusted - Beach 3	1.32	0.25, 6.95	0.743	56
Final Adjusted - Beach 4	0.12	0.00, 4.72	0.257	56
Final Adjusted - Beach 5	0.00	0.00, 60.59	0.130	57
Final Adjusted - Beach 6	0.66	0.10, 4.42	0.672	57

Table 146. Outcome: Cough
Water Exposure: Water
Indicator: Imax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.85	0.46, 1.55	0.589	72
Final Adjusted	0.78	0.40, 1.51	0.458	72
Final Adjusted - Age Category 1	0.69	0.17, 2.81	0.600	72
Final Adjusted - Age Category 2	0.49	0.15, 1.66	0.253	73
Final Adjusted - Age Category 3	0.77	0.20, 3.04	0.714	73
Final Adjusted - Age Category 4	2.08	0.56, 7.73	0.275	74
Final Adjusted - Beach 1	0.86	0.07, 10.07	0.905	74
Final Adjusted - Beach 2	1.23	0.17, 8.93	0.838	75
Final Adjusted - Beach 3	0.99	0.30, 3.29	0.983	75
Final Adjusted - Beach 4	0.40	0.05, 3.43	0.402	76
Final Adjusted - Beach 5	0.00	0.00, 1.88	0.077	76
Final Adjusted - Beach 6	0.62	0.13, 2.87	0.541	77

Table 147. Outcome: Cough
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.38	0.12, 1.21	0.102	46
Final Adjusted	0.50	0.14, 1.76	0.278	45
Final Adjusted - Age Category 1	0.28	0.02, 4.00	0.348	46
Final Adjusted - Age Category 2	0.07	0.01, 0.82	0.034	47
Final Adjusted - Age Category 3	2.35	0.17, 31.61	0.519	47
Final Adjusted - Age Category 4	3.73	0.27, 51.66	0.327	48
Final Adjusted - Beach 1	2.09	0.02, 191.05	0.748	48
Final Adjusted - Beach 2	0.39	0.02, 8.37	0.550	48
Final Adjusted - Beach 3	0.38	0.03, 5.74	0.485	49
Final Adjusted - Beach 4	0.07	0.00, 6.20	0.245	49
Final Adjusted - Beach 5	0.00	0.00, 5.20	0.090	50
Final Adjusted - Beach 6	0.55	0.03, 11.05	0.698	50

Table 148. Outcome: Cough
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.56	0.35, 0.91	0.018	65
Final Adjusted	0.57	0.34, 0.97	0.039	65
Final Adjusted - Age Category 1	0.72	0.26, 1.99	0.528	66
Final Adjusted - Age Category 2	0.33	0.12, 0.91	0.033	66
Final Adjusted - Age Category 3	0.51	0.16, 1.61	0.252	67
Final Adjusted - Age Category 4	1.09	0.40, 3.00	0.867	67
Final Adjusted - Beach 1	3.40	0.22, 53.02	0.382	68
Final Adjusted - Beach 2	1.54	0.43, 5.57	0.509	68
Final Adjusted - Beach 3	0.50	0.19, 1.35	0.170	69
Final Adjusted - Beach 4	0.23	0.02, 2.56	0.232	69
Final Adjusted - Beach 5	0.05	0.00, 0.64	0.021	70
Final Adjusted - Beach 6	0.09	0.01, 1.24	0.072	70

Table 149. Outcome: Cough
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.52	0.23, 1.14	0.102	79
Final Adjusted	0.52	0.22, 1.21	0.128	78
Final Adjusted - Age Category 1	0.04	0.00, 0.63	0.022	79
Final Adjusted - Age Category 2	0.43	0.10, 1.86	0.259	80
Final Adjusted - Age Category 3	2.08	0.46, 9.40	0.341	80
Final Adjusted - Age Category 4	1.11	0.19, 6.37	0.910	81
Final Adjusted - Beach 1	2.87	0.16, 51.93	0.476	81
Final Adjusted - Beach 2	0.07	0.00, 1.73	0.105	81
Final Adjusted - Beach 3	1.18	0.34, 4.12	0.792	82
Final Adjusted - Beach 4	0.23	0.01, 3.61	0.296	82
Final Adjusted - Beach 5	0.01	0.00, 35.57	0.272	83
Final Adjusted - Beach 6	0.13	0.02, 1.03	0.053	83

Table 150. Outcome: Cough
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.21	1.01, 1.46	0.039	612
Final Adjusted	1.22	1.02, 1.48	0.029	612
Final Adjusted - Age Category 1	1.63	1.23, 2.15	0.001	613
Final Adjusted - Age Category 2	0.56	0.02, 12.53	0.712	613
Final Adjusted - Age Category 3	0.00	.	.	614
Final Adjusted - Age Category 4	1.21	0.88, 1.67	0.235	614
Final Adjusted - Beach 1	0.00	.	.	614
Final Adjusted - Beach 2	0.00	.	.	615
Final Adjusted - Beach 3	0.00	.	.	615
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 151. Outcome: Cough
Water Exposure: Water
Indicator: Iresult_phage_m

Not Analyzed

Table 152. Outcome: Cough
Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.995	618
Final Adjusted	1.00	1.00, 1.01	0.577	617
Final Adjusted - Age Category 1	0.99	0.97, 1.02	0.526	618
Final Adjusted - Age Category 2	0.99	0.96, 1.02	0.407	619
Final Adjusted - Age Category 3	1.01	0.99, 1.02	0.434	619
Final Adjusted - Age Category 4	1.01	1.00, 1.01	0.130	620
Final Adjusted - Beach 1	0.90	0.63, 1.30	0.574	621
Final Adjusted - Beach 2	0.94	0.79, 1.12	0.480	621
Final Adjusted - Beach 3	1.00	0.98, 1.02	0.994	622
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.260	622
Final Adjusted - Beach 5	1.01	0.98, 1.05	0.399	623
Final Adjusted - Beach 6	1.00	0.97, 1.02	0.719	623

Table 153. Outcome: Cough
Water Exposure: Water
Indicator: Iresult_phage_s

Not Analyzed

Table 154. Outcome: Cough
Exposure: Face Under Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.67	0.23, 2.00	0.478	1082
Final Adjusted	0.67	0.21, 2.17	0.508	1081
Final Adjusted - Age Category 1	0.03	0.00, 2.77	0.132	1082
Final Adjusted - Age Category 2	0.50	0.08, 3.09	0.459	1083
Final Adjusted - Age Category 3	2.78	0.40, 19.07	0.299	1083
Final Adjusted - Age Category 4	0.98	0.08, 12.59	0.989	1084
Final Adjusted - Beach 1	0.34	0.00, 68.81	0.693	1084
Final Adjusted - Beach 2	0.52	0.02, 14.85	0.703	1085
Final Adjusted - Beach 3	0.78	0.11, 5.47	0.799	1085
Final Adjusted - Beach 4	0.20	0.00, 13.67	0.455	1085
Final Adjusted - Beach 5	0.00	0.00, 724.47	0.250	1086
Final Adjusted - Beach 6	0.87	0.09, 8.23	0.901	1086

Table 155. Outcome: Cough
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.71	0.33, 1.51	0.368	1142
Final Adjusted	0.71	0.32, 1.60	0.414	1142
Final Adjusted - Age Category 1	0.20	0.02, 1.98	0.167	1142
Final Adjusted - Age Category 2	0.61	0.18, 2.06	0.429	1143
Final Adjusted - Age Category 3	1.37	0.27, 6.82	0.701	1143
Final Adjusted - Age Category 4	1.29	0.22, 7.66	0.781	1144
Final Adjusted - Beach 1	0.38	0.01, 15.26	0.607	1144
Final Adjusted - Beach 2	1.77	0.21, 14.77	0.598	1145
Final Adjusted - Beach 3	0.80	0.21, 3.13	0.752	1145
Final Adjusted - Beach 4	0.26	0.02, 3.97	0.332	1146
Final Adjusted - Beach 5	0.01	0.00, 6.62	0.163	1146
Final Adjusted - Beach 6	0.55	0.07, 4.26	0.567	1147

Table 156. Outcome: Cough
Exposure: Face Under Water
Indicator: Ig_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.19	0.04, 0.84	0.028	1060
Final Adjusted	0.28	0.06, 1.37	0.116	1060
Final Adjusted - Age Category 1	0.24	0.00, 14.03	0.490	1061
Final Adjusted - Age Category 2	0.09	0.01, 1.11	0.060	1061
Final Adjusted - Age Category 3	10.74	0.34, 334.96	0.176	1062
Final Adjusted - Age Category 4	0.08	0.00, 4.61	0.220	1062
Final Adjusted - Beach 1	11.33	0.01, 9371.09	0.479	1063
Final Adjusted - Beach 2	0.09	0.00, 4.00	0.212	1063
Final Adjusted - Beach 3	0.10	0.00, 2.12	0.140	1064
Final Adjusted - Beach 4	0.03	0.00, 19.00	0.293	1064
Final Adjusted - Beach 5	0.00	0.00, 438.33	0.334	1065
Final Adjusted - Beach 6	0.68	0.01, 31.48	0.845	1065

Table 157. Outcome: Cough
Exposure: Face Under Water
Indicator: Imax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.41	0.22, 0.75	0.004	1122
Final Adjusted	0.41	0.22, 0.79	0.008	1121
Final Adjusted - Age Category 1	0.77	0.19, 3.18	0.716	1122
Final Adjusted - Age Category 2	0.33	0.12, 0.92	0.035	1123
Final Adjusted - Age Category 3	0.61	0.16, 2.26	0.457	1123
Final Adjusted - Age Category 4	0.25	0.05, 1.26	0.092	1123
Final Adjusted - Beach 1	1.99	0.04, 101.95	0.733	1124
Final Adjusted - Beach 2	0.59	0.09, 3.83	0.577	1124
Final Adjusted - Beach 3	0.43	0.14, 1.31	0.138	1125
Final Adjusted - Beach 4	0.15	0.01, 3.13	0.223	1125
Final Adjusted - Beach 5	0.08	0.00, 1.67	0.103	1126
Final Adjusted - Beach 6	0.12	0.01, 2.38	0.163	1126

Table 158. Outcome: Cough
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.58	0.23, 1.47	0.253	1155
Final Adjusted	0.63	0.23, 1.74	0.372	1155
Final Adjusted - Age Category 1	0.05	0.00, 2.04	0.114	1156
Final Adjusted - Age Category 2	0.44	0.09, 2.18	0.317	1156
Final Adjusted - Age Category 3	3.77	0.66, 21.61	0.137	1157
Final Adjusted - Age Category 4	0.75	0.07, 7.85	0.809	1157
Final Adjusted - Beach 1	1.36	0.02, 105.24	0.889	1158
Final Adjusted - Beach 2	0.08	0.00, 3.56	0.191	1158
Final Adjusted - Beach 3	1.10	0.25, 4.86	0.901	1159
Final Adjusted - Beach 4	0.57	0.03, 10.96	0.707	1160
Final Adjusted - Beach 5	0.03	0.00, 54.30	0.369	1160
Final Adjusted - Beach 6	0.35	0.03, 3.64	0.382	1161

Table 159. Outcome: Cough
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.16	0.84, 1.59	0.371	2866
Final Adjusted	1.25	0.90, 1.73	0.179	2865
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	2866
Final Adjusted - Age Category 2	0.58	0.02, 14.36	0.738	2867
Final Adjusted - Age Category 3	0.00	.	.	2868
Final Adjusted - Age Category 4	1.42	1.02, 1.99	0.040	2868
Final Adjusted - Beach 1	0.00	.	.	2869
Final Adjusted - Beach 2	tf*			
Final Adjusted - Beach 3	tf			
Final Adjusted - Beach 4	tf			
Final Adjusted - Beach 5	tf			
Final Adjusted - Beach 6	tf			

* Too few to analyze

**Table 160. Outcome: Cough
Exposure: Face Under Water
Indicator: Iresult_phage_m**

Not Analyzed

**Table 161. Outcome: Cough
Exposure: Face Under Water
Indicator: result_phage_s**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.736	2896
Final Adjusted	1.00	1.00, 1.01	0.419	2896
Final Adjusted - Age Category 1	1.00	0.99, 1.02	0.955	2896
Final Adjusted - Age Category 2	0.98	0.95, 1.01	0.276	2897
Final Adjusted - Age Category 3	1.00	0.99, 1.02	0.541	2897
Final Adjusted - Age Category 4	1.01	1.00, 1.02	0.052	2898
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	2898
Final Adjusted - Beach 2	0.47	0.03, 6.84	0.584	2899
Final Adjusted - Beach 3	1.00	0.98, 1.02	0.758	2899
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.176	2900
Final Adjusted - Beach 5	1.02	0.98, 1.06	0.450	2900
Final Adjusted - Beach 6	1.00	0.98, 1.03	0.848	2901

**Table 162. Outcome: Cough
Exposure: Face Under Water
Indicator: Iresult_phage_s**

Not Analyzed

Table 163. Outcome: Fever
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.64	0.33, 1.24	0.185	95
Final Adjusted	0.61	0.31, 1.22	0.161	95
Final Adjusted - Age Category 1	0.33	0.09, 1.27	0.107	95
Final Adjusted - Age Category 2	0.64	0.19, 2.16	0.476	96
Final Adjusted - Age Category 3	2.4	0.64, 8.99	0.195	96
Final Adjusted - Age Category 4	0.34	0.05, 2.33	0.274	97
Final Adjusted - Beach 1	0.01	0.00, 2.80	0.114	97
Final Adjusted - Beach 2	0.86	0.13, 5.71	0.872	98
Final Adjusted - Beach 3	1.64	0.62, 4.33	0.321	98
Final Adjusted - Beach 4	0.30	0.02, 4.23	0.374	99
Final Adjusted - Beach 5	0.58	0.06, 5.60	0.640	99
Final Adjusted - Beach 6	0.52	0.11, 2.38	0.398	99

Table 164. Outcome: Fever
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.83	0.53, 1.28	0.396	118
Final Adjusted	0.81	0.51, 1.27	0.354	118
Final Adjusted - Age Category 1	0.70	0.32, 1.53	0.373	119
Final Adjusted - Age Category 2	0.87	0.38, 1.95	0.728	119
Final Adjusted - Age Category 3	1.09	0.39, 3.07	0.870	120
Final Adjusted - Age Category 4	0.69	0.22, 2.13	0.514	120
Final Adjusted - Beach 1	0.19	0.01, 3.59	0.267	121
Final Adjusted - Beach 2	1.11	0.30, 4.10	0.872	121
Final Adjusted - Beach 3	1.58	0.78, 3.21	0.205	122
Final Adjusted - Beach 4	0.40	0.07, 2.30	0.305	122
Final Adjusted - Beach 5	1.18	0.43, 3.26	0.750	123
Final Adjusted - Beach 6	0.92	0.24, 3.50	0.904	123

Table 165. Outcome: Fever
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.59	0.26, 1.36	0.219	85
Final Adjusted	0.98	0.39, 2.43	0.962	85
Final Adjusted - Age Category 1	0.74	0.16, 3.44	0.698	86
Final Adjusted - Age Category 2	1.42	0.28, 7.28	0.671	87
Final Adjusted - Age Category 3	1.10	0.12, 9.98	0.933	88
Final Adjusted - Age Category 4	0.67	0.05, 8.20	0.752	88
Final Adjusted - Beach 1	0.11	0.00, 102.25	0.525	89
Final Adjusted - Beach 2	1.50	0.13, 17.29	0.747	90
Final Adjusted - Beach 3	5.66	0.92, 34.71	0.061	91
Final Adjusted - Beach 4	0.13	0.00, 7.47	0.328	91
Final Adjusted - Beach 5	5.98	0.10, 373.32	0.397	92
Final Adjusted - Beach 6	1.72	0.12, 25.69	0.695	93

Table 166. Outcome: Fever
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.95	0.70, 1.29	0.739	110
Final Adjusted	1.09	0.78, 1.53	0.607	109
Final Adjusted - Age Category 1	1.22	0.70, 2.11	0.482	110
Final Adjusted - Age Category 2	1.23	0.67, 2.26	0.496	111
Final Adjusted - Age Category 3	0.93	0.41, 2.07	0.853	112
Final Adjusted - Age Category 4	0.57	0.19, 1.65	0.298	112
Final Adjusted - Beach 1	0.12	0.00, 6.21	0.296	113
Final Adjusted - Beach 2	2.63	1.01, 6.87	0.048	114
Final Adjusted - Beach 3	1.20	0.70, 2.05	0.502	114
Final Adjusted - Beach 4	0.53	0.06, 4.66	0.566	115
Final Adjusted - Beach 5	1.88	0.66, 5.36	0.235	116
Final Adjusted - Beach 6	1.67	0.33, 8.51	0.537	116

Table 167. Outcome: Fever
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.67	0.39, 1.14	0.136	125
Final Adjusted	No Change			
Final Adjusted - Age Category 1	0.48	0.19, 1.21	0.120	125
Final Adjusted - Age Category 2	0.93	0.38, 2.29	0.876	125
Final Adjusted - Age Category 3	1.13	0.34, 3.78	0.841	126
Final Adjusted - Age Category 4	0.34	0.07, 1.63	0.176	126
Final Adjusted - Beach 1	0.07	0.00, 2.17	0.128	127
Final Adjusted - Beach 2	0.55	0.11, 2.77	0.466	127
Final Adjusted - Beach 3	1.70	0.84, 3.44	0.143	127
Final Adjusted - Beach 4	0.23	0.03, 2.09	0.192	128
Final Adjusted - Beach 5	0.66	0.12, 3.77	0.639	128
Final Adjusted - Beach 6	0.39	0.10, 1.49	0.168	129
No adjusted results available				

Table 168. Outcome: Fever
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.22	1.07, 1.40	0.004	625
Final Adjusted	1.25	1.09, 1.44	0.001	625
Final Adjusted - Age Category 1	1.51	1.16, 1.97	0.002	626
Final Adjusted - Age Category 2	1.19	0.84, 1.68	0.322	626
Final Adjusted - Age Category 3	0.35	0.00, 88.64	0.713	626
Final Adjusted - Age Category 4	1.18	0.86, 1.63	0.298	627
Final Adjusted - Beach 1	0.00	.	.	627
Final Adjusted - Beach 2	0.00	.	.	628
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 169. Outcome: Fever
Water Exposure: Water
Indicator: Iresult_phage_m

Not Analyzed

Table 170. Outcome: Fever
Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.452	630
Final Adjusted	1.00	1.00, 1.01	0.374	630
Final Adjusted - Age Category 1	1.00	1.00, 1.01	0.111	631
Final Adjusted - Age Category 2	1.00	0.99, 1.01	0.876	631
Final Adjusted - Age Category 3	1.00	1.00, 1.01	0.216	632
Final Adjusted - Age Category 4	0.98	0.95, 1.01	0.153	632
Final Adjusted - Beach 1	0.94	0.68, 1.29	0.696	632
Final Adjusted - Beach 2	1.00	0.98, 1.02	0.702	633
Final Adjusted - Beach 3	1.01	0.99, 1.02	0.354	633
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.148	634
Final Adjusted - Beach 5	0.99	0.96, 1.01	0.230	634
Final Adjusted - Beach 6	1.00	0.99, 1.02	0.546	634

Table 171. Outcome: Fever
Water Exposure: Water
Indicator: Iresult_phage_s

Not Analyzed

Table 172. Outcome: Fever
Exposure: Face Under Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.73	0.34, 1.60	0.438	1205
Final Adjusted	0.75	0.33, 1.71	0.499	1204
Final Adjusted - Age Category 1	0.24	0.04, 1.45	0.121	1205
Final Adjusted - Age Category 2	0.79	0.22, 2.89	0.721	1206
Final Adjusted - Age Category 3	2.37	0.56, 9.94	0.239	1206
Final Adjusted - Age Category 4	0.49	0.02, 15.61	0.684	1207
Final Adjusted - Beach 1	0.02	0.00, 34.35	0.313	1207
Final Adjusted - Beach 2	0.49	0.05, 5.26	0.556	1208
Final Adjusted - Beach 3	1.46	0.50, 4.24	0.491	1208
Final Adjusted - Beach 4	0.43	0.02, 8.11	0.574	1209
Final Adjusted - Beach 5	0.10	0.00, 4.63	0.238	1209
Final Adjusted - Beach 6	0.68	0.10, 4.58	0.696	1210

Table 173. Outcome: Fever
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.87	0.51, 1.50	0.625	1282
Final Adjusted	0.87	0.49, 1.55	0.643	1282
Final Adjusted - Age Category 1	0.45	0.15, 1.38	0.162	1283
Final Adjusted - Age Category 2	0.98	0.39, 2.48	0.965	1283
Final Adjusted - Age Category 3	1.60	0.50, 5.12	0.429	1284
Final Adjusted - Age Category 4	0.85	0.09, 7.76	0.882	1284
Final Adjusted - Beach 1	0.05	0.00, 7.07	0.238	1285
Final Adjusted - Beach 2	0.95	0.19, 4.84	0.948	1286
Final Adjusted - Beach 3	1.34	0.60, 3.00	0.477	1286
Final Adjusted - Beach 4	0.73	0.08, 6.46	0.775	1287
Final Adjusted - Beach 5	0.38	0.05, 2.67	0.332	1287
Final Adjusted - Beach 6	0.84	0.14, 4.99	0.851	1288

Table 174. Outcome: Fever
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.01	0.36, 2.83	0.979	1181
Final Adjusted	1.62	0.52, 5.00	0.404	1181
Final Adjusted - Age Category 1	1.71	0.22, 13.30	0.608	1182
Final Adjusted - Age Category 2	1.02	0.17, 5.97	0.982	1183
Final Adjusted - Age Category 3	1.07	0.08, 13.62	0.961	1183
Final Adjusted - Age Category 4	20.16	0.23, 1732.41	0.186	1184
Final Adjusted - Beach 1	0.36	0.00, 2798.96	0.824	1185
Final Adjusted - Beach 2	0.53	0.04, 7.08	0.632	1185
Final Adjusted - Beach 3	5.89	0.80, 43.32	0.082	1186
Final Adjusted - Beach 4	0.51	0.00, 95.60	0.803	1187
Final Adjusted - Beach 5	1.06	0.00, 429.00	0.985	1187
Final Adjusted - Beach 6	9.01	0.28, 290.38	0.215	1188

Table 175. Outcome: Fever
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.02	0.71, 1.49	0.878	1257
Final Adjusted	1.22	0.81, 1.82	0.343	1256
Final Adjusted - Age Category 1	1.37	0.68, 2.75	0.381	1258
Final Adjusted - Age Category 2	1.15	0.60, 2.21	0.682	1258
Final Adjusted - Age Category 3	0.76	0.29, 2.01	0.578	1259
Final Adjusted - Age Category 4	2.17	0.56, 8.39	0.260	1260
Final Adjusted - Beach 1	0.31	0.00, 82.40	0.678	1260
Final Adjusted - Beach 2	1.50	0.49, 4.58	0.481	1261
Final Adjusted - Beach 3	1.27	0.70, 2.29	0.437	1262
Final Adjusted - Beach 4	1.05	0.06, 19.25	0.975	1262
Final Adjusted - Beach 5	1.67	0.37, 7.50	0.502	1263
Final Adjusted - Beach 6	2.50	0.28, 22.20	0.410	1264

Table 176. Outcome: Fever
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.84	0.45, 1.57	0.576	1301
Final Adjusted	0.83	0.43, 1.60	0.580	1301
Final Adjusted - Age Category 1	0.52	0.15, 1.82	0.307	1302
Final Adjusted - Age Category 2	1.04	0.38, 2.88	0.936	1302
Final Adjusted - Age Category 3	1.21	0.31, 4.79	0.781	1302
Final Adjusted - Age Category 4	0.33	0.02, 6.93	0.476	1303
Final Adjusted - Beach 1	0.00	0.00, 4.00	0.097	1304
Final Adjusted - Beach 2	1.00	0.16, 6.12	0.996	1304
Final Adjusted - Beach 3	1.29	0.55, 3.05	0.563	1305
Final Adjusted - Beach 4	0.54	0.04, 7.66	0.650	1305
Final Adjusted - Beach 5	0.20	0.01, 3.41	0.267	1306
Final Adjusted - Beach 6	1.05	0.21, 5.34	0.951	1306

Table 177. Outcome: Fever
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.02	0.74, 1.42	0.891	2924
Final Adjusted	0.13	0.00, 160.56	0.578	2924
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	2925
Final Adjusted - Age Category 2	0.00	0.00, 0.00	0.000	2925
Final Adjusted - Age Category 3	0.68	0.05, 10.19	0.783	2926
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	2927
Final Adjusted - Beach 1	0.00	.	.	2927
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 178. Outcome: Fever
Exposure: Face Under Water
Indicator: Iresult_phage_m

Not Analyzed

Table 179. Outcome: Fever
Exposure: Face Under Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.387	2960
Final Adjusted	1.00	1.00, 1.01	0.457	2960
Final Adjusted - Age Category 1	1.01	1.00, 1.01	0.118	2961
Final Adjusted - Age Category 2	0.99	0.98, 1.01	0.420	2961
Final Adjusted - Age Category 3	1.00	0.99, 1.01	0.740	2962
Final Adjusted - Age Category 4	0.98	0.94, 1.03	0.540	2962
Final Adjusted - Beach 1	0.85	0.44, 1.64	0.623	2963
Final Adjusted - Beach 2	1.00	0.97, 1.02	0.761	2964
Final Adjusted - Beach 3	1.00	0.99, 1.01	0.965	2964
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.150	2965
Final Adjusted - Beach 5	1.00	0.96, 1.03	0.893	2965
Final Adjusted - Beach 6	1.01	0.99, 1.03	0.526	2966

Table 180. Outcome: Fever
Exposure: Face Under Water
Indicator: Iresult_phage_s

Not Analyzed

Table 181. Outcome: Sore Throat
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.24	0.70, 2.21	0.460	139
Final Adjusted	0.94	0.48, 1.83	0.845	139
Final Adjusted - Age Category 1	0.99	0.17, 5.97	0.995	140
Final Adjusted - Age Category 2	1.08	0.34, 3.41	0.898	141
Final Adjusted - Age Category 3	0.81	0.21, 3.14	0.761	141
Final Adjusted - Age Category 4	0.87	0.24, 3.21	0.835	142
Final Adjusted - Beach 1	1.24	0.05, 33.46	0.899	143
Final Adjusted - Beach 2	1.14	0.13, 10.26	0.905	143
Final Adjusted - Beach 3	0.74	0.24, 2.25	0.594	144
Final Adjusted - Beach 4	1.21	0.12, 12.36	0.870	144
Final Adjusted - Beach 5	0.44	0.03, 7.36	0.571	145
Final Adjusted - Beach 6	6.04	1.01, 36.08	0.049	146

Table 182. Outcome: Sore Throat
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.11	0.73, 1.68	0.621	161
Final Adjusted	0.87	0.55, 1.39	0.558	161
Final Adjusted - Age Category 1	0.86	0.25, 2.95	0.809	162
Final Adjusted - Age Category 2	1.12	0.49, 2.54	0.795	162
Final Adjusted - Age Category 3	0.63	0.25, 1.63	0.343	163
Final Adjusted - Age Category 4	0.83	0.34, 2.02	0.687	163
Final Adjusted - Beach 1	0.82	0.11, 6.24	0.852	164
Final Adjusted - Beach 2	1.60	0.30, 8.39	0.580	165
Final Adjusted - Beach 3	0.85	0.39, 1.86	0.691	165
Final Adjusted - Beach 4	0.55	0.10, 3.08	0.494	166
Final Adjusted - Beach 5	0.79	0.22, 2.76	0.706	166
Final Adjusted - Beach 6	6.10	1.28, 29.14	0.024	167

Table 183. Outcome: Sore Throat
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.28	0.58, 2.83	0.543	131
Final Adjusted	1.27	0.52, 3.13	0.600	130
Final Adjusted - Age Category 1	2.04	0.21, 20.17	0.542	131
Final Adjusted - Age Category 2	0.90	0.17, 4.67	0.901	132
Final Adjusted - Age Category 3	1.40	0.23, 8.41	0.716	133
Final Adjusted - Age Category 4	1.17	0.22, 6.37	0.855	133
Final Adjusted - Beach 1	3.29	0.06, 181.14	0.560	134
Final Adjusted - Beach 2	2.68	0.22, 33.23	0.443	135
Final Adjusted - Beach 3	1.96	0.35, 10.82	0.441	135
Final Adjusted - Beach 4	1.60	0.07, 34.68	0.763	136
Final Adjusted - Beach 5	12.54	0.23, 697.07	0.217	137
Final Adjusted - Beach 6	2.86	0.16, 50.53	0.473	137

Table 184. Outcome: Sore Throat
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.05	0.78, 1.41	0.743	154
Final Adjusted	1.13	0.83, 1.55	0.436	154
Final Adjusted - Age Category 1	1.15	0.51, 2.57	0.742	155
Final Adjusted - Age Category 2	1.03	0.57, 1.87	0.915	155
Final Adjusted - Age Category 3	1.03	0.54, 1.95	0.936	156
Final Adjusted - Age Category 4	1.23	0.70, 2.17	0.463	156
Final Adjusted - Beach 1	1.07	0.11, 10.09	0.952	156
Final Adjusted - Beach 2	2.10	0.79, 5.57	0.136	157
Final Adjusted - Beach 3	1.02	0.62, 1.69	0.931	158
Final Adjusted - Beach 4	1.10	0.19, 6.56	0.914	158
Final Adjusted - Beach 5	2.71	0.96, 7.64	0.060	158
Final Adjusted - Beach 6	2.59	0.57, 11.78	0.219	159

Table 185. Outcome: Sore Throat
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.19	0.73, 1.92	0.489	169
Final Adjusted	0.98	0.55, 1.74	0.944	169
Final Adjusted - Age Category 1	1.79	0.48, 6.66	0.384	170
Final Adjusted - Age Category 2	1.15	0.42, 3.15	0.782	171
Final Adjusted - Age Category 3	1.00	0.33, 3.02	0.996	171
Final Adjusted - Age Category 4	0.49	0.12, 1.95	0.311	172
Final Adjusted - Beach 1	18.05	1.15, 283.44	0.040	173
Final Adjusted - Beach 2	3.99	0.43, 37.30	0.226	174
Final Adjusted - Beach 3	1.00	0.41, 2.44	0.994	174
Final Adjusted - Beach 4	0.78	0.10, 6.31	0.815	175
Final Adjusted - Beach 5	0.08	0.00, 1.40	0.084	176
Final Adjusted - Beach 6	1.73	0.29, 10.15	0.545	177

Table 186. Outcome: Sore Throat
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.99	0.79, 1.25	0.955	636
Final Adjusted	1.04	0.83, 1.30	0.745	636
Final Adjusted - Age Category 1	0.00	.	.	637
Final Adjusted - Age Category 2	0.00	.	.	638
Final Adjusted - Age Category 3	1.21	0.87, 1.67	0.254	638
Final Adjusted - Age Category 4	1.06	0.76, 1.46	0.738	639
Final Adjusted - Beach 1	0.00	.	.	639
Final Adjusted - Beach 2	0.00	.	.	640
Final Adjusted - Beach 3	0.00	.	.	640
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 187. Outcome: Sore Throat

Water Exposure: Water

Not Analyzed

Indicator: Iresult_phage_m

Table 188. Outcome: Sore Throat

Water Exposure: Water

Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.590	643
Final Adjusted	1.00	1.00, 1.01	0.406	642
Final Adjusted - Age Category 1	1.01	1.00, 1.01	0.165	643
Final Adjusted - Age Category 2	1.00	0.99, 1.01	0.842	643
Final Adjusted - Age Category 3	1.01	1.00, 1.02	0.155	644
Final Adjusted - Age Category 4	1.00	0.98, 1.01	0.533	644
Final Adjusted - Beach 1	0.80	0.53, 1.22	0.303	645
Final Adjusted - Beach 2	1.01	0.99, 1.02	0.477	645
Final Adjusted - Beach 3	1.00	0.99, 1.01	0.491	646
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.270	646
Final Adjusted - Beach 5	0.99	0.97, 1.02	0.600	646
Final Adjusted - Beach 6	1.00	0.98, 1.02	0.971	647

Table 189. Outcome: Sore Throat

Water Exposure: Water

Not Analyzed

Indicator: Iresult_phage_s

Table 190. Outcome: Sore Throat
Exposure: Face Under Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.04	0.50, 2.18	0.915	1352
Final Adjusted	0.77	0.35, 1.72	0.526	1352
Final Adjusted - Age Category 1	1.69	0.23, 12.44	0.605	1353
Final Adjusted - Age Category 2	0.52	0.13, 2.11	0.362	1353
Final Adjusted - Age Category 3	1.27	0.30, 5.46	0.747	1354
Final Adjusted - Age Category 4	0.41	0.07, 2.43	0.327	1354
Final Adjusted - Beach 1	92.20	0.24, 35138.14	0.136	1355
Final Adjusted - Beach 2	0.80	0.05, 12.29	0.870	1356
Final Adjusted - Beach 3	0.61	0.16, 2.32	0.466	1356
Final Adjusted - Beach 4	1.55	0.14, 17.39	0.722	1357
Final Adjusted - Beach 5	0.22	0.01, 7.21	0.393	1357
Final Adjusted - Beach 6	1.73	0.25, 11.93	0.578	1358

Table 191. Outcome: Sore Throat
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.89	0.52, 1.54	0.685	1420
Final Adjusted	0.62	0.33, 1.17	0.141	1420
Final Adjusted - Age Category 1	1.80	0.40, 8.06	0.442	1421
Final Adjusted - Age Category 2	0.55	0.19, 1.57	0.263	1422
Final Adjusted - Age Category 3	0.72	0.21, 2.48	0.601	1422
Final Adjusted - Age Category 4	0.24	0.06, 1.03	0.055	1423
Final Adjusted - Beach 1	3.03	0.08, 116.29	0.552	1423
Final Adjusted - Beach 2	0.70	0.06, 7.91	0.776	1424
Final Adjusted - Beach 3	0.64	0.24, 1.71	0.372	1425
Final Adjusted - Beach 4	0.36	0.05, 2.79	0.326	1425
Final Adjusted - Beach 5	0.20	0.02, 1.61	0.130	1426
Final Adjusted - Beach 6	2.58	0.33, 20.40	0.370	1426

Table 192. Outcome: Sore Throat
Exposure: Swallow Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.04	0.37, 2.95	0.938	1327
Final Adjusted	0.88	0.27, 2.84	0.827	1327
Final Adjusted - Age Category 1	4.86	0.21, 111.51	0.322	1328
Final Adjusted - Age Category 2	0.30	0.04, 2.18	0.237	1329
Final Adjusted - Age Category 3	2.24	0.21, 24.03	0.507	1329
Final Adjusted - Age Category 4	0.41	0.03, 5.02	0.488	1330
Final Adjusted - Beach 1	1019.12	0.19, 5606559	0.115	1331
Final Adjusted - Beach 2	0.28	0.01, 10.06	0.485	1331
Final Adjusted - Beach 3	0.91	0.12, 6.96	0.924	1332
Final Adjusted - Beach 4	1.35	0.03, 68.99	0.880	1333
Final Adjusted - Beach 5	17.18	0.06, 4646.19	0.320	1333
Final Adjusted - Beach 6	2.15	0.06, 74.54	0.672	1334

Table 193. Outcome: Sore Throat
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.87	0.59, 1.28	0.473	1399
Final Adjusted	0.88	0.59, 1.34	0.560	1398
Final Adjusted - Age Category 1	1.06	0.37, 3.09	0.912	1399
Final Adjusted - Age Category 2	0.77	0.39, 1.53	0.459	1400
Final Adjusted - Age Category 3	0.92	0.40, 2.13	0.846	1400
Final Adjusted - Age Category 4	0.89	0.38, 2.05	0.779	1401
Final Adjusted - Beach 1	4.71	0.08, 267.36	0.452	1401
Final Adjusted - Beach 2	1.24	0.29, 5.27	0.773	1402
Final Adjusted - Beach 3	0.90	0.48, 1.67	0.731	1402
Final Adjusted - Beach 4	1.29	0.17, 9.76	0.803	1402
Final Adjusted - Beach 5	1.88	0.42, 8.50	0.413	1403
Final Adjusted - Beach 6	0.85	0.12, 5.88	0.872	1403

Table 194. Outcome: Sore Throat
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.53, 1.86	0.993	1444
Final Adjusted	0.77	0.38, 1.54	0.455	1444
Final Adjusted - Age Category 1	3.14	0.73, 13.57	0.125	1445
Final Adjusted - Age Category 2	0.44	0.12, 1.58	0.208	1445
Final Adjusted - Age Category 3	1.10	0.29, 4.19	0.883	1446
Final Adjusted - Age Category 4	0.24	0.04, 1.43	0.116	1446
Final Adjusted - Beach 1	8.52	0.06, 1165.51	0.393	1447
Final Adjusted - Beach 2	0.31	0.02, 4.52	0.391	1447
Final Adjusted - Beach 3	0.61	0.20, 1.83	0.377	1448
Final Adjusted - Beach 4	0.73	0.08, 6.40	0.773	1448
Final Adjusted - Beach 5	0.18	0.01, 3.79	0.268	1449
Final Adjusted - Beach 6	1.71	0.34, 8.69	0.519	1449

Table 195. Outcome: Sore Throat
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.11	0.00, 303.06	0.582	3000
Final Adjusted	0.10	0.00, 427.88	0.595	2999
Final Adjusted - Age Category 1	0.00	.	.	3000
Final Adjusted - Age Category 2	0.00	.	.	3001
Final Adjusted - Age Category 3	0.67	0.04, 12.53	0.788	3001
Final Adjusted - Age Category 4	0.00	0.00, 0.00	0.000	3002
Final Adjusted - Beach 1	0.00	.	.	3002
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 196. Outcome: Sore Throat

Exposure: Face Under Water

Not Analyzed

Indicator: Iresult_phage_m

Table 197. Outcome: Sore Throat

Exposure: Swallow Water

Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.603	3030
Final Adjusted	1.00	1.00, 1.01	0.439	3029
Final Adjusted - Age Category 1	1.01	1.00, 1.01	0.070	3030
Final Adjusted - Age Category 2	0.99	0.97, 1.01	0.298	3031
Final Adjusted - Age Category 3	1.00	0.99, 1.02	0.608	3031
Final Adjusted - Age Category 4	1.00	0.98, 1.01	0.742	3032
Final Adjusted - Beach 1	0.00	0.00, 0.00	0.000	3032
Final Adjusted - Beach 2	1.00	0.97, 1.03	0.946	3033
Final Adjusted - Beach 3	1.00	0.98, 1.01	0.604	3033
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.196	3034
Final Adjusted - Beach 5	1.01	0.98, 1.03	0.558	3034
Final Adjusted - Beach 6	1.00	0.98, 1.02	0.943	3035

Table 198. Outcome: Sore Throat

Exposure: Face Under Water

Not Analyzed

Indicator: Iresult_phage_s

EAR SYMPTOMS

Page numbers refer to analysis output "backselectear.doc"

QA completed by L. Carlton and C. Wright 3/14/05

Table 199. Outcome: Earache
Water Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.01	0.45, 2.23	0.990	10
Final Adjusted	0.90	0.36, 2.25	0.829	10
Final Adjusted - Age Category 1	0.50	0.03, 8.49	0.628	13
Final Adjusted - Age Category 2	0.68	0.14, 3.37	0.637	14
Final Adjusted - Age Category 3	2.32	0.47, 11.40	0.299	15
Final Adjusted - Age Category 4	0.50	0.06, 3.91	0.511	15
Final Adjusted - Beach 1	0.02	0.00, 12.53	0.240	16
Final Adjusted - Beach 2	1.16	0.08, 16.96	0.915	17
Final Adjusted - Beach 3	1.49	0.39, 5.75	0.562	18
Final Adjusted - Beach 4	0.39	0.01, 13.67	0.603	18
Final Adjusted - Beach 5	0.02	0.00, 4.94	0.171	19
Final Adjusted - Beach 6	4.33	0.37, 51.03	0.244	20

Table 200. Outcome: Earache
Water Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.13	0.65, 1.95	0.667	38
Final Adjusted	1.06	0.56, 1.99	0.867	38
Final Adjusted - Age Category 1	0.60	0.10, 3.71	0.581	41
Final Adjusted - Age Category 2	0.96	0.32, 2.87	0.940	41
Final Adjusted - Age Category 3	1.17	0.32, 4.22	0.814	42
Final Adjusted - Age Category 4	1.34	0.39, 4.66	0.643	43
Final Adjusted - Beach 1	0.17	0.00, 10.83	0.403	44
Final Adjusted - Beach 2	1.81	0.21, 15.41	0.586	44
Final Adjusted - Beach 3	1.82	0.71, 4.70	0.215	45
Final Adjusted - Beach 4	0.72	0.05, 9.40	0.800	46
Final Adjusted - Beach 5	0.13	0.01, 1.53	0.106	47
Final Adjusted - Beach 6	6.26	0.69, 57.09	0.104	47

Table 201. Outcome: Earache
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.86	0.30, 2.46	0.775	1
Final Adjusted	1.13	0.34, 3.81	0.839	1
Final Adjusted - Age Category 1	0.47	0.02, 12.33	0.653	4
Final Adjusted - Age Category 2	0.73	0.09, 6.12	0.770	5
Final Adjusted - Age Category 3	1.22	0.10, 14.84	0.878	5
Final Adjusted - Age Category 4	2.17	0.19, 24.47	0.530	6
Final Adjusted - Beach 1	59.20	0.09, 39221.43	0.218	7
Final Adjusted - Beach 2	0.12	0.00, 3.17	0.207	7
Final Adjusted - Beach 3	4.23	0.43, 41.36	0.215	8
Final Adjusted - Beach 4	1.73	0.03, 108.35	0.796	9
Final Adjusted - Beach 5	0.96	0.00, 311.45	0.989	10
Final Adjusted - Beach 6	26.03	0.31, 2179.70	0.149	10

Table 202. Outcome: Earache
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.91	0.61, 1.35	0.635	29
Final Adjusted	0.94	0.61, 1.47	0.792	29
Final Adjusted - Age Category 1	0.58	0.17, 1.97	0.378	32
Final Adjusted - Age Category 2	0.87	0.39, 1.94	0.733	33
Final Adjusted - Age Category 3	1.08	0.46, 2.52	0.865	33
Final Adjusted - Age Category 4	0.98	0.41, 2.31	0.954	34
Final Adjusted - Beach 1	1.85	0.05, 69.86	0.740	35
Final Adjusted - Beach 2	0.48	0.10, 2.23	0.348	35
Final Adjusted - Beach 3	1.10	0.56, 2.16	0.781	36
Final Adjusted - Beach 4	0.95	0.08, 11.94	0.967	36
Final Adjusted - Beach 5	1.77	0.44, 7.16	0.423	37
Final Adjusted - Beach 6	2.31	0.20, 26.69	0.502	38

Table 203. Outcome: Earache
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.09	0.57, 2.09	0.783	48
Final Adjusted	1.18	0.57, 2.43	0.651	48
Final Adjusted - Age Category 1	0.96	0.13, 6.91	0.969	50
Final Adjusted - Age Category 2	1.15	0.36, 3.63	0.811	51
Final Adjusted - Age Category 3	0.96	0.18, 5.12	0.962	51
Final Adjusted - Age Category 4	1.42	0.33, 6.19	0.639	52
Final Adjusted - Beach 1	3.33	0.08, 140.57	0.529	52
Final Adjusted - Beach 2	1.41	0.12, 16.36	0.781	53
Final Adjusted - Beach 3	1.44	0.52, 3.99	0.487	54
Final Adjusted - Beach 4	1.43	0.11, 18.76	0.784	54
Final Adjusted - Beach 5	0.11	0.00, 5.88	0.276	55
Final Adjusted - Beach 6	2.83	0.31, 26.13	0.359	55

Table 204. Outcome: Earache
Water Exposure: Water
Indicator: result_phAge_m

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.00	.	.	226
Final Adjusted	No Change			
Final Adjusted - Age Category 1	0.00	.	.	227
Final Adjusted - Age Category 2	0.00	.	.	
Final Adjusted - Age Category 3	0.00	.	.	
Final Adjusted - Age Category 4	0.00	.	.	
Final Adjusted - Beach 1	0.00	.	.	
Final Adjusted - Beach 2	0.00	.	.	
Final Adjusted - Beach 3	0.00	.	.	
Final Adjusted - Beach 4	tf	tf	tf	
Final Adjusted - Beach 5	tf	tf	tf	
Final Adjusted - Beach 6	tf	tf	tf	

Table 205. Outcome: Earache**Water Exposure: Water**

Not Analyzed

Indicator: result_phAge_m**Table 206. Outcome: Earache****Water Exposure: Water****Indicator: result_phAge_s**

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.00	0.99, 1.01	0.921	230
Final Adjusted	1.00	0.99, 1.01	0.833	230
Final Adjusted - Age Category 1	1.00	0.97, 1.03	0.863	233
Final Adjusted - Age Category 2	0.98	0.95, 1.01	0.260	233
Final Adjusted - Age Category 3	1.00	0.98, 1.02	0.740	234
Final Adjusted - Age Category 4	1.00	1.00, 1.01	0.284	234
Final Adjusted - Beach 1	0.87	0.62, 1.22	0.417	235
Final Adjusted - Beach 2	0.99	0.96, 1.02	0.610	236
Final Adjusted - Beach 3	0.98	0.95, 1.01	0.165	236
Final Adjusted - Beach 4	1.00	1.00, 1.01	0.165	237
Final Adjusted - Beach 5	1.01	0.98, 1.04	0.471	237
Final Adjusted - Beach 6	1.00	0.97, 1.04	0.785	238

Table 207. Outcome: Earache**Exposure: Face Under Water****Indicator: lg_mean_station_entero**

Model	OR exposure	CI	p-value	Pa+E303ge No.
UnAdjusted	0.90	0.34, 2.37	0.837	364
Final Adjusted	0.92	0.32, 2.70	0.884	364
Final Adjusted - Age Category 1	0.65	0.01, 28.14	0.822	367
Final Adjusted - Age Category 2	0.53	0.09, 3.17	0.488	367
Final Adjusted - Age Category 3	3.87	0.69, 21.72	0.125	368
Final Adjusted - Age Category 4	0.27	0.02, 4.17	0.350	368
Final Adjusted - Beach 1	0.03	0.00, 91.81	0.402	369
Final Adjusted - Beach 2	0.07	0.00, 5.02	0.226	370
Final Adjusted - Beach 3	1.24	0.29, 5.28	0.772	371
Final Adjusted - Beach 4	0.87	0.01, 72.80	0.949	371
Final Adjusted - Beach 5	0.08	0.00, 19.62	0.370	372
Final Adjusted - Beach 6	5.72	0.26, 126.58	0.269	373

Table 208. Outcome: Earache
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.15	0.59, 2.25	0.676	444
Final Adjusted	1.18	0.56, 2.52	0.663	444
Final Adjusted - Age Category 1	0.87	0.06, 11.92	0.916	447
Final Adjusted - Age Category 2	0.88	0.27, 2.93	0.839	448
Final Adjusted - Age Category 3	2.23	0.50, 9.86	0.290	449
Final Adjusted - Age Category 4	0.82	0.16, 4.13	0.813	449
Final Adjusted - Beach 1	0.00	0.00, 10.00	0.170	450
Final Adjusted - Beach 2	0.33	0.02, 6.21	0.461	451
Final Adjusted - Beach 3	1.80	0.65, 4.99	0.262	452
Final Adjusted - Beach 4	0.81	0.02, 28.71	0.907	452
Final Adjusted - Beach 5	0.33	0.02, 4.90	0.419	453
Final Adjusted - Beach 6	28.78	0.73, 1137.11	0.073	545

Table 209. Outcome: Earache
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.68	0.18, 2.50	0.561	336
Final Adjusted	1.27	0.28, 5.68	0.753	336
Final Adjusted - Age Category 1	0.32	0.00, 38.91	0.643	339
Final Adjusted - Age Category 2	1.03	0.11, 9.81	0.981	339
Final Adjusted - Age Category 3	1.81	0.07, 49.37	0.725	340
Final Adjusted - Age Category 4	1.61	0.06, 40.34	0.772	341
Final Adjusted - Beach 1	16.81	0.00, 101209.30	0.525	341
Final Adjusted - Beach 2	0.05	0.00, 3.03	0.156	342
Final Adjusted - Beach 3	3.50	0.26, 47.01	0.345	342
Final Adjusted - Beach 4	2.90	0.04, 210.19	0.627	343
Final Adjusted - Beach 5	15.60	0.01, 31074.16	0.478	344
Final Adjusted - Beach 6	207.14	0.31, 137548.5	0.108	344

Table 210. Outcome: Earache
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.87	0.54, 1.42	0.586	415
Final Adjusted	1.03	0.60, 1.78	0.915	415
Final Adjusted - Age Category 1	0.70	0.12, 3.91	0.681	418
Final Adjusted - Age Category 2	0.88	0.37, 2.11	0.780	419
Final Adjusted - Age Category 3	1.10	0.34, 3.54	0.874	420
Final Adjusted - Age Category 4	1.10	0.36, 3.43	0.864	420
Final Adjusted - Beach 1	0.87	0.00, 211.99	0.960	421
Final Adjusted - Beach 2	0.36	0.05, 2.87	0.337	422
Final Adjusted - Beach 3	1.08	0.49, 2.38	0.843	422
Final Adjusted - Beach 4	1.18	0.04, 37.20	0.924	423
Final Adjusted - Beach 5	2.79	0.33, 23.98	0.349	424
Final Adjusted - Beach 6	19.09	0.31, 1187.68	0.162	425

Table 211. Outcome: Earache
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.00	0.45, 2.21	0.995	469
Final Adjusted	0.99	0.40, 2.47	0.986	469
Final Adjusted - Age Category 1	2.93	0.20, 42.83	0.432	472
Final Adjusted - Age Category 2	1.03	0.25, 4.27	0.972	473
Final Adjusted - Age Category 3	0.76	0.08, 7.40	0.810	474
Final Adjusted - Age Category 4	0.85	0.12, 5.95	0.868	475
Final Adjusted - Beach 1	4.10E+14	0.00, .	0.994	476
Final Adjusted - Beach 2	0.04	0.00, 3.00	0.142	477
Final Adjusted - Beach 3	1.44	0.46, 4.51	0.534	478
Final Adjusted - Beach 4	2.33	0.00, 1129.61	0.789	479
Final Adjusted - Beach 5	0.07	0.00, 11.57	0.306	480
Final Adjusted - Beach 6	3.03	0.08, 113.99	0.550	481

Table 212. Outcome: Earache
Exposure: Face Under Water
Indicator: result_phAge_m

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.00	0.00, 0.00	0.000	989
Final Adjusted	No Change			
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 213. Outcome: Earache
Exposure: Face Under Water
Indicator: Iresult_phAge_m

Not Analyzed

Table 214. Outcome: Earache
Exposure: Face Under Water
Indicator: result_phAge_s

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.00	1.00, 1.01	0.568	1008
Final Adjusted	1.00	1.00, 1.01	0.388	1008
Final Adjusted - Age Category 1	1.00	0.97, 1.02	0.829	1010
Final Adjusted - Age Category 2	0.98	0.96, 1.01	0.269	1010
Final Adjusted - Age Category 3	1.00	0.99, 1.02	0.640	1011
Final Adjusted - Age Category 4	1.01	1.00, 1.01	0.101	1011
Final Adjusted - Beach 1	0.83	0.42, 1.65	0.600	1012
Final Adjusted - Beach 2	0.93	0.72, 1.19	0.560	1012
Final Adjusted - Beach 3	0.99	0.97, 1.01	0.536	1013
Final Adjusted - Beach 4	1.01	1.00, 1.01	0.133	1013
Final Adjusted - Beach 5	1.00	0.97, 1.03	0.967	1014
Final Adjusted - Beach 6	1.02	0.99, 1.04	0.215	1014

Table 215. Outcome: Earache
Exposure: Face Under Water
Indicator: Iresult_phAge_s

Not Analyzed

Table 216. Outcome: Earache
Water Exposure: Water
Indicator: Iresult_phAge_s

Not Analyzed

Table 217. Outcome: Ear Discharge
Exposure: Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.72	0.25, 11.92	0.583	58
Final Adjusted	0.42	0.02, 10.04	0.591	58
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 218. Outcome: Ear Discharge
Exposure: Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.26	0.29, 5.40	0.759	65
Final Adjusted	0.36	0.04, 3.06	0.349	65
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 219. Outcome: Ear Discharge
Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	2.38	0.10, 55.21	0.590	481
Final Adjusted	1.45	0.05, 42.31	0.828	481

Table 220. Outcome: Ear Discharge
Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.93	0.29, 3.00	0.898	504
Final Adjusted	0.60	0.13, 2.72	0.508	504

Table 221. Outcome: Ear Discharge

Exposure: Water

Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.32	0.19, 9.16	0.779	519
Final Adjusted	0.83	0.06, 12.00	0.891	519

Table 222. Outcome: Ear Discharge

Exposure: Water

Indicator: result_phAge_m

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.00	.	.	27
Final Adjusted	NA			
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 223. Outcome: Ear Discharge

Exposure: Water

Not Analyzed

Indicator: lresult_phAge_m

Table 224. Outcome: Ear Discharge

Exposure: Water

Indicator: result_phAge_s

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.00	0.99, 1.02	0.489	242
Final Adjusted	1.01	0.99, 1.02	0.574	242

Table 225. Outcome: Ear Discharge

Exposure: Water

Not Analyzed

Indicator: Iresult_phAge_s

Table 226. Outcome: Ear Discharge

Water Exposure: Face Under Water

Indicator: Ig_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.19	0.09, 15.22	0.895	494
Final Adjusted	0.26	0.01, 13.12	0.503	494
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 227. Outcome: Ear Discharge

Water Exposure: Face Under Water

Indicator: Imax_station_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.77	0.11, 5.53	0.797	517
Final Adjusted	0.24	0.02, 3.23	0.281	517
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 228. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	2.69	0.08, 88.79	0.579	486
Final Adjusted	0.56	0.01, 36.44	0.785	486
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 229. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.14	0.33, 3.94	0.839	509
Final Adjusted	0.59	0.12, 2.97	0.524	509
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 230. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.81	0.27, 12.30	0.543	525
Final Adjusted	0.81	0.06, 10.84	0.873	525
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 231. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: result_phAge_m

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	0.00	0.00, 0.00	0.000	1019
Final Adjusted	NA			
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

**Table 232. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: Iresult_phAge_m**

Not Analyzed

**Table 233. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: result_phAge_s**

Model	OR exposure	CI	p-value	Page No.
UnAdjusted	1.00	0.99, 1.02	0.582	1027
Final Adjusted	1.00	0.97, 1.03	0.852	1027
Final Adjusted - Age Category 1	NA			
Final Adjusted - Age Category 2	NA			
Final Adjusted - Age Category 3	NA			
Final Adjusted - Age Category 4	NA			
Final Adjusted - Beach 1	NA			
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

**Table 234. Outcome: Ear Discharge
Water Exposure: Face Under Water
Indicator: Iresult_phAge_s**

Not Analyzed

EYE SYMPTOMS

Page number refers to analysis output "backselecteye.doc"

QA Completed by L. Carlton and C. Wright 3/14/05

Table 235. Outcome: Eye Irritation**Water Exposure: Water****Indicator: lg_mean_station_entero****s**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.71	0.41, 1.25	0.238	11
Final Adjusted	0.63	0.35, 1.11	0.112	11
Final Adjusted - Age Category 1	0.80	0.17, 3.81	0.783	12
Final Adjusted - Age Category 2	0.45	0.17, 1.21	0.113	12
Final Adjusted - Age Category 3	0.54	0.18, 1.64	0.277	12
Final Adjusted - Age Category 4	1.18	0.37, 3.78	0.782	13
Final Adjusted - Beach 1	0.27	0.01, 13.76	0.514	13
Final Adjusted - Beach 2	0.97	0.23, 4.10	0.968	14
Final Adjusted - Beach 3	0.32	0.11, 0.94	0.038	14
Final Adjusted - Beach 4	1.20	0.27, 5.33	0.807	14
Final Adjusted - Beach 5	1.29	0.13, 13.09	0.827	15
Final Adjusted - Beach 6	1.18	0.31, 4.47	0.806	15

Table 236. Outcome: Eye Irritation**Water Exposure: Water****Indicator: lmax_station_entero**

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.79	0.54, 1.16	0.231	31
Final Adjusted	0.73	0.50, 1.08	0.113	31
Final Adjusted - Age Category 1	1.12	0.40, 3.13	0.825	32
Final Adjusted - Age Category 2	0.54	0.28, 1.06	0.072	32
Final Adjusted - Age Category 3	0.53	0.25, 1.12	0.096	33
Final Adjusted - Age Category 4	1.48	0.67, 3.24	0.329	33
Final Adjusted - Beach 1	0.48	0.04, 5.62	0.556	34
Final Adjusted - Beach 2	1.12	0.41, 3.04	0.831	34
Final Adjusted - Beach 3	0.69	0.36, 1.34	0.275	34
Final Adjusted - Beach 4	0.70	0.23, 2.16	0.538	35
Final Adjusted - Beach 5	0.65	0.20, 2.18	0.490	35
Final Adjusted - Beach 6	1.02	0.32, 3.26	0.972	36

Table 237. Outcome: Eye Irritation
Water Exposure: Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.60	0.29, 1.23	0.162	3
Final Adjusted	0.74	0.34, 1.58	0.433	3
Final Adjusted - Age Category 1	1.15	0.15, 8.85	0.892	4
Final Adjusted - Age Category 2	0.85	0.25, 2.87	0.788	4
Final Adjusted - Age Category 3	0.33	0.08, 1.46	0.145	5
Final Adjusted - Age Category 4	1.36	0.23, 8.01	0.735	6
Final Adjusted - Beach 1	1.28	0.00, 359.41	0.931	6
Final Adjusted - Beach 2	1.31	0.25, 6.74	0.749	7
Final Adjusted - Beach 3	0.11	0.03, 0.47	0.003	7
Final Adjusted - Beach 4	1.35	0.15, 12.19	0.790	8
Final Adjusted - Beach 5	7.96	0.10, 651.16	0.356	9
Final Adjusted - Beach 6	4.09	0.46, 36.51	0.207	9

Table 238. Outcome: Eye Irritation
Water Exposure: Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.72	0.55, 0.96	0.022	24
Final Adjusted	0.77	0.57, 1.02	0.070	24
Final Adjusted - Age Category 1	1.19	0.59, 2.41	0.629	25
Final Adjusted - Age Category 2	0.69	0.42, 1.14	0.151	26
Final Adjusted - Age Category 3	0.63	0.37, 1.08	0.096	26
Final Adjusted - Age Category 4	0.86	0.45, 1.61	0.631	27
Final Adjusted - Beach 1	1.08	0.07, 17.08	0.954	27
Final Adjusted - Beach 2	1.06	0.51, 2.18	0.884	28
Final Adjusted - Beach 3	0.55	0.34, 0.91	0.019	28
Final Adjusted - Beach 4	1.31	0.33, 5.12	0.701	29
Final Adjusted - Beach 5	1.07	0.35, 3.24	0.912	29
Final Adjusted - Beach 6	1.34	0.30, 5.89	0.702	30

Table 239. Outcome: Eye Irritation
Water Exposure: Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.71	0.45, 1.12	0.140	38
Final Adjusted	0.69	0.42, 1.12	0.135	37
Final Adjusted - Age Category 1	0.62	0.17, 2.26	0.469	38
Final Adjusted - Age Category 2	0.53	0.23, 1.23	0.138	39
Final Adjusted - Age Category 3	0.68	0.27, 1.74	0.423	39
Final Adjusted - Age Category 4	1.11	0.39, 3.23	0.841	40
Final Adjusted - Beach 1	5.44	0.41, 72.07	0.199	40
Final Adjusted - Beach 2	0.38	0.08, 1.77	0.219	41
Final Adjusted - Beach 3	0.76	0.36, 1.59	0.470	41
Final Adjusted - Beach 4	0.59	0.16, 2.16	0.428	42
Final Adjusted - Beach 5	0.65	0.07, 5.67	0.698	42
Final Adjusted - Beach 6	0.56	0.15, 2.07	0.386	43

Table 240. Outcome: Eye Irritation
Water Exposure: Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.16	1.00, 1.33	0.043	162
Final Adjusted	1.14	0.95, 1.36	0.154	161
Final Adjusted - Age Category 1	1.53	1.15, 2.02	0.003	162
Final Adjusted - Age Category 2	1.06	0.65, 1.72	0.824	163
Final Adjusted - Age Category 3	0.02	0.00, 534.51	0.462	163
Final Adjusted - Age Category 4	1.07	0.77, 1.48	0.705	164
Final Adjusted - Beach 1	1.78	0.89, 3.56	0.103	165
Final Adjusted - Beach 2	0.00	.	.	165
Final Adjusted - Beach 3	0.00	.	.	166
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 241. Outcome: Eye Irritation

Water Exposure: Water Not Analyzed
Indicator: Iresult_phage_m

Table 242. Outcome: Eye Irritation

Water Exposure: Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	1.00, 1.01	0.737	168
Final Adjusted	1.00	1.00, 1.01	0.301	168
Final Adjusted - Age Category 1	1.00	1.00, 1.01	0.201	169
Final Adjusted - Age Category 2	1.00	0.99, 1.01	0.857	169
Final Adjusted - Age Category 3	1.00	1.00, 1.01	0.329	170
Final Adjusted - Age Category 4	1.00	0.99, 1.01	0.991	170
Final Adjusted - Beach 1	1.01	0.84, 1.22	0.931	171
Final Adjusted - Beach 2	0.99	0.97, 1.01	0.328	172
Final Adjusted - Beach 3	0.99	0.98, 1.01	0.343	172
Final Adjusted - Beach 4	1.01	1.00, 1.01	0.014	172
Final Adjusted - Beach 5	1.00	0.98, 1.02	0.737	173
Final Adjusted - Beach 6	1.00	0.98, 1.02	0.920	174

Table 243. Outcome: Eye Irritation

Water Exposure: Water Not Analyzed
Indicator: Iresult_phage_s

Table 244. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: lg_mean_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.54	0.26, 1.08	0.082	274
Final Adjusted	0.45	0.22, 0.96	0.038	273
Final Adjusted - Age Category 1	0.35	0.04, 3.09	0.348	274
Final Adjusted - Age Category 2	0.41	0.13, 1.30	0.130	275
Final Adjusted - Age Category 3	0.16	0.03, 0.98	0.047	275
Final Adjusted - Age Category 4	1.95	0.46, 8.28	0.367	276
Final Adjusted - Beach 1	0.00	0.00, 4.94	0.130	276
Final Adjusted - Beach 2	0.77	0.13, 4.57	0.773	277
Final Adjusted - Beach 3	0.21	0.05, 0.84	0.027	277
Final Adjusted - Beach 4	0.83	0.12, 5.74	0.854	277
Final Adjusted - Beach 5	1.56	0.10, 24.56	0.753	278
Final Adjusted - Beach 6	1.36	0.21, 8.69	0.748	278

Table 245. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: lmax_station_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.68	0.42, 1.09	0.111	339
Final Adjusted	0.62	0.38, 1.02	0.058	339

Table 246. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: lg_mean_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.28	0.11, 0.68	0.005	254
Final Adjusted	0.33	0.13, 0.83	0.019	253

Table 247. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: lmax_Beach_entero

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.57	0.40, 0.81	0.002	317
Final Adjusted	0.56	0.39, 0.83	0.003	317

Table 248. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: mlresult_entero_time

Model	OR exposure	CI	p-value	Page No.
Unadjusted	0.63	0.35, 1.10	0.106	361
Final Adjusted	0.59	0.33, 1.05	0.073	360

Table 249. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: result_phage_m

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.24	1.03, 1.48	0.022	733
Final Adjusted	1.20	0.91, 1.58	0.206	733
Final Adjusted - Age Category 1	0.00	0.00, 0.00	0.000	734
Final Adjusted - Age Category 2	1.20	0.70, 2.05	0.509	734
Final Adjusted - Age Category 3	0.48	0.00, 59.47	0.766	735
Final Adjusted - Age Category 4	1.32	0.95, 1.85	0.098	735
Final Adjusted - Beach 1	2.16	0.95, 4.94	0.068	736
Final Adjusted - Beach 2	NA			
Final Adjusted - Beach 3	NA			
Final Adjusted - Beach 4	NA			
Final Adjusted - Beach 5	NA			
Final Adjusted - Beach 6	NA			

Table 250. Outcome: Eye Irritation
Exposure: Face Under Water Not Analyzed
Indicator: lresult_phage_m

Table 251. Outcome: Eye Irritation
Exposure: Face Under Water
Indicator: result_phage_s

Model	OR exposure	CI	p-value	Page No.
Unadjusted	1.00	0.99, 1.01	0.964	756
Final Adjusted	1.00	1.00, 1.01	0.650	755

Table 252. Outcome: Eye Irritation
Exposure: Face Under Water Not Analyzed
Indicator: Iresult_phage_s

Appendix 4

Tabulation of Sociodemographic Characteristics of Study Population

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*SOCIODEMOGRAPHICS OF NON-COMPLETES VS CATI COMPLETES

*ALL BEACHES - Individual Level Data

Key
Frequency
Row Percentage
Column Percentage

Beach Name	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Visitr	208	506	0	714
	29.13	70.87	0.00	100.00
	5.71	5.75	0.00	5.73
Tecalote	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	14.25	15.91	6.90	15.41
Leisure	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	35.25	37.66	31.03	36.94
DeAnza	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	11.53	12.78	24.14	12.44
Crown	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	14.49	14.10	24.14	14.24
Bonita	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	18.78	13.80	13.79	15.25
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
0 - 5	525	1,214	1	1,740
	30.17	69.77	0.06	100.00
	14.41	13.80	3.45	13.95
5.1 - 12	678	1,808	2	2,488
	27.25	72.67	0.08	100.00
	18.61	20.55	6.90	19.95
12.1 - 30	1,195	2,366	13	3,574
	33.44	66.20	0.36	100.00
	32.80	26.90	44.83	28.66
30.1 - 55	1,080	2,928	12	4,020
	26.87	72.84	0.30	100.00
	29.65	33.28	41.38	32.24
>55	101	332	1	434
	23.27	76.50	0.23	100.00
	2.77	3.77	3.45	3.48
.	64	149	0	213
	30.05	69.95	0.00	100.00
	1.76	1.69	0.00	1.71
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
White	0	2,495	0	2,495
	0.00	100.00	0.00	100.00
	0.00	28.36	0.00	20.01
Black	0	369	0	369
	0.00	100.00	0.00	100.00
	0.00	4.19	0.00	2.96
American Indian or Al	0	62	0	62
	0.00	100.00	0.00	100.00
	0.00	0.70	0.00	0.50
Asian or Pacific Isla	0	463	0	463
	0.00	100.00	0.00	100.00
	0.00	5.26	0.00	3.71
Other (SPECIFY)	0	227	0	227
	0.00	100.00	0.00	100.00
	0.00	2.58	0.00	1.82
VOLUNTEERED: Mixed ra	0	407	0	407
	0.00	100.00	0.00	100.00
	0.00	4.63	0.00	3.26
VOLUNTEERED: Identifi	0	4,723	0	4,723
	0.00	100.00	0.00	100.00
	0.00	53.69	0.00	37.88
.	3,643	51	29	3,723
	97.85	1.37	0.78	100.00
	100.00	0.58	100.00	29.86
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Yes, Mexican/Mex-Amer	0	4,824	0	4,824
	0.00	100.00	0.00	100.00
	0.00	54.84	0.00	38.69
Yes, Puerto Rican	0	61	0	61
	0.00	100.00	0.00	100.00
	0.00	0.69	0.00	0.49
Yes, Cuban	0	23	0	23
	0.00	100.00	0.00	100.00
	0.00	0.26	0.00	0.18
Yes, Other Hispanic	0	378	0	378
	0.00	100.00	0.00	100.00
	0.00	4.30	0.00	3.03
No (None of the above)	0	3,465	0	3,465
	0.00	100.00	0.00	100.00
	0.00	39.39	0.00	27.79
.	3,643	46	29	3,718
	97.98	1.24	0.78	100.00
	100.00	0.52	100.00	29.82
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Female	1,628	3,948	14	5,590
	29.12	70.63	0.25	100.00
	44.69	44.88	48.28	44.83
Male	1,954	4,761	15	6,730
	29.03	70.74	0.22	100.00
	53.64	54.12	51.72	53.97
.	61	88	0	149
	40.94	59.06	0.00	100.00
	1.67	1.00	0.00	1.19
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*ALL BEACHES - Household-level Data

Key	
	Frequency
	Row Percentage
	Column Percentage

Total Number of Household Members	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
1	691	1,321	15	2,027
	34.09	65.17	0.74	100.00
	18.97	15.02	51.72	16.26
2	419	1,210	5	1,634
	25.64	74.05	0.31	100.00
	11.50	13.75	17.24	13.10
3	583	1,522	3	2,108
	27.66	72.20	0.14	100.00
	16.00	17.30	10.34	16.91
4	738	1,882	4	2,624
	28.13	71.72	0.15	100.00
	20.26	21.39	13.79	21.04
5	575	1,351	0	1,926
	29.85	70.15	0.00	100.00
	15.78	15.36	0.00	15.45
6	307	804	2	1,113
	27.58	72.24	0.18	100.00
	8.43	9.14	6.90	8.93
7	217	445	0	662
	32.78	67.22	0.00	100.00
	5.96	5.06	0.00	5.31
8	72	201	0	273
	26.37	73.63	0.00	100.00
	1.98	2.28	0.00	2.19
9	9	47	0	56
	16.07	83.93	0.00	100.00
	0.25	0.53	0.00	0.45
10	11	0	0	11
	100.00	0.00	0.00	100.00
	0.30	0.00	0.00	0.09

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*ALL BEACHES - Household-Level Data (Continued)

Total Number of Household Members	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
13	13	0	0	13
	100.00	0.00	0.00	100.00
	0.36	0.00	0.00	0.10
14	0	14	0	14
	0.00	100.00	0.00	100.00
	0.00	0.16	0.00	0.11
40	4	0	0	4
	100.00	0.00	0.00	100.00
	0.11	0.00	0.00	0.03
.	4	0	0	4
	100.00	0.00	0.00	100.00
	0.11	0.00	0.00	0.03
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
U.S.	3,192	7,869	21	11,082
	28.80	71.01	0.19	100.00
	87.62	89.45	72.41	88.88
Mexico	68	225	4	297
	22.90	75.76	1.35	100.00
	1.87	2.56	13.79	2.38
Canada	4	4	0	8
	50.00	50.00	0.00	100.00
	0.11	0.05	0.00	0.06
.	379	699	4	1,082
	35.03	64.60	0.37	100.00
	10.40	7.95	13.79	8.68
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Less than 10K	6	566	0	572
	1.05	98.95	0.00	100.00
	0.16	6.43	0.00	4.59
Exactly 10K	0	315	0	315
	0.00	100.00	0.00	100.00
	0.00	3.58	0.00	2.53
10-20K	2	1,424	0	1,426
	0.14	99.86	0.00	100.00
	0.05	16.19	0.00	11.44
Exactly 20K	0	492	0	492
	0.00	100.00	0.00	100.00
	0.00	5.59	0.00	3.95
20-30K	2	913	0	915
	0.22	99.78	0.00	100.00
	0.05	10.38	0.00	7.34
Exactly 30K	0	304	0	304
	0.00	100.00	0.00	100.00
	0.00	3.46	0.00	2.44
30-40K	1	709	0	710
	0.14	99.86	0.00	100.00
	0.03	8.06	0.00	5.69
Exactly 40K	0	183	0	183
	0.00	100.00	0.00	100.00
	0.00	2.08	0.00	1.47
40-50K	1	495	0	496
	0.20	99.80	0.00	100.00
	0.03	5.63	0.00	3.98
Exactly 50K	0	188	0	188
	0.00	100.00	0.00	100.00
	0.00	2.14	0.00	1.51
50-60K	1	368	0	369
	0.27	99.73	0.00	100.00
	0.03	4.18	0.00	2.96

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Continued

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Exactly 60K	1	173	0	174
	0.57	99.43	0.00	100.00
	0.03	1.97	0.00	1.40
60-70K	1	261	0	262
	0.38	99.62	0.00	100.00
	0.03	2.97	0.00	2.10
Exactly 70K	0	130	0	130
	0.00	100.00	0.00	100.00
	0.00	1.48	0.00	1.04
70-80K	0	305	0	305
	0.00	100.00	0.00	100.00
	0.00	3.47	0.00	2.45
Exactly 80K	0	126	0	126
	0.00	100.00	0.00	100.00
	0.00	1.43	0.00	1.01
80-100K	0	399	0	399
	0.00	100.00	0.00	100.00
	0.00	4.54	0.00	3.20
Exactly 100K	0	95	0	95
	0.00	100.00	0.00	100.00
	0.00	1.08	0.00	0.76
More than 100K	1	674	0	675
	0.15	99.85	0.00	100.00
	0.03	7.66	0.00	5.41
.	3,627	677	29	4,333
	83.71	15.62	0.67	100.00
	99.56	7.70	100.00	34.75
Total	3,643	8,797	29	12,469
	29.22	70.55	0.23	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*BY BEACH - Individual Level Data

Visitor's Center

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
0 - 5	22	67	89
	24.72	75.28	100.00
	10.58	13.24	12.46
5.1 - 12	31	102	133
	23.31	76.69	100.00
	14.90	20.16	18.63
12.1 - 30	87	152	239
	36.40	63.60	100.00
	41.83	30.04	33.47
30.1 - 55	59	153	212
	27.83	72.17	100.00
	28.37	30.24	29.69
>55	8	27	35
	22.86	77.14	100.00
	3.85	5.34	4.90
.	1	5	6
	16.67	83.33	100.00
	0.48	0.99	0.84
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
0 - 5	99	215	0	314
	31.53	68.47	0.00	100.00
	19.08	15.36	0.00	16.35
5.1 - 12	97	333	0	430
	22.56	77.44	0.00	100.00
	18.69	23.79	0.00	22.38
12.1 - 30	163	371	0	534
	30.52	69.48	0.00	100.00
	31.41	26.50	0.00	27.80
30.1 - 55	125	419	1	545
	22.94	76.88	0.18	100.00
	24.08	29.93	50.00	28.37
>55	17	39	1	57
	29.82	68.42	1.75	100.00
	3.28	2.79	50.00	2.97
.	18	23	0	41
	43.90	56.10	0.00	100.00
	3.47	1.64	0.00	2.13
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
0 - 5	209	520	1	730
	28.63	71.23	0.14	100.00
	16.28	15.70	11.11	15.85
5.1 - 12	282	764	1	1,047
	26.93	72.97	0.10	100.00
	21.96	23.06	11.11	22.73
12.1 - 30	392	826	3	1,221
	32.10	67.65	0.25	100.00
	30.53	24.93	33.33	26.51
30.1 - 55	357	1,039	4	1,400
	25.50	74.21	0.29	100.00
	27.80	31.36	44.44	30.40
>55	19	111	0	130
	14.62	85.38	0.00	100.00
	1.48	3.35	0.00	2.82
.	25	53	0	78
	32.05	67.95	0.00	100.00
	1.95	1.60	0.00	1.69
Total	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
0 - 5	54	110	0	164
	32.93	67.07	0.00	100.00
	12.86	9.79	0.00	10.57
5.1 - 12	60	193	1	254
	23.62	75.98	0.39	100.00
	14.29	17.17	14.29	16.38
12.1 - 30	130	274	4	408
	31.86	67.16	0.98	100.00
	30.95	24.38	57.14	26.31
30.1 - 55	156	466	2	624
	25.00	74.68	0.32	100.00
	37.14	41.46	28.57	40.23
>55	16	67	0	83
	19.28	80.72	0.00	100.00
	3.81	5.96	0.00	5.35
.	4	14	0	18
	22.22	77.78	0.00	100.00
	0.95	1.25	0.00	1.16
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
0 - 5	56	142	0	198
	28.28	71.72	0.00	100.00
	10.61	11.45	0.00	11.15
5.1 - 12	77	194	0	271
	28.41	71.59	0.00	100.00
	14.58	15.65	0.00	15.27
12.1 - 30	201	403	2	606
	33.17	66.50	0.33	100.00
	38.07	32.50	28.57	34.14
30.1 - 55	171	440	5	616
	27.76	71.43	0.81	100.00
	32.39	35.48	71.43	34.70
>55	16	38	0	54
	29.63	70.37	0.00	100.00
	3.03	3.06	0.00	3.04
.	7	23	0	30
	23.33	76.67	0.00	100.00
	1.33	1.85	0.00	1.69
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Age Category	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
0 - 5	85	160	0	245
	34.69	65.31	0.00	100.00
	12.43	13.18	0.00	12.88
5.1 - 12	131	222	0	353
	37.11	62.89	0.00	100.00
	19.15	18.29	0.00	18.56
12.1 - 30	222	340	4	566
	39.22	60.07	0.71	100.00
	32.46	28.01	100.00	29.76
30.1 - 55	212	411	0	623
	34.03	65.97	0.00	100.00
	30.99	33.86	0.00	32.75
>55	25	50	0	75
	33.33	66.67	0.00	100.00
	3.65	4.12	0.00	3.94
.	9	31	0	40
	22.50	77.50	0.00	100.00
	1.32	2.55	0.00	2.10
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
White	0	96	96
	0.00	100.00	100.00
	0.00	18.97	13.45
Black	0	8	8
	0.00	100.00	100.00
	0.00	1.58	1.12
American Indian or Al	0	3	3
	0.00	100.00	100.00
	0.00	0.59	0.42
Asian or Pacific Isla	0	46	46
	0.00	100.00	100.00
	0.00	9.09	6.44
Other (SPECIFY)	0	13	13
	0.00	100.00	100.00
	0.00	2.57	1.82
VOLUNTEERED: Mixed ra	0	32	32
	0.00	100.00	100.00
	0.00	6.32	4.48
VOLUNTEERED: Identifi	0	307	307
	0.00	100.00	100.00
	0.00	60.67	43.00
.	208	1	209
	99.52	0.48	100.00
	100.00	0.20	29.27
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
White	0	249	0	249
	0.00	100.00	0.00	100.00
	0.00	17.79	0.00	12.96
Black	0	32	0	32
	0.00	100.00	0.00	100.00
	0.00	2.29	0.00	1.67
American Indian or Al	0	4	0	4
	0.00	100.00	0.00	100.00
	0.00	0.29	0.00	0.21
Asian or Pacific Isla	0	64	0	64
	0.00	100.00	0.00	100.00
	0.00	4.57	0.00	3.33
Other (SPECIFY)	0	30	0	30
	0.00	100.00	0.00	100.00
	0.00	2.14	0.00	1.56
VOLUNTEERED: Mixed ra	0	24	0	24
	0.00	100.00	0.00	100.00
	0.00	1.71	0.00	1.25
VOLUNTEERED: Identifi	0	990	0	990
	0.00	100.00	0.00	100.00
	0.00	70.71	0.00	51.54
.	519	7	2	528
	98.30	1.33	0.38	100.00
	100.00	0.50	100.00	27.49
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
White	0	465	0	465
	0.00	100.00	0.00	100.00
	0.00	14.04	0.00	10.10
Black	0	57	0	57
	0.00	100.00	0.00	100.00
	0.00	1.72	0.00	1.24
American Indian or Al	0	8	0	8
	0.00	100.00	0.00	100.00
	0.00	0.24	0.00	0.17
Asian or Pacific Isla	0	94	0	94
	0.00	100.00	0.00	100.00
	0.00	2.84	0.00	2.04
Other (SPECIFY)	0	67	0	67
	0.00	100.00	0.00	100.00
	0.00	2.02	0.00	1.45
VOLUNTEERED: Mixed ra	0	99	0	99
	0.00	100.00	0.00	100.00
	0.00	2.99	0.00	2.15
VOLUNTEERED: Identifi	0	2,514	0	2,514
	0.00	100.00	0.00	100.00
	0.00	75.88	0.00	54.58
.	1,284	9	9	1,302
	98.62	0.69	0.69	100.00
	100.00	0.27	100.00	28.27
Total	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
White	0	577	0	577
	0.00	100.00	0.00	100.00
	0.00	51.33	0.00	37.20
Black	0	22	0	22
	0.00	100.00	0.00	100.00
	0.00	1.96	0.00	1.42
American Indian or Al	0	7	0	7
	0.00	100.00	0.00	100.00
	0.00	0.62	0.00	0.45
Asian or Pacific Isla	0	98	0	98
	0.00	100.00	0.00	100.00
	0.00	8.72	0.00	6.32
Other (SPECIFY)	0	34	0	34
	0.00	100.00	0.00	100.00
	0.00	3.02	0.00	2.19
VOLUNTEERED: Mixed ra	0	91	0	91
	0.00	100.00	0.00	100.00
	0.00	8.10	0.00	5.87
VOLUNTEERED: Identifi	0	289	0	289
	0.00	100.00	0.00	100.00
	0.00	25.71	0.00	18.63
.	420	6	7	433
	97.00	1.39	1.62	100.00
	100.00	0.53	100.00	27.92
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
White	0	650	0	650
	0.00	100.00	0.00	100.00
	0.00	52.42	0.00	36.62
Black	0	136	0	136
	0.00	100.00	0.00	100.00
	0.00	10.97	0.00	7.66
American Indian or Al	0	21	0	21
	0.00	100.00	0.00	100.00
	0.00	1.69	0.00	1.18
Asian or Pacific Isla	0	92	0	92
	0.00	100.00	0.00	100.00
	0.00	7.42	0.00	5.18
Other (SPECIFY)	0	28	0	28
	0.00	100.00	0.00	100.00
	0.00	2.26	0.00	1.58
VOLUNTEERED: Mixed ra	0	68	0	68
	0.00	100.00	0.00	100.00
	0.00	5.48	0.00	3.83
VOLUNTEERED: Identifi	0	238	0	238
	0.00	100.00	0.00	100.00
	0.00	19.19	0.00	13.41
.	528	7	7	542
	97.42	1.29	1.29	100.00
	100.00	0.56	100.00	30.54
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
White	0	458	0	458
	0.00	100.00	0.00	100.00
	0.00	37.73	0.00	24.08
Black	0	114	0	114
	0.00	100.00	0.00	100.00
	0.00	9.39	0.00	5.99
American Indian or Al	0	19	0	19
	0.00	100.00	0.00	100.00
	0.00	1.57	0.00	1.00
Asian or Pacific Isla	0	69	0	69
	0.00	100.00	0.00	100.00
	0.00	5.68	0.00	3.63
Other (SPECIFY)	0	55	0	55
	0.00	100.00	0.00	100.00
	0.00	4.53	0.00	2.89
VOLUNTEERED: Mixed ra	0	93	0	93
	0.00	100.00	0.00	100.00
	0.00	7.66	0.00	4.89
VOLUNTEERED: Identifi	0	385	0	385
	0.00	100.00	0.00	100.00
	0.00	31.71	0.00	20.24
.	684	21	4	709
	96.47	2.96	0.56	100.00
	100.00	1.73	100.00	37.28
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
Yes, Mexican/Mex-Amer	0	302	302
	0.00	100.00	100.00
	0.00	59.68	42.30
Yes, Puerto Rican	0	7	7
	0.00	100.00	100.00
	0.00	1.38	0.98
Yes, Cuban	0	1	1
	0.00	100.00	100.00
	0.00	0.20	0.14
Yes, Other Hispanic	0	13	13
	0.00	100.00	100.00
	0.00	2.57	1.82
No (None of the above)	0	183	183
	0.00	100.00	100.00
	0.00	36.17	25.63
.	208	0	208
	100.00	0.00	100.00
	100.00	0.00	29.13
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Yes, Mexican/Mex-Amer	0	971	0	971
	0.00	100.00	0.00	100.00
	0.00	69.36	0.00	50.55
Yes, Puerto Rican	0	10	0	10
	0.00	100.00	0.00	100.00
	0.00	0.71	0.00	0.52
Yes, Other Hispanic	0	61	0	61
	0.00	100.00	0.00	100.00
	0.00	4.36	0.00	3.18
No (None of the above)	0	351	0	351
	0.00	100.00	0.00	100.00
	0.00	25.07	0.00	18.27
.	519	7	2	528
	98.30	1.33	0.38	100.00
	100.00	0.50	100.00	27.49
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Yes, Mexican/Mex-Amer	0	2,555	0	2,555
	0.00	100.00	0.00	100.00
	0.00	77.12	0.00	55.47
Yes, Puerto Rican	0	21	0	21
	0.00	100.00	0.00	100.00
	0.00	0.63	0.00	0.46
Yes, Cuban	0	10	0	10
	0.00	100.00	0.00	100.00
	0.00	0.30	0.00	0.22
Yes, Other Hispanic	0	121	0	121
	0.00	100.00	0.00	100.00
	0.00	3.65	0.00	2.63
No (None of the above)	0	599	0	599
	0.00	100.00	0.00	100.00
	0.00	18.08	0.00	13.00
.	1,284	7	9	1,300
	98.77	0.54	0.69	100.00
	100.00	0.21	100.00	28.22
Total	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Yes, Mexican/Mex-Amer	0	304	0	304
	0.00	100.00	0.00	100.00
	0.00	27.05	0.00	19.60
Yes, Puerto Rican	0	8	0	8
	0.00	100.00	0.00	100.00
	0.00	0.71	0.00	0.52
Yes, Cuban	0	1	0	1
	0.00	100.00	0.00	100.00
	0.00	0.09	0.00	0.06
Yes, Other Hispanic	0	66	0	66
	0.00	100.00	0.00	100.00
	0.00	5.87	0.00	4.26
No (None of the above)	0	741	0	741
	0.00	100.00	0.00	100.00
	0.00	65.93	0.00	47.78
.	420	4	7	431
	97.45	0.93	1.62	100.00
	100.00	0.36	100.00	27.79
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Yes, Mexican/Mex-Amer	0	275	0	275
	0.00	100.00	0.00	100.00
	0.00	22.18	0.00	15.49
Yes, Puerto Rican	0	6	0	6
	0.00	100.00	0.00	100.00
	0.00	0.48	0.00	0.34
Yes, Cuban	0	8	0	8
	0.00	100.00	0.00	100.00
	0.00	0.65	0.00	0.45
Yes, Other Hispanic	0	49	0	49
	0.00	100.00	0.00	100.00
	0.00	3.95	0.00	2.76
No (None of the above)	0	895	0	895
	0.00	100.00	0.00	100.00
	0.00	72.18	0.00	50.42
.	528	7	7	542
	97.42	1.29	1.29	100.00
	100.00	0.56	100.00	30.54
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Yes, Mexican/Mex-Amer	0	417	0	417
	0.00	100.00	0.00	100.00
	0.00	34.35	0.00	21.92
Yes, Puerto Rican	0	9	0	9
	0.00	100.00	0.00	100.00
	0.00	0.74	0.00	0.47
Yes, Cuban	0	3	0	3
	0.00	100.00	0.00	100.00
	0.00	0.25	0.00	0.16
Yes, Other Hispanic	0	68	0	68
	0.00	100.00	0.00	100.00
	0.00	5.60	0.00	3.58
No (None of the above)	0	696	0	696
	0.00	100.00	0.00	100.00
	0.00	57.33	0.00	36.59
.	684	21	4	709
	96.47	2.96	0.56	100.00
	100.00	1.73	100.00	37.28
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
Female	82	227	309
	26.54	73.46	100.00
	39.42	44.86	43.28
Male	126	275	401
	31.42	68.58	100.00
	60.58	54.35	56.16
.	0	4	4
	0.00	100.00	100.00
	0.00	0.79	0.56
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Female	224	627	1	852
	26.29	73.59	0.12	100.00
	43.16	44.79	50.00	44.35
Male	282	758	1	1,041
	27.09	72.81	0.10	100.00
	54.34	54.14	50.00	54.19
.	13	15	0	28
	46.43	53.57	0.00	100.00
	2.50	1.07	0.00	1.46
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Female	577	1,564	2	2,143
	26.92	72.98	0.09	100.00
	44.94	47.21	22.22	46.53
Male	679	1,702	7	2,388
	28.43	71.27	0.29	100.00
	52.88	51.37	77.78	51.85
.	28	47	0	75
	37.33	62.67	0.00	100.00
	2.18	1.42	0.00	1.63
Total	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	100.00	100.00	100.00	100.00

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Female	175	491	2	668
	26.20	73.50	0.30	100.00
	41.67	43.68	28.57	43.07
Male	237	624	5	866
	27.37	72.06	0.58	100.00
	56.43	55.52	71.43	55.83
.	8	9	0	17
	47.06	52.94	0.00	100.00
	1.90	0.80	0.00	1.10
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Female	248	532	5	785
	31.59	67.77	0.64	100.00
	46.97	42.90	71.43	44.23
Male	271	700	2	973
	27.85	71.94	0.21	100.00
	51.33	56.45	28.57	54.82
.	9	8	0	17
	52.94	47.06	0.00	100.00
	1.70	0.65	0.00	0.96
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Female	322	507	4	833
	38.66	60.86	0.48	100.00
	47.08	41.76	100.00	43.80
Male	359	702	0	1,061
	33.84	66.16	0.00	100.00
	52.49	57.83	0.00	55.78
.	3	5	0	8
	37.50	62.50	0.00	100.00
	0.44	0.41	0.00	0.42
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

*BY BEACH - Household level data

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
1	51	89	140
	36.43	63.57	100.00
	24.52	17.59	19.61
2	26	78	104
	25.00	75.00	100.00
	12.50	15.42	14.57
3	36	101	137
	26.28	73.72	100.00
	17.31	19.96	19.19
4	36	82	118
	30.51	69.49	100.00
	17.31	16.21	16.53
5	20	85	105
	19.05	80.95	100.00
	9.62	16.80	14.71
6	12	30	42
	28.57	71.43	100.00
	5.77	5.93	5.88
7	14	25	39
	35.90	64.10	100.00
	6.73	4.94	5.46
8	0	16	16
	0.00	100.00	100.00
	0.00	3.16	2.24
13	13	0	13
	100.00	0.00	100.00
	6.25	0.00	1.82
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

->Beach Name = Tecalote

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
1	41	96	0	137
	29.93	70.07	0.00	100.00
	7.90	6.86	0.00	7.13
2	52	131	2	185
	28.11	70.81	1.08	100.00
	10.02	9.36	100.00	9.63
3	93	228	0	321
	28.97	71.03	0.00	100.00
	17.92	16.29	0.00	16.71
4	130	356	0	486
	26.75	73.25	0.00	100.00
	25.05	25.43	0.00	25.30
5	100	293	0	393
	25.45	74.55	0.00	100.00
	19.27	20.93	0.00	20.46
6	60	173	0	233
	25.75	74.25	0.00	100.00
	11.56	12.36	0.00	12.13
7	35	98	0	133
	26.32	73.68	0.00	100.00
	6.74	7.00	0.00	6.92
8	8	16	0	24
	33.33	66.67	0.00	100.00
	1.54	1.14	0.00	1.25
9	0	9	0	9
	0.00	100.00	0.00	100.00
	0.00	0.64	0.00	0.47
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

->Beach Name = Leisure

Key
Frequency

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Row Percentage		Column Percentage		
Total Number of Household	CATI Completion Indicator			
Members	Non-Cmp	CATI Cmp	.	Total
1	116 35.26 9.03	209 63.53 6.31	4 1.22 44.44	329 100.00 7.14
2	92 20.63 7.17	354 79.37 10.69	0 0.00 0.00	446 100.00 9.68
3	202 28.57 15.73	502 71.00 15.15	3 0.42 33.33	707 100.00 15.35
4	295 26.60 22.98	814 73.40 24.57	0 0.00 0.00	1,109 100.00 24.08
5	280 31.53 21.81	608 68.47 18.35	0 0.00 0.00	888 100.00 19.28
6	151 26.08 11.76	426 73.58 12.86	2 0.35 22.22	579 100.00 12.57
7	70 25.64 5.45	203 74.36 6.13	0 0.00 0.00	273 100.00 5.93
8	56 27.86 4.36	145 72.14 4.38	0 0.00 0.00	201 100.00 4.36
9	9 19.15 0.70	38 80.85 1.15	0 0.00 0.00	47 100.00 1.02
10	10 100.00 0.78	0 0.00 0.00	0 0.00 0.00	10 100.00 0.22
14	0 0.00 0.00	14 100.00 0.42	0 0.00 0.00	14 100.00 0.30
.	3 100.00 0.23	0 0.00 0.00	0 0.00 0.00	3 100.00 0.07
Total	1,284 27.88 100.00	3,313 71.93 100.00	9 0.20 100.00	4,606 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key	
	Frequency
	Row Percentage
	Column Percentage

Total Number of Household Members	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
1	180	411	3	594
	30.30	69.19	0.51	100.00
	42.86	36.57	42.86	38.30
2	52	226	0	278
	18.71	81.29	0.00	100.00
	12.38	20.11	0.00	17.92
3	48	179	0	227
	21.15	78.85	0.00	100.00
	11.43	15.93	0.00	14.64
4	36	154	4	194
	18.56	79.38	2.06	100.00
	8.57	13.70	57.14	12.51
5	45	85	0	130
	34.62	65.38	0.00	100.00
	10.71	7.56	0.00	8.38
6	24	47	0	71
	33.80	66.20	0.00	100.00
	5.71	4.18	0.00	4.58
7	21	14	0	35
	60.00	40.00	0.00	100.00
	5.00	1.25	0.00	2.26
8	8	8	0	16
	50.00	50.00	0.00	100.00
	1.90	0.71	0.00	1.03
10	1	0	0	1
	100.00	0.00	0.00	100.00
	0.24	0.00	0.00	0.06
40	4	0	0	4
	100.00	0.00	0.00	100.00
	0.95	0.00	0.00	0.26
.	1	0	0	1
	100.00	0.00	0.00	100.00
	0.24	0.00	0.00	0.06
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
1	164	316	4	484
	33.88	65.29	0.83	100.00
	31.06	25.48	57.14	27.27
2	81	196	3	280
	28.93	70.00	1.07	100.00
	15.34	15.81	42.86	15.77
3	78	251	0	329
	23.71	76.29	0.00	100.00
	14.77	20.24	0.00	18.54
4	108	232	0	340
	31.76	68.24	0.00	100.00
	20.45	18.71	0.00	19.15
5	50	110	0	160
	31.25	68.75	0.00	100.00
	9.47	8.87	0.00	9.01
6	12	56	0	68
	17.65	82.35	0.00	100.00
	2.27	4.52	0.00	3.83
7	35	63	0	98
	35.71	64.29	0.00	100.00
	6.63	5.08	0.00	5.52
8	0	16	0	16
	0.00	100.00	0.00	100.00
	0.00	1.29	0.00	0.90
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
1	139	200	4	343
	40.52	58.31	1.17	100.00
	20.32	16.47	100.00	18.03
2	116	225	0	341
	34.02	65.98	0.00	100.00
	16.96	18.53	0.00	17.93
3	126	261	0	387
	32.56	67.44	0.00	100.00
	18.42	21.50	0.00	20.35
4	133	244	0	377
	35.28	64.72	0.00	100.00
	19.44	20.10	0.00	19.82
5	80	170	0	250
	32.00	68.00	0.00	100.00
	11.70	14.00	0.00	13.14
6	48	72	0	120
	40.00	60.00	0.00	100.00
	7.02	5.93	0.00	6.31
7	42	42	0	84
	50.00	50.00	0.00	100.00
	6.14	3.46	0.00	4.42
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
U.S.	165	481	646
	25.54	74.46	100.00
	79.33	95.06	90.48
Mexico	0	4	4
	0.00	100.00	100.00
	0.00	0.79	0.56
Canada	2	0	2
	100.00	0.00	100.00
	0.96	0.00	0.28
.	41	21	62
	66.13	33.87	100.00
	19.71	4.15	8.68
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
U.S.	452	1,209	2	1,663
	27.18	72.70	0.12	100.00
	87.09	86.36	100.00	86.57
Mexico	7	54	0	61
	11.48	88.52	0.00	100.00
	1.35	3.86	0.00	3.18
Canada	0	3	0	3
	0.00	100.00	0.00	100.00
	0.00	0.21	0.00	0.16
.	60	134	0	194
	30.93	69.07	0.00	100.00
	11.56	9.57	0.00	10.10
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
U.S.	1,128	2,974	5	4,107
	27.47	72.41	0.12	100.00
	87.85	89.77	55.56	89.17
Mexico	49	137	4	190
	25.79	72.11	2.11	100.00
	3.82	4.14	44.44	4.13
Canada	0	1	0	1
	0.00	100.00	0.00	100.00
	0.00	0.03	0.00	0.02
.	107	201	0	308
	34.74	65.26	0.00	100.00
	8.33	6.07	0.00	6.69
Total	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
U.S.	376	1,022	3	1,401
	26.84	72.95	0.21	100.00
	89.52	90.93	42.86	90.33
Mexico	1	9	0	10
	10.00	90.00	0.00	100.00
	0.24	0.80	0.00	0.64
.	43	93	4	140
	30.71	66.43	2.86	100.00
	10.24	8.27	57.14	9.03
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
U.S.	492	1,134	7	1,633
	30.13	69.44	0.43	100.00
	93.18	91.45	100.00	92.00
Mexico	5	3	0	8
	62.50	37.50	0.00	100.00
	0.95	0.24	0.00	0.45
.	31	103	0	134
	23.13	76.87	0.00	100.00
	5.87	8.31	0.00	7.55
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

->Beach Name = Bonita

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
U.S.	579	1,049	4	1,632
	35.48	64.28	0.25	100.00
	84.65	86.41	100.00	85.80
Mexico	6	18	0	24
	25.00	75.00	0.00	100.00
	0.88	1.48	0.00	1.26
Canada	2	0	0	2
	100.00	0.00	0.00	100.00
	0.29	0.00	0.00	0.11
.	97	147	0	244
	39.75	60.25	0.00	100.00
	14.18	12.11	0.00	12.83
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
Less than 10K	0	13	13
	0.00	100.00	100.00
	0.00	2.57	1.82
Exactly 10K	0	6	6
	0.00	100.00	100.00
	0.00	1.19	0.84
10-20K	0	77	77
	0.00	100.00	100.00
	0.00	15.22	10.78
Exactly 20K	0	28	28
	0.00	100.00	100.00
	0.00	5.53	3.92
20-30K	0	55	55
	0.00	100.00	100.00
	0.00	10.87	7.70
Exactly 30K	0	38	38
	0.00	100.00	100.00
	0.00	7.51	5.32
30-40K	0	35	35
	0.00	100.00	100.00
	0.00	6.92	4.90
Exactly 40K	0	11	11
	0.00	100.00	100.00
	0.00	2.17	1.54
40-50K	0	37	37
	0.00	100.00	100.00
	0.00	7.31	5.18
Exactly 50K	0	24	24
	0.00	100.00	100.00
	0.00	4.74	3.36
50-60K	0	16	16
	0.00	100.00	100.00
	0.00	3.16	2.24

->Beach Name = Visitr (Continued)

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Family Pre-tax Income for 2002	CATI Completion Indicator		Total
	Non-Cmp	CATI Cmp	
Exactly 60K	0	12	12
	0.00	100.00	100.00
	0.00	2.37	1.68
60-70K	0	18	18
	0.00	100.00	100.00
	0.00	3.56	2.52
Exactly 70K	0	16	16
	0.00	100.00	100.00
	0.00	3.16	2.24
70-80K	0	13	13
	0.00	100.00	100.00
	0.00	2.57	1.82
Exactly 80K	0	6	6
	0.00	100.00	100.00
	0.00	1.19	0.84
80-100K	0	22	22
	0.00	100.00	100.00
	0.00	4.35	3.08
More than 100K	0	39	39
	0.00	100.00	100.00
	0.00	7.71	5.46
.	208	40	248
	83.87	16.13	100.00
	100.00	7.91	34.73
Total	208	506	714
	29.13	70.87	100.00
	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Less than 10K	3	152	0	155
	1.94	98.06	0.00	100.00
	0.58	10.86	0.00	8.07
Exactly 10K	0	62	0	62
	0.00	100.00	0.00	100.00
	0.00	4.43	0.00	3.23
10-20K	0	320	0	320
	0.00	100.00	0.00	100.00
	0.00	22.86	0.00	16.66
Exactly 20K	0	121	0	121
	0.00	100.00	0.00	100.00
	0.00	8.64	0.00	6.30
20-30K	0	182	0	182
	0.00	100.00	0.00	100.00
	0.00	13.00	0.00	9.47
Exactly 30K	0	62	0	62
	0.00	100.00	0.00	100.00
	0.00	4.43	0.00	3.23
30-40K	0	76	0	76
	0.00	100.00	0.00	100.00
	0.00	5.43	0.00	3.96
Exactly 40K	0	19	0	19
	0.00	100.00	0.00	100.00
	0.00	1.36	0.00	0.99
40-50K	0	71	0	71
	0.00	100.00	0.00	100.00
	0.00	5.07	0.00	3.70
Exactly 50K	0	13	0	13
	0.00	100.00	0.00	100.00
	0.00	0.93	0.00	0.68
50-60K	0	36	0	36
	0.00	100.00	0.00	100.00
	0.00	2.57	0.00	1.87

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Exactly 60K	0	27	0	27
	0.00	100.00	0.00	100.00
	0.00	1.93	0.00	1.41
60-70K	0	15	0	15
	0.00	100.00	0.00	100.00
	0.00	1.07	0.00	0.78
Exactly 70K	0	10	0	10
	0.00	100.00	0.00	100.00
	0.00	0.71	0.00	0.52
70-80K	0	30	0	30
	0.00	100.00	0.00	100.00
	0.00	2.14	0.00	1.56
Exactly 80K	0	10	0	10
	0.00	100.00	0.00	100.00
	0.00	0.71	0.00	0.52
80-100K	0	29	0	29
	0.00	100.00	0.00	100.00
	0.00	2.07	0.00	1.51
Exactly 100K	0	13	0	13
	0.00	100.00	0.00	100.00
	0.00	0.93	0.00	0.68
More than 100K	0	79	0	79
	0.00	100.00	0.00	100.00
	0.00	5.64	0.00	4.11
.	516	73	2	591
	87.31	12.35	0.34	100.00
	99.42	5.21	100.00	30.77
Total	519	1,400	2	1,921
	27.02	72.88	0.10	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Less than 10K	3	290	0	293
	1.02	98.98	0.00	100.00
	0.23	8.75	0.00	6.36
Exactly 10K	0	195	0	195
	0.00	100.00	0.00	100.00
	0.00	5.89	0.00	4.23
10-20K	2	727	0	729
	0.27	99.73	0.00	100.00
	0.16	21.94	0.00	15.83
Exactly 20K	0	245	0	245
	0.00	100.00	0.00	100.00
	0.00	7.40	0.00	5.32
20-30K	1	409	0	410
	0.24	99.76	0.00	100.00
	0.08	12.35	0.00	8.90
Exactly 30K	0	103	0	103
	0.00	100.00	0.00	100.00
	0.00	3.11	0.00	2.24
30-40K	1	271	0	272
	0.37	99.63	0.00	100.00
	0.08	8.18	0.00	5.91
Exactly 40K	0	75	0	75
	0.00	100.00	0.00	100.00
	0.00	2.26	0.00	1.63
40-50K	1	146	0	147
	0.68	99.32	0.00	100.00
	0.08	4.41	0.00	3.19
Exactly 50K	0	42	0	42
	0.00	100.00	0.00	100.00
	0.00	1.27	0.00	0.91
50-60K	0	109	0	109
	0.00	100.00	0.00	100.00
	0.00	3.29	0.00	2.37

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Exactly 60K	0	38	0	38
	0.00	100.00	0.00	100.00
	0.00	1.15	0.00	0.83
60-70K	0	62	0	62
	0.00	100.00	0.00	100.00
	0.00	1.87	0.00	1.35
Exactly 70K	0	27	0	27
	0.00	100.00	0.00	100.00
	0.00	0.81	0.00	0.59
70-80K	0	56	0	56
	0.00	100.00	0.00	100.00
	0.00	1.69	0.00	1.22
Exactly 80K	0	31	0	31
	0.00	100.00	0.00	100.00
	0.00	0.94	0.00	0.67
80-100K	0	95	0	95
	0.00	100.00	0.00	100.00
	0.00	2.87	0.00	2.06
Exactly 100K	0	36	0	36
	0.00	100.00	0.00	100.00
	0.00	1.09	0.00	0.78
More than 100K	0	123	0	123
	0.00	100.00	0.00	100.00
	0.00	3.71	0.00	2.67
.	1,276	233	9	1,518
	84.06	15.35	0.59	100.00
	99.38	7.03	100.00	32.96
Total	1,284	3,313	9	4,606
	27.88	71.93	0.20	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Less than 10K	0	33	0	33
	0.00	100.00	0.00	100.00
	0.00	2.94	0.00	2.13
Exactly 10K	0	15	0	15
	0.00	100.00	0.00	100.00
	0.00	1.33	0.00	0.97
10-20K	0	104	0	104
	0.00	100.00	0.00	100.00
	0.00	9.25	0.00	6.71
Exactly 20K	0	21	0	21
	0.00	100.00	0.00	100.00
	0.00	1.87	0.00	1.35
20-30K	0	77	0	77
	0.00	100.00	0.00	100.00
	0.00	6.85	0.00	4.96
Exactly 30K	0	21	0	21
	0.00	100.00	0.00	100.00
	0.00	1.87	0.00	1.35
30-40K	0	104	0	104
	0.00	100.00	0.00	100.00
	0.00	9.25	0.00	6.71
Exactly 40K	0	30	0	30
	0.00	100.00	0.00	100.00
	0.00	2.67	0.00	1.93
40-50K	0	91	0	91
	0.00	100.00	0.00	100.00
	0.00	8.10	0.00	5.87
Exactly 50K	0	28	0	28
	0.00	100.00	0.00	100.00
	0.00	2.49	0.00	1.81
50-60K	1	61	0	62
	1.61	98.39	0.00	100.00
	0.24	5.43	0.00	4.00
Exactly 60K	0	27	0	27

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

	0.00	100.00	0.00	100.00
	0.00	2.40	0.00	1.74
60-70K	0	43	0	43
	0.00	100.00	0.00	100.00
	0.00	3.83	0.00	2.77
Exactly 70K	0	22	0	22
	0.00	100.00	0.00	100.00
	0.00	1.96	0.00	1.42
70-80K	0	78	0	78
	0.00	100.00	0.00	100.00
	0.00	6.94	0.00	5.03
Exactly 80K	0	29	0	29
	0.00	100.00	0.00	100.00
	0.00	2.58	0.00	1.87
80-100K	0	102	0	102
	0.00	100.00	0.00	100.00
	0.00	9.07	0.00	6.58
Exactly 100K	0	7	0	7
	0.00	100.00	0.00	100.00
	0.00	0.62	0.00	0.45
More than 100K	0	155	0	155
	0.00	100.00	0.00	100.00
	0.00	13.79	0.00	9.99
.	419	76	7	502
	83.47	15.14	1.39	100.00
	99.76	6.76	100.00	32.37
Total	420	1,124	7	1,551
	27.08	72.47	0.45	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Less than 10K	0	28	0	28
	0.00	100.00	0.00	100.00
	0.00	2.26	0.00	1.58
Exactly 10K	0	16	0	16
	0.00	100.00	0.00	100.00
	0.00	1.29	0.00	0.90
10-20K	0	68	0	68
	0.00	100.00	0.00	100.00
	0.00	5.48	0.00	3.83
Exactly 20K	0	39	0	39
	0.00	100.00	0.00	100.00
	0.00	3.15	0.00	2.20
20-30K	0	78	0	78
	0.00	100.00	0.00	100.00
	0.00	6.29	0.00	4.39
Exactly 30K	0	27	0	27
	0.00	100.00	0.00	100.00
	0.00	2.18	0.00	1.52
30-40K	0	94	0	94
	0.00	100.00	0.00	100.00
	0.00	7.58	0.00	5.30
Exactly 40K	0	29	0	29
	0.00	100.00	0.00	100.00
	0.00	2.34	0.00	1.63
40-50K	0	80	0	80
	0.00	100.00	0.00	100.00
	0.00	6.45	0.00	4.51
Exactly 50K	0	39	0	39
	0.00	100.00	0.00	100.00
	0.00	3.15	0.00	2.20
50-60K	0	72	0	72
	0.00	100.00	0.00	100.00
	0.00	5.81	0.00	4.06

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Exactly 60K	0	49	0	49
	0.00	100.00	0.00	100.00
	0.00	3.95	0.00	2.76
60-70K	1	45	0	46
	2.17	97.83	0.00	100.00
	0.19	3.63	0.00	2.59
Exactly 70K	0	39	0	39
	0.00	100.00	0.00	100.00
	0.00	3.15	0.00	2.20
70-80K	0	72	0	72
	0.00	100.00	0.00	100.00
	0.00	5.81	0.00	4.06
Exactly 80K	0	33	0	33
	0.00	100.00	0.00	100.00
	0.00	2.66	0.00	1.86
80-100K	0	103	0	103
	0.00	100.00	0.00	100.00
	0.00	8.31	0.00	5.80
Exactly 100K	0	26	0	26
	0.00	100.00	0.00	100.00
	0.00	2.10	0.00	1.46
More than 100K	0	170	0	170
	0.00	100.00	0.00	100.00
	0.00	13.71	0.00	9.58
.	527	133	7	667
	79.01	19.94	1.05	100.00
	99.81	10.73	100.00	37.58
Total	528	1,240	7	1,775
	29.75	69.86	0.39	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	CATI Completion Indicator			Total
	Non-Cmp	CATI Cmp	.	
Less than 10K	0	50	0	50
	0.00	100.00	0.00	100.00
	0.00	4.12	0.00	2.63
Exactly 10K	0	21	0	21
	0.00	100.00	0.00	100.00
	0.00	1.73	0.00	1.10
10-20K	0	128	0	128
	0.00	100.00	0.00	100.00
	0.00	10.54	0.00	6.73
Exactly 20K	0	38	0	38
	0.00	100.00	0.00	100.00
	0.00	3.13	0.00	2.00
20-30K	1	112	0	113
	0.88	99.12	0.00	100.00
	0.15	9.23	0.00	5.94
Exactly 30K	0	53	0	53
	0.00	100.00	0.00	100.00
	0.00	4.37	0.00	2.79
30-40K	0	129	0	129
	0.00	100.00	0.00	100.00
	0.00	10.63	0.00	6.78
Exactly 40K	0	19	0	19
	0.00	100.00	0.00	100.00
	0.00	1.57	0.00	1.00
40-50K	0	70	0	70
	0.00	100.00	0.00	100.00
	0.00	5.77	0.00	3.68
Exactly 50K	0	42	0	42
	0.00	100.00	0.00	100.00
	0.00	3.46	0.00	2.21
50-60K	0	74	0	74
	0.00	100.00	0.00	100.00
	0.00	6.10	0.00	3.89
Exactly 60K	1	20	0	21

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

	4.76	95.24	0.00	100.00
	0.15	1.65	0.00	1.10
60-70K	0	78	0	78
	0.00	100.00	0.00	100.00
	0.00	6.43	0.00	4.10
Exactly 70K	0	16	0	16
	0.00	100.00	0.00	100.00
	0.00	1.32	0.00	0.84
70-80K	0	56	0	56
	0.00	100.00	0.00	100.00
	0.00	4.61	0.00	2.94
Exactly 80K	0	17	0	17
	0.00	100.00	0.00	100.00
	0.00	1.40	0.00	0.89
80-100K	0	48	0	48
	0.00	100.00	0.00	100.00
	0.00	3.95	0.00	2.52
Exactly 100K	0	13	0	13
	0.00	100.00	0.00	100.00
	0.00	1.07	0.00	0.68
More than 100K	1	108	0	109
	0.92	99.08	0.00	100.00
	0.15	8.90	0.00	5.73
.	681	122	4	807
	84.39	15.12	0.50	100.00
	99.56	10.05	100.00	42.43
Total	684	1,214	4	1,902
	35.96	63.83	0.21	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*SOCIODEMOGRAPHICS OF SWIMMERS VS NON-SWIMMERS

*ALL BEACHES - Individual Level Data

Key	
	Frequency
	Row Percentage
	Column Percentage

Beach Name	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Visitr	257	244	5	506
	50.79	48.22	0.99	100.00
	6.87	4.91	5.95	5.75
Tecalote	607	770	23	1,400
	43.36	55.00	1.64	100.00
	16.22	15.49	27.38	15.91
Leisure	1,183	2,096	34	3,313
	35.71	63.27	1.03	100.00
	31.61	42.16	40.48	37.66
DeAnza	657	458	9	1,124
	58.45	40.75	0.80	100.00
	17.56	9.21	10.71	12.78
Crown	523	713	4	1,240
	42.18	57.50	0.32	100.00
	13.98	14.34	4.76	14.10
Bonita	515	690	9	1,214
	42.42	56.84	0.74	100.00
	13.76	13.88	10.71	13.80
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	326	870	18	1,214
	26.85	71.66	1.48	100.00
	8.71	17.50	21.43	13.80
5.1 - 12	332	1,461	15	1,808
	18.36	80.81	0.83	100.00
	8.87	29.39	17.86	20.55
12.1 - 30	1,127	1,215	24	2,366
	47.63	51.35	1.01	100.00
	30.12	24.44	28.57	26.90
30.1 - 55	1,654	1,251	23	2,928
	56.49	42.73	0.79	100.00
	44.20	25.17	27.38	33.28
>55	253	76	3	332
	76.20	22.89	0.90	100.00
	6.76	1.53	3.57	3.77
.	50	98	1	149
	33.56	65.77	0.67	100.00
	1.34	1.97	1.19	1.69
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	1,307 52.38 34.93	1,181 47.33 23.76	7 0.28 8.33	2,495 100.00 28.36
Black	194 52.57 5.18	165 44.72 3.32	10 2.71 11.90	369 100.00 4.19
American Indian or Al	27 43.55 0.72	35 56.45 0.70	0 0.00 0.00	62 100.00 0.70
Asian or Pacific Isla	281 60.69 7.51	177 38.23 3.56	5 1.08 5.95	463 100.00 5.26
Other (SPECIFY)	128 56.39 3.42	96 42.29 1.93	3 1.32 3.57	227 100.00 2.58
VOLUNTEERED: Mixed ra	163 40.05 4.36	241 59.21 4.85	3 0.74 3.57	407 100.00 4.63
VOLUNTEERED: Identifi	1,616 34.22 43.19	3,052 64.62 61.40	55 1.16 65.48	4,723 100.00 53.69
.	26 50.98 0.69	24 47.06 0.48	1 1.96 1.19	51 100.00 0.58
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	1,662 34.45 44.41	3,108 64.43 62.52	54 1.12 64.29	4,824 100.00 54.84
Yes, Puerto Rican	33 54.10 0.88	28 45.90 0.56	0 0.00 0.00	61 100.00 0.69
Yes, Cuban	13 56.52 0.35	9 39.13 0.18	1 4.35 1.19	23 100.00 0.26
Yes, Other Hispanic	161 42.59 4.30	214 56.61 4.30	3 0.79 3.57	378 100.00 4.30
No (None of the above)	1,850 53.39 49.44	1,590 45.89 31.99	25 0.72 29.76	3,465 100.00 39.39
.	23 50.00 0.61	22 47.83 0.44	1 2.17 1.19	46 100.00 0.52
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	1,609	2,292	47	3,948
	40.75	58.05	1.19	100.00
	43.00	46.11	55.95	44.88
Male	2,100	2,624	37	4,761
	44.11	55.11	0.78	100.00
	56.12	52.79	44.05	54.12
.	33	55	0	88
	37.50	62.50	0.00	100.00
	0.88	1.11	0.00	1.00
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*ALL BEACHES - Household level data

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	847 64.12 22.63	469 35.50 9.43	5 0.38 5.95	1,321 100.00 15.02
2	643 53.14 17.18	560 46.28 11.27	7 0.58 8.33	1,210 100.00 13.75
3	581 38.17 15.53	927 60.91 18.65	14 0.92 16.67	1,522 100.00 17.30
4	751 39.90 20.07	1,093 58.08 21.99	38 2.02 45.24	1,882 100.00 21.39
5	458 33.90 12.24	884 65.43 17.78	9 0.67 10.71	1,351 100.00 15.36
6	247 30.72 6.60	549 68.28 11.04	8 1.00 9.52	804 100.00 9.14
7	150 33.71 4.01	292 65.62 5.87	3 0.67 3.57	445 100.00 5.06
8	49 24.38 1.31	152 75.62 3.06	0 0.00 0.00	201 100.00 2.28
9	12 25.53 0.32	35 74.47 0.70	0 0.00 0.00	47 100.00 0.53
14	4 28.57 0.11	10 71.43 0.20	0 0.00 0.00	14 100.00 0.16
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	3,262	4,525	82	7,869
	41.45	57.50	1.04	100.00
	87.17	91.03	97.62	89.45
Mexico	75	149	1	225
	33.33	66.22	0.44	100.00
	2.00	3.00	1.19	2.56
Canada	4	0	0	4
	100.00	0.00	0.00	100.00
	0.11	0.00	0.00	0.05
.	401	297	1	699
	57.37	42.49	0.14	100.00
	10.72	5.97	1.19	7.95
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	179	376	11	566
	31.63	66.43	1.94	100.00
	4.78	7.56	13.10	6.43
Exactly 10K	91	220	4	315
	28.89	69.84	1.27	100.00
	2.43	4.43	4.76	3.58
10-20K	490	920	14	1,424
	34.41	64.61	0.98	100.00
	13.09	18.51	16.67	16.19
Exactly 20K	166	315	11	492
	33.74	64.02	2.24	100.00
	4.44	6.34	13.10	5.59
20-30K	341	566	6	913
	37.35	61.99	0.66	100.00
	9.11	11.39	7.14	10.38
Exactly 30K	115	185	4	304
	37.83	60.86	1.32	100.00
	3.07	3.72	4.76	3.46
30-40K	320	382	7	709
	45.13	53.88	0.99	100.00
	8.55	7.68	8.33	8.06
Exactly 40K	74	105	4	183
	40.44	57.38	2.19	100.00
	1.98	2.11	4.76	2.08
40-50K	230	261	4	495
	46.46	52.73	0.81	100.00
	6.15	5.25	4.76	5.63
Exactly 50K	86	100	2	188
	45.74	53.19	1.06	100.00
	2.30	2.01	2.38	2.14
50-60K	190	177	1	368
	51.63	48.10	0.27	100.00
	5.08	3.56	1.19	4.18
Exactly 60K	85	83	5	173
	49.13	47.98	2.89	100.00
	2.27	1.67	5.95	1.97

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

60-70K	130	131	0	261
	49.81	50.19	0.00	100.00
	3.47	2.64	0.00	2.97
Exactly 70K	60	69	1	130
	46.15	53.08	0.77	100.00
	1.60	1.39	1.19	1.48
70-80K	163	139	3	305
	53.44	45.57	0.98	100.00
	4.36	2.80	3.57	3.47
Exactly 80K	60	64	2	126
	47.62	50.79	1.59	100.00
	1.60	1.29	2.38	1.43
80-100K	217	181	1	399
	54.39	45.36	0.25	100.00
	5.80	3.64	1.19	4.54
Exactly 100K	41	54	0	95
	43.16	56.84	0.00	100.00
	1.10	1.09	0.00	1.08
More than 100K	361	312	1	674
	53.56	46.29	0.15	100.00
	9.65	6.28	1.19	7.66
.	343	331	3	677
	50.66	48.89	0.44	100.00
	9.17	6.66	3.57	7.70
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*BY BEACH - Individual Level Data

Key
Frequency
Row Percentage
Column Percentage

Beach Name	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Visitr	257	244	5	506
	50.79	48.22	0.99	100.00
	6.87	4.91	5.95	5.75
Tecalote	607	770	23	1,400
	43.36	55.00	1.64	100.00
	16.22	15.49	27.38	15.91
Leisure	1,183	2,096	34	3,313
	35.71	63.27	1.03	100.00
	31.61	42.16	40.48	37.66
DeAnza	657	458	9	1,124
	58.45	40.75	0.80	100.00
	17.56	9.21	10.71	12.78
Crown	523	713	4	1,240
	42.18	57.50	0.32	100.00
	13.98	14.34	4.76	14.10
Bonita	515	690	9	1,214
	42.42	56.84	0.74	100.00
	13.76	13.88	10.71	13.80
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	19	46	2	67
	28.36	68.66	2.99	100.00
	7.39	18.85	40.00	13.24
5.1 - 12	30	71	1	102
	29.41	69.61	0.98	100.00
	11.67	29.10	20.00	20.16
12.1 - 30	89	61	2	152
	58.55	40.13	1.32	100.00
	34.63	25.00	40.00	30.04
30.1 - 55	97	56	0	153
	63.40	36.60	0.00	100.00
	37.74	22.95	0.00	30.24
>55	20	7	0	27
	74.07	25.93	0.00	100.00
	7.78	2.87	0.00	5.34
.	2	3	0	5
	40.00	60.00	0.00	100.00
	0.78	1.23	0.00	0.99
Total	257	244	5	506
	50.79	48.22	0.99	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	70	140	5	215
	32.56	65.12	2.33	100.00
	11.53	18.18	21.74	15.36
5.1 - 12	86	243	4	333
	25.83	72.97	1.20	100.00
	14.17	31.56	17.39	23.79
12.1 - 30	168	197	6	371
	45.28	53.10	1.62	100.00
	27.68	25.58	26.09	26.50
30.1 - 55	243	169	7	419
	58.00	40.33	1.67	100.00
	40.03	21.95	30.43	29.93
>55	29	10	0	39
	74.36	25.64	0.00	100.00
	4.78	1.30	0.00	2.79
.	11	11	1	23
	47.83	47.83	4.35	100.00
	1.81	1.43	4.35	1.64
Total	607	770	23	1,400
	43.36	55.00	1.64	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	142	371	7	520
	27.31	71.35	1.35	100.00
	12.00	17.70	20.59	15.70
5.1 - 12	103	657	4	764
	13.48	85.99	0.52	100.00
	8.71	31.35	11.76	23.06
12.1 - 30	308	508	10	826
	37.29	61.50	1.21	100.00
	26.04	24.24	29.41	24.93
30.1 - 55	535	493	11	1,039
	51.49	47.45	1.06	100.00
	45.22	23.52	32.35	31.36
>55	81	28	2	111
	72.97	25.23	1.80	100.00
	6.85	1.34	5.88	3.35
.	14	39	0	53
	26.42	73.58	0.00	100.00
	1.18	1.86	0.00	1.60
Total	1,183	2,096	34	3,313
	35.71	63.27	1.03	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	36	73	1	110
	32.73	66.36	0.91	100.00
	5.48	15.94	11.11	9.79
5.1 - 12	40	150	3	193
	20.73	77.72	1.55	100.00
	6.09	32.75	33.33	17.17
12.1 - 30	186	86	2	274
	67.88	31.39	0.73	100.00
	28.31	18.78	22.22	24.38
30.1 - 55	330	134	2	466
	70.82	28.76	0.43	100.00
	50.23	29.26	22.22	41.46
>55	59	7	1	67
	88.06	10.45	1.49	100.00
	8.98	1.53	11.11	5.96
.	6	8	0	14
	42.86	57.14	0.00	100.00
	0.91	1.75	0.00	1.25
Total	657	458	9	1,124
	58.45	40.75	0.80	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	19	123	0	142
	13.38	86.62	0.00	100.00
	3.63	17.25	0.00	11.45
5.1 - 12	29	163	2	194
	14.95	84.02	1.03	100.00
	5.54	22.86	50.00	15.65
12.1 - 30	203	199	1	403
	50.37	49.38	0.25	100.00
	38.81	27.91	25.00	32.50
30.1 - 55	236	203	1	440
	53.64	46.14	0.23	100.00
	45.12	28.47	25.00	35.48
>55	27	11	0	38
	71.05	28.95	0.00	100.00
	5.16	1.54	0.00	3.06
.	9	14	0	23
	39.13	60.87	0.00	100.00
	1.72	1.96	0.00	1.85
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Age Category	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0 - 5	40	117	3	160
	25.00	73.13	1.88	100.00
	7.77	16.96	33.33	13.18
5.1 - 12	44	177	1	222
	19.82	79.73	0.45	100.00
	8.54	25.65	11.11	18.29
12.1 - 30	173	164	3	340
	50.88	48.24	0.88	100.00
	33.59	23.77	33.33	28.01
30.1 - 55	213	196	2	411
	51.82	47.69	0.49	100.00
	41.36	28.41	22.22	33.86
>55	37	13	0	50
	74.00	26.00	0.00	100.00
	7.18	1.88	0.00	4.12
.	8	23	0	31
	25.81	74.19	0.00	100.00
	1.55	3.33	0.00	2.55
Total	515	690	9	1,214
	42.42	56.84	0.74	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	71 73.96 27.63	24 25.00 9.84	1 1.04 20.00	96 100.00 18.97
Black	7 87.50 2.72	1 12.50 0.41	0 0.00 0.00	8 100.00 1.58
American Indian or Al	2 66.67 0.78	1 33.33 0.41	0 0.00 0.00	3 100.00 0.59
Asian or Pacific Isla	33 71.74 12.84	13 28.26 5.33	0 0.00 0.00	46 100.00 9.09
Other (SPECIFY)	6 46.15 2.33	7 53.85 2.87	0 0.00 0.00	13 100.00 2.57
VOLUNTEERED: Mixed ra	17 53.13 6.61	15 46.88 6.15	0 0.00 0.00	32 100.00 6.32
VOLUNTEERED: Identifi	120 39.09 46.69	183 59.61 75.00	4 1.30 80.00	307 100.00 60.67
.	1 100.00 0.39	0 0.00 0.00	0 0.00 0.00	1 100.00 0.20
Total	257 50.79 100.00	244 48.22 100.00	5 0.99 100.00	506 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	130 52.21 21.42	118 47.39 15.32	1 0.40 4.35	249 100.00 17.79
Black	22 68.75 3.62	10 31.25 1.30	0 0.00 0.00	32 100.00 2.29
American Indian or Al	3 75.00 0.49	1 25.00 0.13	0 0.00 0.00	4 100.00 0.29
Asian or Pacific Isla	44 68.75 7.25	20 31.25 2.60	0 0.00 0.00	64 100.00 4.57
Other (SPECIFY)	23 76.67 3.79	6 20.00 0.78	1 3.33 4.35	30 100.00 2.14
VOLUNTEERED: Mixed ra	12 50.00 1.98	12 50.00 1.56	0 0.00 0.00	24 100.00 1.71
VOLUNTEERED: Identifi	369 37.27 60.79	600 60.61 77.92	21 2.12 91.30	990 100.00 70.71
.	4 57.14 0.66	3 42.86 0.39	0 0.00 0.00	7 100.00 0.50
Total	607 43.36 100.00	770 55.00 100.00	23 1.64 100.00	1,400 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	256 55.05 21.64	208 44.73 9.92	1 0.22 2.94	465 100.00 14.04
Black	30 52.63 2.54	25 43.86 1.19	2 3.51 5.88	57 100.00 1.72
American Indian or Al	3 37.50 0.25	5 62.50 0.24	0 0.00 0.00	8 100.00 0.24
Asian or Pacific Isla	52 55.32 4.40	38 40.43 1.81	4 4.26 11.76	94 100.00 2.84
Other (SPECIFY)	31 46.27 2.62	34 50.75 1.62	2 2.99 5.88	67 100.00 2.02
VOLUNTEERED: Mixed ra	36 36.36 3.04	63 63.64 3.01	0 0.00 0.00	99 100.00 2.99
VOLUNTEERED: Identifi	771 30.67 65.17	1,719 68.38 82.01	24 0.95 70.59	2,514 100.00 75.88
.	4 44.44 0.34	4 44.44 0.19	1 11.11 2.94	9 100.00 0.27
Total	1,183 35.71 100.00	2,096 63.27 100.00	34 1.03 100.00	3,313 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	359	216	2	577
	62.22	37.44	0.35	100.00
	54.64	47.16	22.22	51.33
Black	15	7	0	22
	68.18	31.82	0.00	100.00
	2.28	1.53	0.00	1.96
American Indian or Al	4	3	0	7
	57.14	42.86	0.00	100.00
	0.61	0.66	0.00	0.62
Asian or Pacific Isla	78	19	1	98
	79.59	19.39	1.02	100.00
	11.87	4.15	11.11	8.72
Other (SPECIFY)	22	12	0	34
	64.71	35.29	0.00	100.00
	3.35	2.62	0.00	3.02
VOLUNTEERED: Mixed ra	44	44	3	91
	48.35	48.35	3.30	100.00
	6.70	9.61	33.33	8.10
VOLUNTEERED: Identifi	130	156	3	289
	44.98	53.98	1.04	100.00
	19.79	34.06	33.33	25.71
.	5	1	0	6
	83.33	16.67	0.00	100.00
	0.76	0.22	0.00	0.53
Total	657	458	9	1,124
	58.45	40.75	0.80	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key	
	Frequency
	Row Percentage
	Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	290	360	0	650
	44.62	55.38	0.00	100.00
	55.45	50.49	0.00	52.42
Black	66	66	4	136
	48.53	48.53	2.94	100.00
	12.62	9.26	100.00	10.97
American Indian or Al	10	11	0	21
	47.62	52.38	0.00	100.00
	1.91	1.54	0.00	1.69
Asian or Pacific Isla	41	51	0	92
	44.57	55.43	0.00	100.00
	7.84	7.15	0.00	7.42
Other (SPECIFY)	19	9	0	28
	67.86	32.14	0.00	100.00
	3.63	1.26	0.00	2.26
VOLUNTEERED: Mixed ra	22	46	0	68
	32.35	67.65	0.00	100.00
	4.21	6.45	0.00	5.48
VOLUNTEERED: Identifi	73	165	0	238
	30.67	69.33	0.00	100.00
	13.96	23.14	0.00	19.19
.	2	5	0	7
	28.57	71.43	0.00	100.00
	0.38	0.70	0.00	0.56
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key	
	Frequency
	Row Percentage
	Column Percentage

Respondent's Race	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
White	201	255	2	458
	43.89	55.68	0.44	100.00
	39.03	36.96	22.22	37.73
Black	54	56	4	114
	47.37	49.12	3.51	100.00
	10.49	8.12	44.44	9.39
American Indian or Al	5	14	0	19
	26.32	73.68	0.00	100.00
	0.97	2.03	0.00	1.57
Asian or Pacific Isla	33	36	0	69
	47.83	52.17	0.00	100.00
	6.41	5.22	0.00	5.68
Other (SPECIFY)	27	28	0	55
	49.09	50.91	0.00	100.00
	5.24	4.06	0.00	4.53
VOLUNTEERED: Mixed ra	32	61	0	93
	34.41	65.59	0.00	100.00
	6.21	8.84	0.00	7.66
VOLUNTEERED: Identifi	153	229	3	385
	39.74	59.48	0.78	100.00
	29.71	33.19	33.33	31.71
.	10	11	0	21
	47.62	52.38	0.00	100.00
	1.94	1.59	0.00	1.73
Total	515	690	9	1,214
	42.42	56.84	0.74	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	117	181	4	302
	38.74	59.93	1.32	100.00
	45.53	74.18	80.00	59.68
Yes, Puerto Rican	5	2	0	7
	71.43	28.57	0.00	100.00
	1.95	0.82	0.00	1.38
Yes, Cuban	1	0	0	1
	100.00	0.00	0.00	100.00
	0.39	0.00	0.00	0.20
Yes, Other Hispanic	6	7	0	13
	46.15	53.85	0.00	100.00
	2.33	2.87	0.00	2.57
No (None of the above)	128	54	1	183
	69.95	29.51	0.55	100.00
	49.81	22.13	20.00	36.17
Total	257	244	5	506
	50.79	48.22	0.99	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	365	585	21	971
	37.59	60.25	2.16	100.00
	60.13	75.97	91.30	69.36
Yes, Puerto Rican	2	8	0	10
	20.00	80.00	0.00	100.00
	0.33	1.04	0.00	0.71
Yes, Other Hispanic	29	32	0	61
	47.54	52.46	0.00	100.00
	4.78	4.16	0.00	4.36
No (None of the above)	207	142	2	351
	58.97	40.46	0.57	100.00
	34.10	18.44	8.70	25.07
.	4	3	0	7
	57.14	42.86	0.00	100.00
	0.66	0.39	0.00	0.50
Total	607	770	23	1,400
	43.36	55.00	1.64	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	786 30.76 66.44	1,746 68.34 83.30	23 0.90 67.65	2,555 100.00 77.12
Yes, Puerto Rican	11 52.38 0.93	10 47.62 0.48	0 0.00 0.00	21 100.00 0.63
Yes, Cuban	6 60.00 0.51	4 40.00 0.19	0 0.00 0.00	10 100.00 0.30
Yes, Other Hispanic	34 28.10 2.87	84 69.42 4.01	3 2.48 8.82	121 100.00 3.65
No (None of the above)	343 57.26 28.99	249 41.57 11.88	7 1.17 20.59	599 100.00 18.08
.	3 42.86 0.25	3 42.86 0.14	1 14.29 2.94	7 100.00 0.21
Total	1,183 35.71 100.00	2,096 63.27 100.00	34 1.03 100.00	3,313 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	136 44.74 20.70	165 54.28 36.03	3 0.99 33.33	304 100.00 27.05
Yes, Puerto Rican	6 75.00 0.91	2 25.00 0.44	0 0.00 0.00	8 100.00 0.71
Yes, Cuban	1 100.00 0.15	0 0.00 0.00	0 0.00 0.00	1 100.00 0.09
Yes, Other Hispanic	42 63.64 6.39	24 36.36 5.24	0 0.00 0.00	66 100.00 5.87
No (None of the above)	468 63.16 71.23	267 36.03 58.30	6 0.81 66.67	741 100.00 65.93
.	4 100.00 0.61	0 0.00 0.00	0 0.00 0.00	4 100.00 0.36
Total	657 58.45 100.00	458 40.75 100.00	9 0.80 100.00	1,124 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	91	184	0	275
	33.09	66.91	0.00	100.00
	17.40	25.81	0.00	22.18
Yes, Puerto Rican	4	2	0	6
	66.67	33.33	0.00	100.00
	0.76	0.28	0.00	0.48
Yes, Cuban	3	5	0	8
	37.50	62.50	0.00	100.00
	0.57	0.70	0.00	0.65
Yes, Other Hispanic	21	28	0	49
	42.86	57.14	0.00	100.00
	4.02	3.93	0.00	3.95
No (None of the above)	402	489	4	895
	44.92	54.64	0.45	100.00
	76.86	68.58	100.00	72.18
.	2	5	0	7
	28.57	71.43	0.00	100.00
	0.38	0.70	0.00	0.56
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Ethnic Origin Hispanic	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, Mexican/Mex-Amer	167 40.05 32.43	247 59.23 35.80	3 0.72 33.33	417 100.00 34.35
Yes, Puerto Rican	5 55.56 0.97	4 44.44 0.58	0 0.00 0.00	9 100.00 0.74
Yes, Cuban	2 66.67 0.39	0 0.00 0.00	1 33.33 11.11	3 100.00 0.25
Yes, Other Hispanic	29 42.65 5.63	39 57.35 5.65	0 0.00 0.00	68 100.00 5.60
No (None of the above)	302 43.39 58.64	389 55.89 56.38	5 0.72 55.56	696 100.00 57.33
.	10 47.62 1.94	11 52.38 1.59	0 0.00 0.00	21 100.00 1.73
Total	515 42.42 100.00	690 56.84 100.00	9 0.74 100.00	1,214 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	113	110	4	227
	49.78	48.46	1.76	100.00
	43.97	45.08	80.00	44.86
Male	143	131	1	275
	52.00	47.64	0.36	100.00
	55.64	53.69	20.00	54.35
.	1	3	0	4
	25.00	75.00	0.00	100.00
	0.39	1.23	0.00	0.79
Total	257	244	5	506
	50.79	48.22	0.99	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	268	346	13	627
	42.74	55.18	2.07	100.00
	44.15	44.94	56.52	44.79
Male	335	413	10	758
	44.20	54.49	1.32	100.00
	55.19	53.64	43.48	54.14
.	4	11	0	15
	26.67	73.33	0.00	100.00
	0.66	1.43	0.00	1.07
Total	607	770	23	1,400
	43.36	55.00	1.64	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	519	1,028	17	1,564
	33.18	65.73	1.09	100.00
	43.87	49.05	50.00	47.21
Male	644	1,041	17	1,702
	37.84	61.16	1.00	100.00
	54.44	49.67	50.00	51.37
.	20	27	0	47
	42.55	57.45	0.00	100.00
	1.69	1.29	0.00	1.42
Total	1,183	2,096	34	3,313
	35.71	63.27	1.03	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	276	210	5	491
	56.21	42.77	1.02	100.00
	42.01	45.85	55.56	43.68
Male	375	245	4	624
	60.10	39.26	0.64	100.00
	57.08	53.49	44.44	55.52
.	6	3	0	9
	66.67	33.33	0.00	100.00
	0.91	0.66	0.00	0.80
Total	657	458	9	1,124
	58.45	40.75	0.80	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	213	316	3	532
	40.04	59.40	0.56	100.00
	40.73	44.32	75.00	42.90
Male	310	389	1	700
	44.29	55.57	0.14	100.00
	59.27	54.56	25.00	56.45
.	0	8	0	8
	0.00	100.00	0.00	100.00
	0.00	1.12	0.00	0.65
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Gender on Consent Form	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Female	220	282	5	507
	43.39	55.62	0.99	100.00
	42.72	40.87	55.56	41.76
Male	293	405	4	702
	41.74	57.69	0.57	100.00
	56.89	58.70	44.44	57.83
.	2	3	0	5
	40.00	60.00	0.00	100.00
	0.39	0.43	0.00	0.41
Total	515	690	9	1,214
	42.42	56.84	0.74	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

*BY BEACH - Household level data

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	60	28	1	89
	67.42	31.46	1.12	100.00
	23.35	11.48	20.00	17.59
2	41	37	0	78
	52.56	47.44	0.00	100.00
	15.95	15.16	0.00	15.42
3	48	52	1	101
	47.52	51.49	0.99	100.00
	18.68	21.31	20.00	19.96
4	30	49	3	82
	36.59	59.76	3.66	100.00
	11.67	20.08	60.00	16.21
5	39	46	0	85
	45.88	54.12	0.00	100.00
	15.18	18.85	0.00	16.80
6	17	13	0	30
	56.67	43.33	0.00	100.00
	6.61	5.33	0.00	5.93
7	12	13	0	25
	48.00	52.00	0.00	100.00
	4.67	5.33	0.00	4.94
8	10	6	0	16
	62.50	37.50	0.00	100.00
	3.89	2.46	0.00	3.16
Total	257	244	5	506
	50.79	48.22	0.99	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	55 57.29 9.06	40 41.67 5.19	1 1.04 4.35	96 100.00 6.86
2	84 64.12 13.84	47 35.88 6.10	0 0.00 0.00	131 100.00 9.36
3	103 45.18 16.97	120 52.63 15.58	5 2.19 21.74	228 100.00 16.29
4	139 39.04 22.90	209 58.71 27.14	8 2.25 34.78	356 100.00 25.43
5	110 37.54 18.12	180 61.43 23.38	3 1.02 13.04	293 100.00 20.93
6	74 42.77 12.19	96 55.49 12.47	3 1.73 13.04	173 100.00 12.36
7	38 38.78 6.26	57 58.16 7.40	3 3.06 13.04	98 100.00 7.00
8	2 12.50 0.33	14 87.50 1.82	0 0.00 0.00	16 100.00 1.14
9	2 22.22 0.33	7 77.78 0.91	0 0.00 0.00	9 100.00 0.64
Total	607 43.36 100.00	770 55.00 100.00	23 1.64 100.00	1,400 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	139 66.51 11.75	69 33.01 3.29	1 0.48 2.94	209 100.00 6.31
2	201 56.78 16.99	148 41.81 7.06	5 1.41 14.71	354 100.00 10.69
3	157 31.27 13.27	338 67.33 16.13	7 1.39 20.59	502 100.00 15.15
4	305 37.47 25.78	495 60.81 23.62	14 1.72 41.18	814 100.00 24.57
5	181 29.77 15.30	423 69.57 20.18	4 0.66 11.76	608 100.00 18.35
6	103 24.18 8.71	320 75.12 15.27	3 0.70 8.82	426 100.00 12.86
7	54 26.60 4.56	149 73.40 7.11	0 0.00 0.00	203 100.00 6.13
8	29 20.00 2.45	116 80.00 5.53	0 0.00 0.00	145 100.00 4.38
9	10 26.32 0.85	28 73.68 1.34	0 0.00 0.00	38 100.00 1.15
14	4 28.57 0.34	10 71.43 0.48	0 0.00 0.00	14 100.00 0.42
Total	1,183 35.71 100.00	2,096 63.27 100.00	34 1.03 100.00	3,313 100.00 100.00

->Beach Name = DeAnza

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	290	119	2	411
	70.56	28.95	0.49	100.00
	44.14	25.98	22.22	36.57
2	127	97	2	226
	56.19	42.92	0.88	100.00
	19.33	21.18	22.22	20.11
3	80	98	1	179
	44.69	54.75	0.56	100.00
	12.18	21.40	11.11	15.93
4	85	67	2	154
	55.19	43.51	1.30	100.00
	12.94	14.63	22.22	13.70
5	41	42	2	85
	48.24	49.41	2.35	100.00
	6.24	9.17	22.22	7.56
6	18	29	0	47
	38.30	61.70	0.00	100.00
	2.74	6.33	0.00	4.18
7	11	3	0	14
	78.57	21.43	0.00	100.00
	1.67	0.66	0.00	1.25
8	5	3	0	8
	62.50	37.50	0.00	100.00
	0.76	0.66	0.00	0.71
Total	657	458	9	1,124
	58.45	40.75	0.80	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	185	131	0	316
	58.54	41.46	0.00	100.00
	35.37	18.37	0.00	25.48
2	90	106	0	196
	45.92	54.08	0.00	100.00
	17.21	14.87	0.00	15.81
3	94	157	0	251
	37.45	62.55	0.00	100.00
	17.97	22.02	0.00	20.24
4	85	145	2	232
	36.64	62.50	0.86	100.00
	16.25	20.34	50.00	18.71
5	32	78	0	110
	29.09	70.91	0.00	100.00
	6.12	10.94	0.00	8.87
6	20	34	2	56
	35.71	60.71	3.57	100.00
	3.82	4.77	50.00	4.52
7	14	49	0	63
	22.22	77.78	0.00	100.00
	2.68	6.87	0.00	5.08
8	3	13	0	16
	18.75	81.25	0.00	100.00
	0.57	1.82	0.00	1.29
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Total Number of Household Members	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	118	82	0	200
	59.00	41.00	0.00	100.00
	22.91	11.88	0.00	16.47
2	100	125	0	225
	44.44	55.56	0.00	100.00
	19.42	18.12	0.00	18.53
3	99	162	0	261
	37.93	62.07	0.00	100.00
	19.22	23.48	0.00	21.50
4	107	128	9	244
	43.85	52.46	3.69	100.00
	20.78	18.55	100.00	20.10
5	55	115	0	170
	32.35	67.65	0.00	100.00
	10.68	16.67	0.00	14.00
6	15	57	0	72
	20.83	79.17	0.00	100.00
	2.91	8.26	0.00	5.93
7	21	21	0	42
	50.00	50.00	0.00	100.00
	4.08	3.04	0.00	3.46
Total	515	690	9	1,214
	42.42	56.84	0.74	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	238 49.48 92.61	238 49.48 97.54	5 1.04 100.00	481 100.00 95.06
Mexico	0 0.00 0.00	4 100.00 1.64	0 0.00 0.00	4 100.00 0.79
.	19 90.48 7.39	2 9.52 0.82	0 0.00 0.00	21 100.00 4.15
Total	257 50.79 100.00	244 48.22 100.00	5 0.99 100.00	506 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	509	677	23	1,209
	42.10	56.00	1.90	100.00
	83.86	87.92	100.00	86.36
Mexico	24	30	0	54
	44.44	55.56	0.00	100.00
	3.95	3.90	0.00	3.86
Canada	3	0	0	3
	100.00	0.00	0.00	100.00
	0.49	0.00	0.00	0.21
.	71	63	0	134
	52.99	47.01	0.00	100.00
	11.70	8.18	0.00	9.57
Total	607	770	23	1,400
	43.36	55.00	1.64	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	1,042 35.04 88.08	1,899 63.85 90.60	33 1.11 97.06	2,974 100.00 89.77
Mexico	43 31.39 3.63	93 67.88 4.44	1 0.73 2.94	137 100.00 4.14
Canada	1 100.00 0.08	0 0.00 0.00	0 0.00 0.00	1 100.00 0.03
.	97 48.26 8.20	104 51.74 4.96	0 0.00 0.00	201 100.00 6.07
Total	1,183 35.71 100.00	2,096 63.27 100.00	34 1.03 100.00	3,313 100.00 100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	591	423	8	1,022
	57.83	41.39	0.78	100.00
	89.95	92.36	88.89	90.93
Mexico	2	7	0	9
	22.22	77.78	0.00	100.00
	0.30	1.53	0.00	0.80
.	64	28	1	93
	68.82	30.11	1.08	100.00
	9.74	6.11	11.11	8.27
Total	657	458	9	1,124
	58.45	40.75	0.80	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	468	662	4	1,134
	41.27	58.38	0.35	100.00
	89.48	92.85	100.00	91.45
Mexico	0	3	0	3
	0.00	100.00	0.00	100.00
	0.00	0.42	0.00	0.24
.	55	48	0	103
	53.40	46.60	0.00	100.00
	10.52	6.73	0.00	8.31
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Country Respondent Lives in	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
U.S.	414	626	9	1,049
	39.47	59.68	0.86	100.00
	80.39	90.72	100.00	86.41
Mexico	6	12	0	18
	33.33	66.67	0.00	100.00
	1.17	1.74	0.00	1.48
.	95	52	0	147
	64.63	35.37	0.00	100.00
	18.45	7.54	0.00	12.11
Total	515	690	9	1,214
	42.42	56.84	0.74	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Visitr

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	4	9	0	13
	30.77	69.23	0.00	100.00
	1.56	3.69	0.00	2.57
Exactly 10K	1	5	0	6
	16.67	83.33	0.00	100.00
	0.39	2.05	0.00	1.19
10-20K	39	38	0	77
	50.65	49.35	0.00	100.00
	15.18	15.57	0.00	15.22
Exactly 20K	11	16	1	28
	39.29	57.14	3.57	100.00
	4.28	6.56	20.00	5.53
20-30K	15	40	0	55
	27.27	72.73	0.00	100.00
	5.84	16.39	0.00	10.87
Exactly 30K	19	19	0	38
	50.00	50.00	0.00	100.00
	7.39	7.79	0.00	7.51
30-40K	26	9	0	35
	74.29	25.71	0.00	100.00
	10.12	3.69	0.00	6.92
Exactly 40K	1	10	0	11
	9.09	90.91	0.00	100.00
	0.39	4.10	0.00	2.17
40-50K	21	15	1	37
	56.76	40.54	2.70	100.00
	8.17	6.15	20.00	7.31
Exactly 50K	12	12	0	24
	50.00	50.00	0.00	100.00
	4.67	4.92	0.00	4.74
50-60K	5	11	0	16
	31.25	68.75	0.00	100.00
	1.95	4.51	0.00	3.16

->Beach Name = Visitr (Continued)

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Exactly 60K	4	5	3	12
	33.33	41.67	25.00	100.00
	1.56	2.05	60.00	2.37
60-70K	7	11	0	18
	38.89	61.11	0.00	100.00
	2.72	4.51	0.00	3.56
Exactly 70K	10	6	0	16
	62.50	37.50	0.00	100.00
	3.89	2.46	0.00	3.16
70-80K	9	4	0	13
	69.23	30.77	0.00	100.00
	3.50	1.64	0.00	2.57
Exactly 80K	4	2	0	6
	66.67	33.33	0.00	100.00
	1.56	0.82	0.00	1.19
80-100K	17	5	0	22
	77.27	22.73	0.00	100.00
	6.61	2.05	0.00	4.35
More than 100K	29	10	0	39
	74.36	25.64	0.00	100.00
	11.28	4.10	0.00	7.71
.	23	17	0	40
	57.50	42.50	0.00	100.00
	8.95	6.97	0.00	7.91
Total	257	244	5	506
	50.79	48.22	0.99	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Tecalote

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	58	88	6	152
	38.16	57.89	3.95	100.00
	9.56	11.43	26.09	10.86
Exactly 10K	23	37	2	62
	37.10	59.68	3.23	100.00
	3.79	4.81	8.70	4.43
10-20K	111	203	6	320
	34.69	63.44	1.88	100.00
	18.29	26.36	26.09	22.86
Exactly 20K	43	74	4	121
	35.54	61.16	3.31	100.00
	7.08	9.61	17.39	8.64
20-30K	71	107	4	182
	39.01	58.79	2.20	100.00
	11.70	13.90	17.39	13.00
Exactly 30K	24	38	0	62
	38.71	61.29	0.00	100.00
	3.95	4.94	0.00	4.43
30-40K	37	39	0	76
	48.68	51.32	0.00	100.00
	6.10	5.06	0.00	5.43
Exactly 40K	8	11	0	19
	42.11	57.89	0.00	100.00
	1.32	1.43	0.00	1.36
40-50K	38	33	0	71
	53.52	46.48	0.00	100.00
	6.26	4.29	0.00	5.07
Exactly 50K	8	5	0	13
	61.54	38.46	0.00	100.00
	1.32	0.65	0.00	0.93
50-60K	20	16	0	36
	55.56	44.44	0.00	100.00
	3.29	2.08	0.00	2.57

->Beach Name = Tecalote (Continued)

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Exactly 60K	13	13	1	27
	48.15	48.15	3.70	100.00
	2.14	1.69	4.35	1.93
60-70K	9	6	0	15
	60.00	40.00	0.00	100.00
	1.48	0.78	0.00	1.07
Exactly 70K	5	5	0	10
	50.00	50.00	0.00	100.00
	0.82	0.65	0.00	0.71
70-80K	19	11	0	30
	63.33	36.67	0.00	100.00
	3.13	1.43	0.00	2.14
Exactly 80K	10	0	0	10
	100.00	0.00	0.00	100.00
	1.65	0.00	0.00	0.71
80-100K	16	13	0	29
	55.17	44.83	0.00	100.00
	2.64	1.69	0.00	2.07
Exactly 100K	5	8	0	13
	38.46	61.54	0.00	100.00
	0.82	1.04	0.00	0.93
More than 100K	42	37	0	79
	53.16	46.84	0.00	100.00
	6.92	4.81	0.00	5.64
.	47	26	0	73
	64.38	35.62	0.00	100.00
	7.74	3.38	0.00	5.21
Total	607	770	23	1,400
	43.36	55.00	1.64	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Leisure

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	71	215	4	290
	24.48	74.14	1.38	100.00
	6.00	10.26	11.76	8.75
Exactly 10K	52	143	0	195
	26.67	73.33	0.00	100.00
	4.40	6.82	0.00	5.89
10-20K	233	488	6	727
	32.05	67.13	0.83	100.00
	19.70	23.28	17.65	21.94
Exactly 20K	63	176	6	245
	25.71	71.84	2.45	100.00
	5.33	8.40	17.65	7.40
20-30K	133	275	1	409
	32.52	67.24	0.24	100.00
	11.24	13.12	2.94	12.35
Exactly 30K	34	65	4	103
	33.01	63.11	3.88	100.00
	2.87	3.10	11.76	3.11
30-40K	97	171	3	271
	35.79	63.10	1.11	100.00
	8.20	8.16	8.82	8.18
Exactly 40K	31	42	2	75
	41.33	56.00	2.67	100.00
	2.62	2.00	5.88	2.26
40-50K	51	94	1	146
	34.93	64.38	0.68	100.00
	4.31	4.48	2.94	4.41
Exactly 50K	19	21	2	42
	45.24	50.00	4.76	100.00
	1.61	1.00	5.88	1.27
50-60K	45	64	0	109
	41.28	58.72	0.00	100.00
	3.80	3.05	0.00	3.29

->Beach Name = Leisure (Continued)

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Exactly 60K	19	18	1	38
	50.00	47.37	2.63	100.00
	1.61	0.86	2.94	1.15
60-70K	40	22	0	62
	64.52	35.48	0.00	100.00
	3.38	1.05	0.00	1.87
Exactly 70K	12	15	0	27
	44.44	55.56	0.00	100.00
	1.01	0.72	0.00	0.81
70-80K	28	28	0	56
	50.00	50.00	0.00	100.00
	2.37	1.34	0.00	1.69
Exactly 80K	11	18	2	31
	35.48	58.06	6.45	100.00
	0.93	0.86	5.88	0.94
80-100K	64	31	0	95
	67.37	32.63	0.00	100.00
	5.41	1.48	0.00	2.87
Exactly 100K	12	24	0	36
	33.33	66.67	0.00	100.00
	1.01	1.15	0.00	1.09
More than 100K	69	54	0	123
	56.10	43.90	0.00	100.00
	5.83	2.58	0.00	3.71
.	99	132	2	233
	42.49	56.65	0.86	100.00
	8.37	6.30	5.88	7.03
Total	1,183	2,096	34	3,313
	35.71	63.27	1.03	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = DeAnza

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	16	16	1	33
	48.48	48.48	3.03	100.00
	2.44	3.49	11.11	2.94
Exactly 10K	6	9	0	15
	40.00	60.00	0.00	100.00
	0.91	1.97	0.00	1.33
10-20K	61	42	1	104
	58.65	40.38	0.96	100.00
	9.28	9.17	11.11	9.25
Exactly 20K	6	15	0	21
	28.57	71.43	0.00	100.00
	0.91	3.28	0.00	1.87
20-30K	43	34	0	77
	55.84	44.16	0.00	100.00
	6.54	7.42	0.00	6.85
Exactly 30K	12	9	0	21
	57.14	42.86	0.00	100.00
	1.83	1.97	0.00	1.87
30-40K	62	42	0	104
	59.62	40.38	0.00	100.00
	9.44	9.17	0.00	9.25
Exactly 40K	17	11	2	30
	56.67	36.67	6.67	100.00
	2.59	2.40	22.22	2.67
40-50K	58	33	0	91
	63.74	36.26	0.00	100.00
	8.83	7.21	0.00	8.10
Exactly 50K	17	11	0	28
	60.71	39.29	0.00	100.00
	2.59	2.40	0.00	2.49
50-60K	28	32	1	61
	45.90	52.46	1.64	100.00
	4.26	6.99	11.11	5.43

->Beach Name = DeAnza (Continued)

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Exactly 60K	13	14	0	27
	48.15	51.85	0.00	100.00
	1.98	3.06	0.00	2.40
60-70K	24	19	0	43
	55.81	44.19	0.00	100.00
	3.65	4.15	0.00	3.83
Exactly 70K	15	7	0	22
	68.18	31.82	0.00	100.00
	2.28	1.53	0.00	1.96
70-80K	56	19	3	78
	71.79	24.36	3.85	100.00
	8.52	4.15	33.33	6.94
Exactly 80K	13	16	0	29
	44.83	55.17	0.00	100.00
	1.98	3.49	0.00	2.58
80-100K	59	42	1	102
	57.84	41.18	0.98	100.00
	8.98	9.17	11.11	9.07
Exactly 100K	2	5	0	7
	28.57	71.43	0.00	100.00
	0.30	1.09	0.00	0.62
More than 100K	104	51	0	155
	67.10	32.90	0.00	100.00
	15.83	11.14	0.00	13.79
.	45	31	0	76
	59.21	40.79	0.00	100.00
	6.85	6.77	0.00	6.76
Total	657	458	9	1,124
	58.45	40.75	0.80	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Crown

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	6	22	0	28
	21.43	78.57	0.00	100.00
	1.15	3.09	0.00	2.26
Exactly 10K	2	14	0	16
	12.50	87.50	0.00	100.00
	0.38	1.96	0.00	1.29
10-20K	18	50	0	68
	26.47	73.53	0.00	100.00
	3.44	7.01	0.00	5.48
Exactly 20K	21	18	0	39
	53.85	46.15	0.00	100.00
	4.02	2.52	0.00	3.15
20-30K	27	51	0	78
	34.62	65.38	0.00	100.00
	5.16	7.15	0.00	6.29
Exactly 30K	8	19	0	27
	29.63	70.37	0.00	100.00
	1.53	2.66	0.00	2.18
30-40K	41	53	0	94
	43.62	56.38	0.00	100.00
	7.84	7.43	0.00	7.58
Exactly 40K	11	18	0	29
	37.93	62.07	0.00	100.00
	2.10	2.52	0.00	2.34
40-50K	39	39	2	80
	48.75	48.75	2.50	100.00
	7.46	5.47	50.00	6.45
Exactly 50K	10	29	0	39
	25.64	74.36	0.00	100.00
	1.91	4.07	0.00	3.15
50-60K	38	34	0	72
	52.78	47.22	0.00	100.00
	7.27	4.77	0.00	5.81

->Beach Name = Crown (Continued)

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Exactly 60K	21	28	0	49
	42.86	57.14	0.00	100.00
	4.02	3.93	0.00	3.95
60-70K	17	28	0	45
	37.78	62.22	0.00	100.00
	3.25	3.93	0.00	3.63
Exactly 70K	12	26	1	39
	30.77	66.67	2.56	100.00
	2.29	3.65	25.00	3.15
70-80K	30	42	0	72
	41.67	58.33	0.00	100.00
	5.74	5.89	0.00	5.81
Exactly 80K	16	17	0	33
	48.48	51.52	0.00	100.00
	3.06	2.38	0.00	2.66
80-100K	49	54	0	103
	47.57	52.43	0.00	100.00
	9.37	7.57	0.00	8.31
Exactly 100K	14	12	0	26
	53.85	46.15	0.00	100.00
	2.68	1.68	0.00	2.10
More than 100K	76	94	0	170
	44.71	55.29	0.00	100.00
	14.53	13.18	0.00	13.71
.	67	65	1	133
	50.38	48.87	0.75	100.00
	12.81	9.12	25.00	10.73
Total	523	713	4	1,240
	42.18	57.50	0.32	100.00
	100.00	100.00	100.00	100.00

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita

Key
Frequency
Row Percentage
Column Percentage

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 10K	24	26	0	50
	48.00	52.00	0.00	100.00
	4.66	3.77	0.00	4.12
Exactly 10K	7	12	2	21
	33.33	57.14	9.52	100.00
	1.36	1.74	22.22	1.73
10-20K	28	99	1	128
	21.88	77.34	0.78	100.00
	5.44	14.35	11.11	10.54
Exactly 20K	22	16	0	38
	57.89	42.11	0.00	100.00
	4.27	2.32	0.00	3.13
20-30K	52	59	1	112
	46.43	52.68	0.89	100.00
	10.10	8.55	11.11	9.23
Exactly 30K	18	35	0	53
	33.96	66.04	0.00	100.00
	3.50	5.07	0.00	4.37
30-40K	57	68	4	129
	44.19	52.71	3.10	100.00
	11.07	9.86	44.44	10.63
Exactly 40K	6	13	0	19
	31.58	68.42	0.00	100.00
	1.17	1.88	0.00	1.57
40-50K	23	47	0	70
	32.86	67.14	0.00	100.00
	4.47	6.81	0.00	5.77
Exactly 50K	20	22	0	42
	47.62	52.38	0.00	100.00
	3.88	3.19	0.00	3.46

Appendix 4 -Tabulation of Sociodemographic Characteristics of Study Population

->Beach Name = Bonita (Continued)

Family Pre-tax Income for 2002	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
50-60K	54	20	0	74
	72.97	27.03	0.00	100.00
	10.49	2.90	0.00	6.10
Exactly 60K	15	5	0	20
	75.00	25.00	0.00	100.00
	2.91	0.72	0.00	1.65
60-70K	33	45	0	78
	42.31	57.69	0.00	100.00
	6.41	6.52	0.00	6.43
Exactly 70K	6	10	0	16
	37.50	62.50	0.00	100.00
	1.17	1.45	0.00	1.32
70-80K	21	35	0	56
	37.50	62.50	0.00	100.00
	4.08	5.07	0.00	4.61
Exactly 80K	6	11	0	17
	35.29	64.71	0.00	100.00
	1.17	1.59	0.00	1.40
80-100K	12	36	0	48
	25.00	75.00	0.00	100.00
	2.33	5.22	0.00	3.95
Exactly 100K	8	5	0	13
	61.54	38.46	0.00	100.00
	1.55	0.72	0.00	1.07
More than 100K	41	66	1	108
	37.96	61.11	0.93	100.00
	7.96	9.57	11.11	8.90
.	62	60	0	122
	50.82	49.18	0.00	100.00
	12.04	8.70	0.00	10.05
Total	515	690	9	1,214
	42.42	56.84	0.74	100.00
	100.00	100.00	100.00	100.00

Appendix 5

Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

*SAQ 15: ATE THESE FOODS IN LAST 48 HOURS

Key
Frequency
Row Percentage
Column Percentage

Ate NONE of These Foods in Last 48 Hours	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, ate NONE of these	548 44.70 14.64	666 54.32 13.40	12 0.98 14.29	1,226 100.00 13.94
No, ate some of these	3,164 42.72 84.55	4,178 56.41 84.05	65 0.88 77.38	7,407 100.00 84.20
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

Dairy Products	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	2,436 43.47 65.10	3,120 55.67 62.76	48 0.86 57.14	5,604 100.00 63.70
No	1,276 42.13 34.10	1,724 56.92 34.68	29 0.96 34.52	3,029 100.00 34.43
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Raw or Runny Eggs	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	257 34.27 6.87	488 65.07 9.82	5 0.67 5.95	750 100.00 8.53
No	3,455 43.83 92.33	4,356 55.26 87.63	72 0.91 85.71	7,883 100.00 89.61
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

Chicken	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	1,851 42.81 49.47	2,437 56.36 49.02	36 0.83 42.86	4,324 100.00 49.15
No	1,861 43.19 49.73	2,407 55.86 48.42	41 0.95 48.81	4,309 100.00 48.98
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Meat (Medium Rare)	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	523 41.44 13.98	730 57.84 14.69	9 0.71 10.71	1,262 100.00 14.35
No	3,189 43.26 85.22	4,114 55.81 82.76	68 0.92 80.95	7,371 100.00 83.79
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

Hot Dogs	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	817 38.12 21.83	1,303 60.80 26.21	23 1.07 27.38	2,143 100.00 24.36
No	2,895 44.61 77.37	3,541 54.56 71.23	54 0.83 64.29	6,490 100.00 73.78
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Food Containing Mayonnaise	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	1,161 41.66 31.03	1,598 57.34 32.15	28 1.00 33.33	2,787 100.00 31.68
No	2,551 43.64 68.17	3,246 55.53 65.30	49 0.84 58.33	5,846 100.00 66.45
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

Raw Seafood	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	126 39.38 3.37	191 59.69 3.84	3 0.94 3.57	320 100.00 3.64
No	3,586 43.14 95.83	4,653 55.97 93.60	74 0.89 88.10	8,313 100.00 94.50
.	30 18.29 0.80	127 77.44 2.55	7 4.27 8.33	164 100.00 1.86
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

*SAQ 16: CONTACT WITH FECES

Key
Frequency
Row Percentage
Column Percentage

Done NONE of These in Last 48 Hours	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, NONE of these	2,728 41.89 72.90	3,719 57.11 74.81	65 1.00 77.38	6,512 100.00 74.03
No, some of these	944 46.32 25.23	1,083 53.14 21.79	11 0.54 13.10	2,038 100.00 23.17
.	70 28.34 1.87	169 68.42 3.40	8 3.24 9.52	247 100.00 2.81
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

Contact with Animal/Feces	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	872 46.63 23.30	988 52.83 19.88	10 0.53 11.90	1,870 100.00 21.26
No	2,800 41.92 74.83	3,814 57.10 76.73	66 0.99 78.57	6,680 100.00 75.93
.	70 28.34 1.87	169 68.42 3.40	8 3.24 9.52	247 100.00 2.81
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Contact w/Lower GI Condition	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	139 46.18 3.71	161 53.49 3.24	1 0.33 1.19	301 100.00 3.42
No	3,533 42.83 94.41	4,641 56.26 93.36	75 0.91 89.29	8,249 100.00 93.77
.	70 28.34 1.87	169 68.42 3.40	8 3.24 9.52	247 100.00 2.81
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

*SAQ 17: ILLNESS IN PAST 3 DAYS

Key
Frequency
Row Percentage
Column Percentage

Have NOT Been Sick in Past 3 Days	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, have NOT been si	3,266 42.82 87.28	4,291 56.25 86.32	71 0.93 84.52	7,628 100.00 86.71
No, have been sick	398 44.42 10.64	491 54.80 9.88	7 0.78 8.33	896 100.00 10.19
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Diarrhea	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
No	3,595 42.95 96.07	4,699 56.14 94.53	76 0.91 90.48	8,370 100.00 95.15
Yes	69 44.81 1.84	83 53.90 1.67	2 1.30 2.38	154 100.00 1.75
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Vomiting	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
No	3,635 43.05 97.14	4,731 56.03 95.17	78 0.92 92.86	8,444 100.00 95.99
Yes	29 36.25 0.77	51 63.75 1.03	0 0.00 0.00	80 100.00 0.91
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Sore Throat	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
No	3,511 42.94 93.83	4,591 56.15 92.36	75 0.92 89.29	8,177 100.00 92.95
Yes	153 44.09 4.09	191 55.04 3.84	3 0.86 3.57	347 100.00 3.94
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Earache	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
No	3,638 43.00 97.22	4,745 56.09 95.45	77 0.91 91.67	8,460 100.00 96.17
Yes	26 40.63 0.69	37 57.81 0.74	1 1.56 1.19	64 100.00 0.73
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Eye Infection	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
No	3,636 42.97 97.17	4,748 56.12 95.51	77 0.91 91.67	8,461 100.00 96.18
Yes	28 44.44 0.75	34 53.97 0.68	1 1.59 1.19	63 100.00 0.72
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Rash	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
No	3,600 42.96 96.21	4,704 56.13 94.63	76 0.91 90.48	8,380 100.00 95.26
Yes	64 44.44 1.71	78 54.17 1.57	2 1.39 2.38	144 100.00 1.64
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

PAST 3 DAYS: Sunburn	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,552 43.03 94.92	4,626 56.04 93.06	77 0.93 91.67	8,255 100.00 93.84
Yes	112 41.64 2.99	156 57.99 3.14	1 0.37 1.19	269 100.00 3.06
.	78 28.57 2.08	189 69.23 3.80	6 2.20 7.14	273 100.00 3.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

*SAQ 18: HOUSEHOLD MEMBERS SICK IN PAST 3 DAYS

Key
Frequency
Row Percentage
Column Percentage

NO HH Members Sick in Past 3 Days	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes, NONE have been sick	1,793 57.45 47.92	1,305 41.81 26.25	23 0.74 27.38	3,121 100.00 35.48
No, some have been sick	145 55.77 3.87	114 43.85 2.29	1 0.38 1.19	260 100.00 2.96
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

OTHER HH MEMBERS: Diarrhea	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	44 58.67 1.18	31 41.33 0.62	0 0.00 0.00	75 100.00 0.85
No	1,894 57.29 50.61	1,388 41.98 27.92	24 0.73 28.57	3,306 100.00 37.58
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

OTHER HH MEMBERS: Vomiting	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	21 58.33 0.56	15 41.67 0.30	0 0.00 0.00	36 100.00 0.41
No	1,917 57.31 51.23	1,404 41.97 28.24	24 0.72 28.57	3,345 100.00 38.02
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

OTHER HH MEMBERS: Sore Throat	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	71 56.35 1.90	54 42.86 1.09	1 0.79 1.19	126 100.00 1.43
No	1,867 57.36 49.89	1,365 41.94 27.46	23 0.71 27.38	3,255 100.00 37.00
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

OTHER HH MEMBERS: Earache	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	9 34.62 0.24	17 65.38 0.34	0 0.00 0.00	26 100.00 0.30
No	1,929 57.50 51.55	1,402 41.79 28.20	24 0.72 28.57	3,355 100.00 38.14
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

OTHER HH MEMBERS: Eye Infection	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	12 54.55 0.32	10 45.45 0.20	0 0.00 0.00	22 100.00 0.25
No	1,926 57.34 51.47	1,409 41.95 28.34	24 0.71 28.57	3,359 100.00 38.18
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 5 - Tabulation of Participant Responses to Questions Regarding Exposures and Illness Prior to Beach Visit

Key
Frequency
Row Percentage
Column Percentage

OTHER HH MEMBERS: Rash	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	19 45.24 0.51	23 54.76 0.46	0 0.00 0.00	42 100.00 0.48
No	1,919 57.47 51.28	1,396 41.81 28.08	24 0.72 28.57	3,339 100.00 37.96
.	1,804 33.31 48.21	3,552 65.58 71.45	60 1.11 71.43	5,416 100.00 61.57
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6

Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

EXPOSURES DURING BEACH VISIT (EXCLUDING INDICATORS)

* SWIMMERS VS NON-SWIMMERS

* SAQ1: TOTAL TIME SPENT AT BEACH IN MINUTES (25th, 50th, and 75th Percentiles)

* ALL BEACHES

Water	N	p25	p50	p75
No	3,575	180	240	330
Yes	4,821	180	270	360
.	58	150	240	300
Total	8,454	180	240	360

* BY BEACH

-> Beach Name = Visitor's Center

Water	N	p25	p50	p75
No	249	150	240	300
Yes	239	240	300	360
.	4	190	200	200
Total	492	180	270	360

-> Beach Name = Tecalote Shores

Water	N	p25	p50	p75
No	574	150	240	300
Yes	748	180	270	330
.	17	180	270	300
Total	1,339	180	240	300

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

-> Beach Name = Leisure Lagoon

Water	N	p25	p50	p75
No	1,105	180	240	360
Yes	2,016	180	300	360
.	23	150	180	360
Total	3,144	180	270	360

-> Beach Name = DeAnza

Water	N	p25	p50	p75
No	635	180	240	360
Yes	445	180	240	420
.	6	210	272.5	300
Total	1,086	180	240	360

-> Beach Name = Crown Point

Water	N	p25	p50	p75
No	522	150	240	330
Yes	703	180	300	480
.	2	240	300	360
Total	1,227	180	240	360

-> Beach Name = Bonita Cove

Water	N	p25	p50	p75
No	490	180	240	360
Yes	670	180	240	360
.	6	180	480	480
Total	1,166	180	240	360

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

* SAQ2: WADE, SWIM OR PLAY IN WATER & LEVELS OF WATER EXPOSURE

* ALL BEACHES

Wade, Swim, or Play in the Water	Freq.	Percent	Cum.
No	3,742	42.54	42.54
Yes	4,971	56.51	99.05
.	84	0.95	100.00
Total	8,797	100.00	

Get Water in Your Face	Freq.	Percent	Cum.
No	4,980	56.61	56.61
Yes	3,684	41.88	98.49
.	133	1.51	100.00
Total	8,797	100.00	

Get in Water Up to Shoulders	Freq.	Percent	Cum.
No	5,408	61.48	61.48
Yes	3,238	36.81	98.28
.	151	1.72	100.00
Total	8,797	100.00	

Put Face Under the Water	Freq.	Percent	Cum.
No	5,674	64.50	64.50
Yes	2,963	33.68	98.18
.	160	1.82	100.00
Total	8,797	100.00	

Get Water in Your Mouth	Freq.	Percent	Cum.
No	6,541	74.35	74.35
Yes	2,070	23.53	97.89
.	186	2.11	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Total		8,797	100.00	
Gag or Cough from Water		Freq.	Percent	Cum.

No		7,722	87.78	87.78
Yes		857	9.74	97.52
.		218	2.48	100.00

Total		8,797	100.00	

Swallow Any Water		Freq.	Percent	Cum.

No		7,506	85.32	85.32
Yes		1,061	12.06	97.39
.		230	2.61	100.00

Total		8,797	100.00	

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*IF WATER SWALLOWED, HOW MUCH

IF YES: Number of Mouthfuls Swallowed	Freq.	Percent	Cum.
0	20	2.27	2.27
1	337	38.17	40.43
2	244	27.63	68.06
3	120	13.59	81.65
4	44	4.98	86.64
5	43	4.87	91.51
6	21	2.38	93.88
7	5	0.57	94.45
8	9	1.02	95.47
9	14	1.59	97.06
10	13	1.47	98.53
11	1	0.11	98.64
15	1	0.11	98.75
20	4	0.45	99.21
30	1	0.11	99.32
50	1	0.11	99.43
99	5	0.57	100.00
Total	883	100.00	

AMOUNT OF WATER SWALLOWED (25th, 50th and 75th Percentiles)

variable	N	p25	p50	p75
Water_swal~t	883	1	2	3

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 3: IN THE WATER DURING ANY OF THE FOLLOWING TIMES

Key
Frequency
Row Percentage
Column Percentage

IN THE WATER: Before 10 AM	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	459 100.00 9.23	0 0.00 0.00	459 100.00 5.22
No	0 0.00 0.00	4,315 100.00 86.80	0 0.00 0.00	4,315 100.00 49.05
.	3,742 93.02 100.00	197 4.90 3.96	84 2.09 100.00	4,023 100.00 45.73
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

IN THE WATER: 10 AM - Noon	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0	777	0	777
	0.00	100.00	0.00	100.00
	0.00	15.63	0.00	8.83
No	0	3,997	0	3,997
	0.00	100.00	0.00	100.00
	0.00	80.41	0.00	45.44
.	3,742	197	84	4,023
	93.02	4.90	2.09	100.00
	100.00	3.96	100.00	45.73
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Key
Frequency
Row Percentage
Column Percentage

IN THE WATER: Noon - 2 PM	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0	2,824	0	2,824
	0.00	100.00	0.00	100.00
	0.00	56.81	0.00	32.10
No	0	1,950	0	1,950
	0.00	100.00	0.00	100.00
	0.00	39.23	0.00	22.17
.	3,742	197	84	4,023
	93.02	4.90	2.09	100.00
	100.00	3.96	100.00	45.73
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

IN THE WATER: 2 PM - 4 PM	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	1,812 100.00 36.45	0 0.00 0.00	1,812 100.00 20.60
No	0 0.00 0.00	2,962 100.00 59.59	0 0.00 0.00	2,962 100.00 33.67
.	3,742 93.02 100.00	197 4.90 3.96	84 2.09 100.00	4,023 100.00 45.73
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

IN THE WATER: After 4 PM	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	903 100.00 18.17	0 0.00 0.00	903 100.00 10.26
No	0 0.00 0.00	3,871 100.00 77.87	0 0.00 0.00	3,871 100.00 44.00
.	3,742 93.02 100.00	197 4.90 3.96	84 2.09 100.00	4,023 100.00 45.73
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

*SAQ 4: TIME SPENT IN WATER (MINUTES)

variable	N	p25	p50	p75
Water_minu~s	8236	0	20	120

*SAQ 5: ENGAGED IN THE FOLLOWING WATER ACTIVITIES

Key
Frequency
Row Percentage
Column Percentage

WATER ACTIVITIES: Sailing or Boating	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0	239	0	239
	0.00	100.00	0.00	100.00
	0.00	4.81	0.00	2.72
No	0	4,570	0	4,570
	0.00	100.00	0.00	100.00
	0.00	91.93	0.00	51.95
.	3,742	162	84	3,988
	93.83	4.06	2.11	100.00
	100.00	3.26	100.00	45.33
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

WATER ACTIVITIES: Swimming Near Shore	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	2,983 100.00 60.01	0 0.00 0.00	2,983 100.00 33.91
No	0 0.00 0.00	1,826 100.00 36.73	0 0.00 0.00	1,826 100.00 20.76
.	3,742 93.83 100.00	162 4.06 3.26	84 2.11 100.00	3,988 100.00 45.33
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

WATER ACTIVITIES: Windsurfing	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	16 100.00 0.32	0 0.00 0.00	16 100.00 0.18
No	0 0.00 0.00	4,793 100.00 96.42	0 0.00 0.00	4,793 100.00 54.48
.	3,742 93.83 100.00	162 4.06 3.26	84 2.11 100.00	3,988 100.00 45.33
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

WATER ACTIVITIES: Kayaking or Rowing	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	88 100.00 1.77	0 0.00 0.00	88 100.00 1.00
No	0 0.00 0.00	4,721 100.00 94.97	0 0.00 0.00	4,721 100.00 53.67
.	3,742 93.83 100.00	162 4.06 3.26	84 2.11 100.00	3,988 100.00 45.33
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

	100.00	100.00	100.00	100.00
+-----+				
Key				
+-----+				
Frequency				
Row Percentage				
Column Percentage				
+-----+				
WATER				
ACTIVITIES:	Wade, Swim, or Play in the Water			
Skiing	No	Yes	.	Total
+-----+				
Yes	0	91	0	91
	0.00	100.00	0.00	100.00
	0.00	1.83	0.00	1.03
+-----+				
No	0	4,718	0	4,718
	0.00	100.00	0.00	100.00
	0.00	94.91	0.00	53.63
+-----+				
.	3,742	162	84	3,988
	93.83	4.06	2.11	100.00
	100.00	3.26	100.00	45.33
+-----+				
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

+-----+				
Key				
+-----+				
Frequency				
Row Percentage				
Column Percentage				
+-----+				
WATER				
ACTIVITIES:	Wade, Swim, or Play in the Water			
Boarding	No	Yes	.	Total
+-----+				
Yes	0	37	0	37
	0.00	100.00	0.00	100.00
	0.00	0.74	0.00	0.42
+-----+				
No	0	4,772	0	4,772
	0.00	100.00	0.00	100.00
	0.00	96.00	0.00	54.25
+-----+				
.	3,742	162	84	3,988
	93.83	4.06	2.11	100.00
	100.00	3.26	100.00	45.33
+-----+				
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

| 100.00 100.00 100.00 | 100.00

Key
Frequency
Row Percentage
Column Percentage

WATER ACTIVITIES: Rafting	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	268 100.00 5.39	0 0.00 0.00	268 100.00 3.05
No	0 0.00 0.00	4,541 100.00 91.35	0 0.00 0.00	4,541 100.00 51.62
.	3,742 93.83 100.00	162 4.06 3.26	84 2.11 100.00	3,988 100.00 45.33
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 6: WORE THE FOLLOWING WATER ITEMS

Key
Frequency
Row Percentage
Column Percentage

WATER ITEMS: Ear Plugs	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	56 100.00 1.13	0 0.00 0.00	56 100.00 0.64
No	0 0.00 0.00	4,686 100.00 94.27	0 0.00 0.00	4,686 100.00 53.27
.	3,742 92.28 100.00	229 5.65 4.61	84 2.07 100.00	4,055 100.00 46.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

WATER ITEMS: Nose Plugs	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	23 100.00 0.46	0 0.00 0.00	23 100.00 0.26
No	0 0.00 0.00	4,719 100.00 94.93	0 0.00 0.00	4,719 100.00 53.64
.	3,742 92.28 100.00	229 5.65 4.61	84 2.07 100.00	4,055 100.00 46.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

WATER ITEMS: Wet Suit	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	880 100.00 17.70	0 0.00 0.00	880 100.00 10.00
No	0 0.00 0.00	3,862 100.00 77.69	0 0.00 0.00	3,862 100.00 43.90
.	3,742 92.28 100.00	229 5.65 4.61	84 2.07 100.00	4,055 100.00 46.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

WATER ITEMS: Goggles or Mask	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	0 0.00 0.00	179 100.00 3.60	0 0.00 0.00	179 100.00 2.03
No	0 0.00 0.00	4,563 100.00 91.79	0 0.00 0.00	4,563 100.00 51.87
.	3,742 92.28 100.00	229 5.65 4.61	84 2.07 100.00	4,055 100.00 46.10
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 7: ENGAGED IN THE FOLLOWING BEACH ACTIVITIES

Key
Frequency
Row Percentage
Column Percentage

BEACH ACTIVITIES: Collect Shells/Rocks	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,085	2,778	45	5,908
	52.22	47.02	0.76	100.00
	82.44	55.88	53.57	67.16
Yes	589	2,081	15	2,685
	21.94	77.50	0.56	100.00
	15.74	41.86	17.86	30.52
.	68	112	24	204
	33.33	54.90	11.76	100.00
	1.82	2.25	28.57	2.32
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

BEACH ACTIVITIES : Dig in Sand	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,070 55.55 82.04	2,406 43.53 48.40	51 0.92 60.71	5,527 100.00 62.83
1	604 19.70 16.14	2,453 80.01 49.35	9 0.29 10.71	3,066 100.00 34.85
.	68 33.33 1.82	112 54.90 2.25	24 11.76 28.57	204 100.00 2.32
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

BEACH ACTIVITIES : Buried in Sand	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,619 44.75 96.71	4,411 54.54 88.73	57 0.70 67.86	8,087 100.00 91.93
1	55 10.87 1.47	448 88.54 9.01	3 0.59 3.57	506 100.00 5.75
.	68 33.33 1.82	112 54.90 2.25	24 11.76 28.57	204 100.00 2.32
Total	3,742 42.54	4,971 56.51	84 0.95	8,797 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

	100.00	100.00	100.00	100.00
+-----+				
Key				
+-----+				
Frequency				
Row Percentage				
Column Percentage				
+-----+				
BEACH				
ACTIVITIES				
: Play				
with				
Algae/Seaweed	Wade, Swim, or Play in the Water			
	No	Yes	.	Total
+-----+				
0	3,636	4,530	57	8,223
	44.22	55.09	0.69	100.00
	97.17	91.13	67.86	93.48
+-----+				
1	38	329	3	370
	10.27	88.92	0.81	100.00
	1.02	6.62	3.57	4.21
+-----+				
.	68	112	24	204
	33.33	54.90	11.76	100.00
	1.82	2.25	28.57	2.32
+-----+				
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

Key
Frequency
Row Percentage
Column Percentage

BEACH ACTIVITIES : Crabbing or Fishing	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,652 43.20 97.59	4,744 56.12 95.43	58 0.69 69.05	8,454 100.00 96.10
1	22 15.83 0.59	115 82.73 2.31	2 1.44 2.38	139 100.00 1.58
.	68 33.33 1.82	112 54.90 2.25	24 11.76 28.57	204 100.00 2.32
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 8: WORE THE FOLLOWING BEACH PROTECTION

Key
Frequency
Row Percentage
Column Percentage

WEAR OR USE: Insect Repellant	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	43 19.55 1.15	175 79.55 3.52	2 0.91 2.38	220 100.00 2.50
No	3,638 43.47 97.22	4,665 55.74 93.84	66 0.79 78.57	8,369 100.00 95.13
.	61 29.33 1.63	131 62.98 2.64	16 7.69 19.05	208 100.00 2.36
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

WEAR OR USE: Sunscreen/Block	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	1,661 36.04 44.39	2,918 63.31 58.70	30 0.65 35.71	4,609 100.00 52.39
No	2,020 50.75 53.98	1,922 48.29 38.66	38 0.95 45.24	3,980 100.00 45.24
.	61 29.33 1.63	131 62.98 2.64	16 7.69 19.05	208 100.00 2.36
Total	3,742 42.54	4,971 56.51	84 0.95	8,797 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

	100.00	100.00	100.00	100.00
+-----+-----+				
Key				
+-----+-----+				
Frequency				
Row Percentage				
Column Percentage				
+-----+-----+				
WEAR OR USE:				
Hat or Clothing	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
+-----+-----+				
Yes	1,115	923	20	2,058
	54.18	44.85	0.97	100.00
	29.80	18.57	23.81	23.39
+-----+-----+				
No	2,566	3,917	48	6,531
	39.29	59.98	0.73	100.00
	68.57	78.80	57.14	74.24
+-----+-----+				
.	61	131	16	208
	29.33	62.98	7.69	100.00
	1.63	2.64	19.05	2.36
+-----+-----+				
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 9a: USED PROTECTIVE EQUIPMENT

Key
Frequency
Row Percentage
Column Percentage

Use Protective Equipment	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	1,418 44.00 37.89	1,778 55.17 35.77	27 0.84 32.14	3,223 100.00 36.64
No	2,238 42.12 59.81	3,023 56.90 60.81	52 0.98 61.90	5,313 100.00 60.40
.	86 32.95 2.30	170 65.13 3.42	5 1.92 5.95	261 100.00 2.97
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

*SAQ 9b: TOTAL TIME IN SUNLIGHT

TOTAL Time in Sunlight	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than one hour	633	487	8	1,128
1-2 hours	1,193	1,340	21	2,554
3-4 hours	1,224	1,976	26	3,226
5-6 hours	340	536	4	880
More than 6 hours	217	381	11	609
.	135	251	14	400
Total	3,742	4,971	84	8,797

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 10: ATE FOOD AT THE BEACH

Key	
	Frequency
	Row Percentage
	Column Percentage

Eat Food at the Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	3,003 40.74 80.25	4,293 58.23 86.36	76 1.03 90.48	7,372 100.00 83.80
No	692 56.26 18.49	533 43.33 10.72	5 0.41 5.95	1,230 100.00 13.98
.	47 24.10 1.26	145 74.36 2.92	3 1.54 3.57	195 100.00 2.22
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

IF YES: Food from Home	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	2,422	3,652	65	6,139
No	488	487	10	985
.	93	154	1	248
Total	3,003	4,293	76	7,372

IF YES: Vender/Machine at the Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	93	103	2	198
No	2,817	4,036	73	6,926
.	93	154	1	248
Total	3,003	4,293	76	7,372

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

IF YES: Vender Outside the Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	460	516	10	986
No	2,450	3,623	65	6,138
.	93	154	1	248
Total	3,003	4,293	76	7,372

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 11: DRANK ALCOHOL AT BEACH

Key
Frequency
Row Percentage
Column Percentage

Drink Alcohol at the Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	493 58.48 13.17	342 40.57 6.88	8 0.95 9.52	843 100.00 9.58
No	3,195 41.35 85.38	4,460 57.73 89.72	71 0.92 84.52	7,726 100.00 87.83
.	54 23.68 1.44	169 74.12 3.40	5 2.19 5.95	228 100.00 2.59
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

IF YES: How Many Drinks	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Less than 1	62	48	0	110
1 - 2	215	114	4	333
3 - 4	138	105	3	246
5 or more	64	54	1	119
.	14	21	0	35
Total	493	342	8	843

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 12: CUT YOURSELF OR HAVE OPEN CUT AT BEACH

Key
Frequency
Row Percentage
Column Percentage

Cut Yourself or Have Open Cut Today	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	144 28.35 3.85	360 70.87 7.24	4 0.79 4.76	508 100.00 5.77
No	3,542 43.86 94.66	4,458 55.20 89.68	76 0.94 90.48	8,076 100.00 91.80
.	56 26.29 1.50	153 71.83 3.08	4 1.88 4.76	213 100.00 2.42
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 13: TAKE A SHOWER BEFORE LEAVING BEACH

Key
Frequency
Row Percentage
Column Percentage

Take a Shower Before Leaving the Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	494 19.08 13.20	2,081 80.38 41.86	14 0.54 16.67	2,589 100.00 29.43
No	3,172 53.13 84.77	2,733 45.78 54.98	65 1.09 77.38	5,970 100.00 67.86
.	76 31.93 2.03	157 65.97 3.16	5 2.10 5.95	238 100.00 2.71
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 6 - Tabulations of Participant Responses to Questions Regarding Exposures During Beach Visit

*SAQ 14: USE BATHROOM FACILITIES AT BEACH

Key
Frequency
Row Percentage
Column Percentage

Use Bathroom Facilities at the Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	2,120 38.09 56.65	3,396 61.01 68.32	50 0.90 59.52	5,566 100.00 63.27
No	1,559 51.85 41.66	1,420 47.22 28.57	28 0.93 33.33	3,007 100.00 34.18
.	63 28.13 1.68	155 69.20 3.12	6 2.68 7.14	224 100.00 2.55
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7

Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

EXPOSURES FOLLOWING BEACH VISIT

*FOLLOW UP CATI QUESTIONS
 *SWIMMERS VS NON-SWIMMERS
 *ALL BEACHES

*GH1: PRE-EXISTING HEALTH CONDITIONS

Key
Frequency
Row Percentage
Column Percentage

Have Allergies Other Than Drug Allergies	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	534 52.15 14.27	481 46.97 9.68	9 0.88 10.71	1,024 100.00 11.64
No	3,197 41.30 85.44	4,469 57.73 89.90	75 0.97 89.29	7,741 100.00 88.00
.	11 34.38 0.29	21 65.63 0.42	0 0.00 0.00	32 100.00 0.36
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Have Skin Problems such as Psoriasis or Eczema	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	242 50.10 6.47	236 48.86 4.75	5 1.04 5.95	483 100.00 5.49
No	3,490 42.10 93.27	4,720 56.94 94.95	79 0.95 94.05	8,289 100.00 94.23
.	10 40.00 0.27	15 60.00 0.30	0 0.00 0.00	25 100.00 0.28
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Have Chronic Respiratory Diseases	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	250 43.33 6.68	323 55.98 6.50	4 0.69 4.76	577 100.00 6.56
No	3,480 42.48 93.00	4,632 56.54 93.18	80 0.98 95.24	8,192 100.00 93.12
.	12 42.86 0.32	16 57.14 0.32	0 0.00 0.00	28 100.00 0.32
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Key
Frequency
Row Percentage
Column Percentage

Have Gastrointestinal Problems	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	133 61.01 3.55	85 38.99 1.71	0 0.00 0.00	218 100.00 2.48
No	3,594 42.04 96.04	4,870 56.97 97.97	84 0.98 100.00	8,548 100.00 97.17
.	15 48.39 0.40	16 51.61 0.32	0 0.00 0.00	31 100.00 0.35
Total	3,742 42.54	4,971 56.51	84 0.95	8,797 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

	100.00	100.00	100.00	100.00
+-----+				
Key				
Frequency				
Row Percentage				
Column Percentage				
+-----+				
Do You Have Any Immunocompromising Condition	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	35 67.31 0.94	17 32.69 0.34	0 0.00 0.00	52 100.00 0.59
No	3,695 42.39 98.74	4,938 56.65 99.34	84 0.96 100.00	8,717 100.00 99.09
.	12 42.86 0.32	16 57.14 0.32	0 0.00 0.00	28 100.00 0.32
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SCHOOL WORK STATUS

Key
Frequency
Row Percentage
Column Percentage

Currently Working Outside the Home or Going to School	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	918 55.57 24.53	722 43.70 14.52	12 0.73 14.29	1,652 100.00 18.78
Yes	2,081 53.90 55.61	1,745 45.20 35.10	35 0.91 41.67	3,861 100.00 43.89
.	743 22.62 19.86	2,504 76.25 50.37	37 1.13 44.05	3,284 100.00 37.33
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Currently in School, Camp or Other Activity	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	343 24.47 9.17	1,041 74.25 20.94	18 1.28 21.43	1,402 100.00 15.94
Yes	386 20.75 10.32	1,455 78.23 29.27	19 1.02 22.62	1,860 100.00 21.14
.	3,013 54.44 80.52	2,475 44.72 49.79	47 0.85 55.95	5,535 100.00 62.92
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*OTHER GENERAL HEALTH QUESTIONS

Key
Frequency
Row Percentage
Column Percentage

Currently Pregnant	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	79 57.25 2.11	59 42.75 1.19	0 0.00 0.00	138 100.00 1.57
No	1,669 55.54 44.60	1,317 43.83 26.49	19 0.63 22.62	3,005 100.00 34.16
.	1,994 35.27 53.29	3,595 63.58 72.32	65 1.15 77.38	5,654 100.00 64.27
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Taken Any Prescription Medications Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	718 54.85 19.19	584 44.61 11.75	7 0.53 8.33	1,309 100.00 14.88
No	3,003 40.36 80.25	4,361 58.61 87.73	77 1.03 91.67	7,441 100.00 84.59
.	21 44.68 0.56	26 55.32 0.52	0 0.00 0.00	47 100.00 0.53
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Key
Frequency
Row Percentage
Column Percentage

Taken Non-prescription Medications Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	845 51.52 22.58	785 47.87 15.79	10 0.61 11.90	1,640 100.00 18.64
No	2,877 40.47 76.88	4,158 58.49 83.65	74 1.04 88.10	7,109 100.00 80.81
.	20 41.67 0.53	28 58.33 0.56	0 0.00 0.00	48 100.00 0.55
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1: VISITED ANY BEACH SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Visited ANY Beach Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	2,962 41.68 79.16	4,073 57.32 81.94	71 1.00 84.52	7,106 100.00 80.78
Yes	762 46.15 20.36	876 53.06 17.62	13 0.79 15.48	1,651 100.00 18.77
.	18 45.00 0.48	22 55.00 0.44	0 0.00 0.00	40 100.00 0.45
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1a_a: BACK TO SAME BEACH SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Back to the SAME Beach Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,452 42.73 92.25	4,549 56.31 91.51	77 0.95 91.67	8,078 100.00 91.83
Yes	271 39.97 7.24	400 59.00 8.05	7 1.03 8.33	678 100.00 7.71
.	19 46.34 0.51	22 53.66 0.44	0 0.00 0.00	41 100.00 0.47
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1a_b: WENT SWIMMING AT SAME BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Went Swimming at Same Beach Since Beach Interv	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,143 42.40 83.99	4,194 56.58 84.37	75 1.01 89.29	7,412 100.00 84.26
Yes	90 24.19 2.41	279 75.00 5.61	3 0.81 3.57	372 100.00 4.23
.	509 50.25 13.60	498 49.16 10.02	6 0.59 7.14	1,013 100.00 11.52
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1a_c: NUMBER OF DIFFERENT DAYS SWAM AT SAME BEACH (25TH, 50TH AND 75TH Percentile)

Variable	N	p25	p50	p75
sw1a_c	372	1	1	1

*SW1a_h: GOT FACE WET OR PUT HEAD UNDER WATER THERE SINCE INTERVIEW

Key	
	Frequency
	Row Percentage
	Column Percentage

Got Face Wet or Put Head Under Water There	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	2,980 41.67 79.64	4,099 57.32 82.46	72 1.01 85.71	7,151 100.00 81.29
Yes	72 22.02 1.92	253 77.37 5.09	2 0.61 2.38	327 100.00 3.72
.	690 52.31 18.44	619 46.93 12.45	10 0.76 11.90	1,319 100.00 14.99
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1b_a: BEEN BACK TO DIFFERENT BAY BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Been back a Different Bay Beach Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,532 42.22 94.39	4,752 56.80 95.59	82 0.98 97.62	8,366 100.00 95.10
Yes	192 49.10 5.13	197 50.38 3.96	2 0.51 2.38	391 100.00 4.44
.	18 45.00 0.48	22 55.00 0.44	0 0.00 0.00	40 100.00 0.45
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1b_b: SWAM AT DIFFERENT BAY BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Went Swimming at Diff. Bay Beach Since Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,093 42.29 82.66	4,147 56.71 83.42	73 1.00 86.90	7,313 100.00 83.13
Yes	61 33.15 1.63	123 66.85 2.47	0 0.00 0.00	184 100.00 2.09
.	588 45.23 15.71	701 53.92 14.10	11 0.85 13.10	1,300 100.00 14.78
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1b_c: NUMBER OF DAYS SWAM AT DIFFERENT BAY BEACH (25th, 50th and 75th Percentiles)

Variable	N	p25	p50	p75
sw1b_c	184	1	1	2

*SW1b_h: GOT FACE WET OR PUT HEAD UNDER WATER AT DIFFERENT BAY BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got Face Wet or Put Head Under Water at Diff. Bay Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	2,974 41.71 79.48	4,085 57.29 82.18	71 1.00 84.52	7,130 100.00 81.05
Yes	48 30.19 1.28	111 69.81 2.23	0 0.00 0.00	159 100.00 1.81
.	720 47.75 19.24	775 51.39 15.59	13 0.86 15.48	1,508 100.00 17.14
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1c_a: BEEN TO DIFFERENT OCEAN BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Been to Different Ocean Beach Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,314 41.62 88.56	4,571 57.40 91.95	78 0.98 92.86	7,963 100.00 90.52
Yes	410 51.64 10.96	378 47.61 7.60	6 0.76 7.14	794 100.00 9.03
.	18 45.00 0.48	22 55.00 0.44	0 0.00 0.00	40 100.00 0.45
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1c_b: SWAM AT DIFFERENT OCEAN BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Went Swimming at Different Ocean Beach Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,184 42.82 85.09	4,178 56.19 84.05	73 0.98 86.90	7,435 100.00 84.52
Yes	188 40.43 5.02	273 58.71 5.49	4 0.86 4.76	465 100.00 5.29
.	370 41.25 9.89	520 57.97 10.46	7 0.78 8.33	897 100.00 10.20
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1c_c: NUMBER OF DAYS SWAM AT OCEAN BEACH SINCE INTERVIEW (25th, 50th and 75th Percentiles)

Variable	N	p25	p50	p75
sw1c_c	464	1	1	2

*SW1c_h: GOT FACE WET OR PUT HEAD UNDER WATER AT DIFFERENT OCEAN BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got face Wet/Head Under Water at Different Ocean Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	2,992 41.72 79.96	4,107 57.27 82.62	72 1.00 85.71	7,171 100.00 81.52
Yes	158 39.60 4.22	238 59.65 4.79	3 0.75 3.57	399 100.00 4.54
.	592 48.25 15.82	626 51.02 12.59	9 0.73 10.71	1,227 100.00 13.95
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1d_a: BEEN TO LAKE OR RIVER BEACH SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Been to a Lake or River Beach Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	3,691 42.49 98.64	4,911 56.54 98.79	84 0.97 100.00	8,686 100.00 98.74
Yes	33 46.48 0.88	38 53.52 0.76	0 0.00 0.00	71 100.00 0.81
.	18 45.00 0.48	22 55.00 0.44	0 0.00 0.00	40 100.00 0.45
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW1d_b: SWAM AT LAKE OR RIVER BEACH SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Went Swimming at Lake/River Beach Since Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	2,985 41.77 79.77	4,090 57.23 82.28	71 0.99 84.52	7,146 100.00 81.23
Yes	10 32.26 0.27	21 67.74 0.42	0 0.00 0.00	31 100.00 0.35
.	747 46.11 19.96	860 53.09 17.30	13 0.80 15.48	1,620 100.00 18.42
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SWld_c: NUMBER OF DAYS SWAM AT LAKE OR RIVER BEACH SINCE INTERVIEW (25th, 50th, and 75th Percentiles)

Variable	N	p25	p50	p75
swld_c	31	1	1	1

*SWld_h: GOT FACE WET OR PUT HEAD UNDER WATER AT LAKE OR RIVER BEACH SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got Face Wet or Head under Water at Lake/River Beach	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
0	2,966 41.70 79.26	4,075 57.30 81.98	71 1.00 84.52	7,112 100.00 80.85
Yes	6 24.00 0.16	19 76.00 0.38	0 0.00 0.00	25 100.00 0.28
.	770 46.39 20.58	877 52.83 17.64	13 0.78 15.48	1,660 100.00 18.87
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2a_a: SWAM IN PRIVATE POOL SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Swam in a Private Pool Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	534 40.89 14.27	764 58.50 15.37	8 0.61 9.52	1,306 100.00 14.85
No	3,190 42.80 85.25	4,188 56.18 84.25	76 1.02 90.48	7,454 100.00 84.73
.	18 48.65 0.48	19 51.35 0.38	0 0.00 0.00	37 100.00 0.42
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2a_a1: GOT FACE WET OR HEAD UNDER WATER IN PRIVATE POOL SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got Face Wet or Head under Water in Private Pool	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	462 38.79 12.35	724 60.79 14.56	5 0.42 5.95	1,191 100.00 13.54
No	71 61.74 1.90	41 35.65 0.82	3 2.61 3.57	115 100.00 1.31
.	3,209 42.84 85.76	4,206 56.15 84.61	76 1.01 90.48	7,491 100.00 85.15
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2a_b: SWAM IN PUBLIC POOL SINCE BEACH INTERVIEW

Key	
	Frequency
	Row Percentage
	Column Percentage

Swam in a Public Pool Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	346 35.97 9.25	614 63.83 12.35	2 0.21 2.38	962 100.00 10.94
No	3,379 43.33 90.30	4,338 55.62 87.27	82 1.05 97.62	7,799 100.00 88.66
.	17 47.22 0.45	19 52.78 0.38	0 0.00 0.00	36 100.00 0.41
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2a_b: GOT FACE WET OR HEAD UNDER WATER IN PUBLIC POOL SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got Face Wet or Head Under Water in Public Pool	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	312 34.98 8.34	578 64.80 11.63	2 0.22 2.38	892 100.00 10.14
No	34 48.57 0.91	36 51.43 0.72	0 0.00 0.00	70 100.00 0.80
.	3,396 43.34 90.75	4,357 55.61 87.65	82 1.05 97.62	7,835 100.00 89.06
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2b_c: SWAM IN PRIVATE HOT TUB OR SPA SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Used a Private Hot Tub or Spa Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	235 47.67 6.28	256 51.93 5.15	2 0.41 2.38	493 100.00 5.60
No	3,490 42.22 93.27	4,694 56.79 94.43	82 0.99 97.62	8,266 100.00 93.96
.	17 44.74 0.45	21 55.26 0.42	0 0.00 0.00	38 100.00 0.43
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2b_c1: GOT FACE WET OR HEAD UNDER WATER IN PRIVATE HOT TUB OR SPA SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got Face Wet or Head under Water in Private Hot Tub	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	126 40.65 3.37	183 59.03 3.68	1 0.32 1.19	310 100.00 3.52
No	109 59.56 2.91	73 39.89 1.47	1 0.55 1.19	183 100.00 2.08
.	3,507 42.23 93.72	4,715 56.78 94.85	82 0.99 97.62	8,304 100.00 94.40
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2b_d: SWAM IN PUBLIC HOT TUB OR SPA SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Used a Private Public Tub or Spa since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	119 45.25 3.18	144 54.75 2.90	0 0.00 0.00	263 100.00 2.99
No	3,606 42.44 96.37	4,807 56.57 96.70	84 0.99 100.00	8,497 100.00 96.59
.	17 45.95 0.45	20 54.05 0.40	0 0.00 0.00	37 100.00 0.42
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*SW2b_d1: GOT FACE WET OR HEAD UNDER WATER IN PUBLIC HOT TUB OR SPA SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Got Face Wet or Head under Water in Public Hot Tub	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	57 38.51 1.52	91 61.49 1.83	0 0.00 0.00	148 100.00 1.68
No	62 54.39 1.66	52 45.61 1.05	0 0.00 0.00	114 100.00 1.30
.	3,623 42.45 96.82	4,828 56.57 97.12	84 0.98 100.00	8,535 100.00 97.02
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*ATE IN A RESTAURANT SINCE BEACH INTERVIEW

Key	
	Frequency
	Row Percentage
	Column Percentage

Ate in a Restaurant Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	2,733 45.08 73.04	3,278 54.07 65.94	51 0.84 60.71	6,062 100.00 68.91
No	988 36.76 26.40	1,667 62.02 33.53	33 1.23 39.29	2,688 100.00 30.56
.	21 44.68 0.56	26 55.32 0.52	0 0.00 0.00	47 100.00 0.53
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*ATE RAW OR RUNNY EGGS SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Ate Raw or Runny Eggs Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	212	253	4	469
	45.20	53.94	0.85	100.00
	5.67	5.09	4.76	5.33
5	3,504	4,688	80	8,272
	42.36	56.67	0.97	100.00
	93.64	94.31	95.24	94.03
.	26	30	0	56
	46.43	53.57	0.00	100.00
	0.69	0.60	0.00	0.64
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*ATE SOFT CHEESES SINCE BEACH INTERVIEW

Key	
	Frequency
	Row Percentage
	Column Percentage

Ate Soft Cheeses Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	1,298 41.91 34.69	1,769 57.12 35.59	30 0.97 35.71	3,097 100.00 35.21
No	2,414 42.87 64.51	3,163 56.17 63.63	54 0.96 64.29	5,631 100.00 64.01
.	30 43.48 0.80	39 56.52 0.78	0 0.00 0.00	69 100.00 0.78
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*ATE MEAT RED IN CENTER SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Ate Meat Red in the Center Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	541 53.78 14.46	458 45.53 9.21	7 0.70 8.33	1,006 100.00 11.44
No	3,175 41.06 84.85	4,481 57.95 90.14	77 1.00 91.67	7,733 100.00 87.90
.	26 44.83 0.69	32 55.17 0.64	0 0.00 0.00	58 100.00 0.66
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*ATE RAW SEAFOOD SINCE BEACH INTERVIEW

Key	
	Frequency
	Row Percentage
	Column Percentage

Ate Raw Seafood Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	364 48.02 9.73	386 50.92 7.77	8 1.06 9.52	758 100.00 8.62
No	3,351 41.99 89.55	4,553 57.06 91.59	76 0.95 90.48	7,980 100.00 90.71
.	27 45.76 0.72	32 54.24 0.64	0 0.00 0.00	59 100.00 0.67
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*DRNK1: DRANK ANY ALCOHOL SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Drank Any Alcohol Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	1,247	777	12	2,036
	61.25	38.16	0.59	100.00
	33.32	15.63	14.29	23.14
No	2,477	4,172	72	6,721
	36.85	62.07	1.07	100.00
	66.19	83.93	85.71	76.40
.	18	22	0	40
	45.00	55.00	0.00	100.00
	0.48	0.44	0.00	0.45
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*DRNK2_a: AVERAGE AMOUNT OF DRINKS PER DAY SINCE BEACH INTERVIEW

-> water = No

variable	mean
drnk2_a	1.480258

-> water = Yes

variable	mean
drnk2_a	1.524548

-> water = missing

variable	mean
drnk2_a	1.583333

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*DRNK2_B: HIGHEST NUMBER OF DRINKS IN 24 HOUR PERIOD SINCE INTERVIEW

Key	
	Frequency
	Row Percentage
	Column Percentage

Highest # of Drinks in 24-hour Period Since Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
1	358 65.57 9.57	182 33.33 3.66	6 1.10 7.14	546 100.00 6.21
2	300 63.69 8.02	169 35.88 3.40	2 0.42 2.38	471 100.00 5.35
3	199 60.30 5.32	130 39.39 2.62	1 0.30 1.19	330 100.00 3.75
4	96 54.86 2.57	79 45.14 1.59	0 0.00 0.00	175 100.00 1.99
5	65 52.42 1.74	58 46.77 1.17	1 0.81 1.19	124 100.00 1.41
6	83 58.87 2.22	57 40.43 1.15	1 0.71 1.19	141 100.00 1.60
7	18 62.07 0.48	10 34.48 0.20	1 3.45 1.19	29 100.00 0.33
10	35 59.32 0.94	24 40.68 0.48	0 0.00 0.00	59 100.00 0.67
11	2 66.67 0.05	1 33.33 0.02	0 0.00 0.00	3 100.00 0.03
12	20 39.22 0.53	31 60.78 0.62	0 0.00 0.00	51 100.00 0.58

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*DRNK2_B: HIGHEST NUMBER OF DRINKS IN 24 HOUR PERIOD SINCE INTERVIEW
(Continued)

Highest # of Drinks in 24-hour Period Since Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
13	2 66.67 0.05	1 33.33 0.02	0 0.00 0.00	3 100.00 0.03
14	2 100.00 0.05	0 0.00 0.00	0 0.00 0.00	2 100.00 0.02
15	5 100.00 0.13	0 0.00 0.00	0 0.00 0.00	5 100.00 0.06
16	1 50.00 0.03	1 50.00 0.02	0 0.00 0.00	2 100.00 0.02
17	2 66.67 0.05	1 33.33 0.02	0 0.00 0.00	3 100.00 0.03
18	2 66.67 0.05	1 33.33 0.02	0 0.00 0.00	3 100.00 0.03
20	7 77.78 0.19	2 22.22 0.04	0 0.00 0.00	9 100.00 0.10
More than 20 (SPECIFY	5 55.56 0.13	4 44.44 0.08	0 0.00 0.00	9 100.00 0.10
98	3 42.86 0.08	4 57.14 0.08	0 0.00 0.00	7 100.00 0.08
99	5 71.43 0.13	2 28.57 0.04	0 0.00 0.00	7 100.00 0.08
.	2,532 37.14 67.66	4,214 61.81 84.77	72 1.06 85.71	6,818 100.00 77.50
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*TRIP_a: SPENT AT LEAST ONE NIGHT AWAY FROM HOME SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Spent at Least One Night Away from Home Since Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	634 48.58 16.94	667 51.11 13.42	4 0.31 4.76	1,305 100.00 14.83
No	3,091 41.44 82.60	4,288 57.49 86.26	80 1.07 95.24	7,459 100.00 84.79
.	17 51.52 0.45	16 48.48 0.32	0 0.00 0.00	33 100.00 0.38
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*TRIP_b: TRAVELED OUTSIDE OF U.S. SINCE INTERVEIW

Key	
	Frequency
	Row Percentage
	Column Percentage

Did you Travel to an Area Outside the U.S.	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	96 40.85 2.57	139 59.15 2.80	0 0.00 0.00	235 100.00 2.67
No	538 50.28 14.38	528 49.35 10.62	4 0.37 4.76	1,070 100.00 12.16
.	3,108 41.48 83.06	4,304 57.45 86.58	80 1.07 95.24	7,492 100.00 85.17
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*TRIP_c: VISITED AREA WHERE WARNED NOT TO DRINK UNTREATED WATER

Key	
	Frequency
	Row Percentage
	Column Percentage

Visit Area Not to Drink Untreated Water	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	49 46.23 1.31	57 53.77 1.15	0 0.00 0.00	106 100.00 1.20
No	582 48.66 15.55	610 51.00 12.27	4 0.33 4.76	1,196 100.00 13.60
.	3,111 41.51 83.14	4,304 57.42 86.58	80 1.07 95.24	7,495 100.00 85.20
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*OACT_A: TOUCHED UNFAMILIAR ANIMALS SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Touch Unfamiliar Animals Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	150 40.21 4.01	218 58.45 4.39	5 1.34 5.95	373 100.00 4.24
No	3,571 42.61 95.43	4,730 56.44 95.15	79 0.94 94.05	8,380 100.00 95.26
.	21 47.73 0.56	23 52.27 0.46	0 0.00 0.00	44 100.00 0.50
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*OACT_B: VISITED CHILDREN'S DAY CARE CENTER SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Touch Unfamiliar Animals Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	150 40.21 4.01	218 58.45 4.39	5 1.34 5.95	373 100.00 4.24
No	3,571 42.61 95.43	4,730 56.44 95.15	79 0.94 94.05	8,380 100.00 95.26
.	21 47.73 0.56	23 52.27 0.46	0 0.00 0.00	44 100.00 0.50
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*OACT_C: WORKED/VOLUNTEERED AT A CHILDREN'S DAYCARE SINCE INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Work/Volunteer at a Children's Daycare Since Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	67	35	0	102
	65.69	34.31	0.00	100.00
	1.79	0.70	0.00	1.16
No	2,011	1,708	35	3,754
	53.57	45.50	0.93	100.00
	53.74	34.36	41.67	42.67
.	1,664	3,228	49	4,941
	33.68	65.33	0.99	100.00
	44.47	64.94	58.33	56.17
Total	3,742	4,971	84	8,797
	42.54	56.51	0.95	100.00
	100.00	100.00	100.00	100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*OACT_D: CHANGED A CHILD'S DIAPER SINCE BEACH INTERVIEW

Key
Frequency
Row Percentage
Column Percentage

Changed a Child's Diaper Since Beach Interview	Wade, Swim, or Play in the Water			Total
	No	Yes	.	
Yes	609 48.53 16.27	638 50.84 12.83	8 0.64 9.52	1,255 100.00 14.27
No	2,908 41.92 77.71	3,962 57.11 79.70	67 0.97 79.76	6,937 100.00 78.86
.	225 37.19 6.01	371 61.32 7.46	9 1.49 10.71	605 100.00 6.88
Total	3,742 42.54 100.00	4,971 56.51 100.00	84 0.95 100.00	8,797 100.00 100.00

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

*ILLNESS IN HOUSEHOLD MEMBERS NOT AT THE BEACH

Household Members NOT at the Beach	Freq.	Percent	Cum.
Yes	1,844	20.96	20.96
No	6,929	78.77	99.73
.	24	0.27	100.00
Total	8,797	100.00	

Non-Beach Members had Fever Since Beach Date	Freq.	Percent	Cum.
Yes	46	0.52	0.52
No	1,795	20.40	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Chills	Freq.	Percent	Cum.
Yes	33	0.38	0.38
No	1,808	20.55	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Redness or Eye Irritation	Freq.	Percent	Cum.
Yes	35	0.40	0.40
No	1,803	20.50	20.89
.	6,959	79.11	100.00
Total	8,797	100.00	

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Non-Beach Members had Earache	Freq.	Percent	Cum.
Yes	16	0.18	0.18
No	1,822	20.71	20.89
.	6,959	79.11	100.00
Total	8,797	100.00	

Non-Beach Members Had Draining from the Ear	Freq.	Percent	Cum.
No	1,841	20.93	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members Had Skin Rash	Freq.	Percent	Cum.
Yes	12	0.14	0.14
No	1,829	20.79	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Infected Cuts or Scrapes	Freq.	Percent	Cum.
No	1,841	20.93	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Nausea	Freq.	Percent	Cum.
Yes	34	0.39	0.39
No	1,807	20.54	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Non-Beach Members had Vomiting	Freq.	Percent	Cum.
Yes	16	0.18	0.18
No	1,825	20.75	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Diarrhea	Freq.	Percent	Cum.
Yes	55	0.63	0.63
No	1,785	20.29	20.92
.	6,957	79.08	100.00
Total	8,797	100.00	

Non-Beach Members had Stomach Pain or Cramps	Freq.	Percent	Cum.
Yes	53	0.60	0.60
No	1,788	20.33	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Coughing with Phlegm	Freq.	Percent	Cum.
Yes	48	0.55	0.55
No	1,793	20.38	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Appendix 7 - Tabulation of Participant Responses to Follow-up Questions Regarding Exposures Following Beach Visit

Non-Beach Members had Coughing w/o Congestion	Freq.	Percent	Cum.
Yes	32	0.36	0.36
No	1,809	20.56	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Nasal Congestion or Runny Nose	Freq.	Percent	Cum.
Yes	69	0.78	0.78
No	1,772	20.14	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	

Non-Beach Members had Sore Throat	Freq.	Percent	Cum.
Yes	68	0.77	0.77
No	1,773	20.15	20.93
.	6,956	79.07	100.00
Total	8,797	100.00	