

Sanitary and Storm Water Sewage Consultation
for the
Placencia Peninsula
Placencia Village Community Center
18 January 2006, 7:00 PM

Presiding: Glen Eiley, Chairman, Placencia Village Council

National Government Representatives:

- Cadet Henderson, Chief Engineer, Department of Public Works
- Martin Lino, Public Health Officer for Stann Creek District, Department of Health
- Anthony Andrews, Department of Housing and Planning
- Albert Roches, Environmental Officer, Department of the Environment
- Lillian Zyden, National Development

Engineers without Borders USA Representatives:

- Ernie Leporini, PE, Project Manager, Water Resources, Sacramento Valley Professional Chapter
- Priya Patel, Engineer, Water Resources, Sacramento Valley Professional Chapter
- Mike Thalhamer, Engineer, Water Resources, Sacramento Valley Professional Chapter

Glen Eiley provided background for the consultation:

- Sewage disposal, both sanitary and storm water, is becoming a major problem on the Placencia Peninsula and will become a more serious problem as more development occurs.
- In March 2005, the Department of the Environment (DOE) ordered a number of hotels on the Peninsula to install package sewage plants by September 2006.
- A public meeting was held with DOE in which the community members and hotel owners/managers argued that the sewage problem on the Peninsula extended beyond just hotels and was really a Peninsula-wide problem that needed to be addressed by all segments of the community. DOE agreed to postpone enforcement of the order for certain hotels to install the package sewage treatment plants to allow the Peninsula to come up with a Peninsula-wide solution for the problem by March 2005.
- A committee to spearhead the project was formed. Members are Kitty Fox, Glen McCullough and David Vernon.
- The committee submitted an application to Engineers Without Borders (EWB) in the US and EWB accepted the Peninsula sewage disposal as an official project.
- Ernie Leporini, Priya Patel and Mike Thalhamer are in Placencia as part of the EWB project with the purpose of gathering information about the community so that a sewage treatment proposal can be submitted to the community.

Ernie Leporini, Project Manager for the Placencia project, outlined the components of the project and a very rough time-line:

- **Feasibility study:** target date for completion of June 2006
- **Funding (identify and solicit grants and other funds):** target date for completion of summer 2007
- **Design and start of construction:** summer 2008

Mr. Leporini stressed that this was a very rough schedule and that EWB had no funds of its own to contribute to the project. EWB would help the community find possible funding sources, but the community would have to raise the money themselves.

Issues identified:

- **Interim Sewage Disposal:** how to control sanitary sewage pollution before completion of Peninsula-wide system (under projected timeline, construction not to start 2008, completion probably not until 2010 – at least 4 years until sewer system comes on-line)
 - **Seine Bight Night Waste Disposal:** night wastes continue to be disposed of by residents into sea and lagoon – critical problem – population in Seine Bight has at least doubled (possibly tripled) in 4 years when fecal coliform counts were already very high. Residents do not even have septic tanks.
 - **Possible solution:** composting toilets (national government assistance strongly urged to tackle this problem).
 - **Note:** Peace Corp volunteers may be source of labor to construct toilets.
 - **Possible solution:** make disposal of night wastes illegal (currently legal after 6 pm and before 4 a.m.)
 - **Note:** community members raised issues of enforcement (who will enforce) and where will wastes be disposed of if night waste disposal made illegal
 - **Residential and commercial developments scheduled to come on-line before sewage system completed:** how to give developers an incentive to help fund sewage system while also making sure they do not contribute to sewage problem in the interim
 - **Possible solution:** proper construction of engineered septic system rather than a “holding tank”
 - **Possible solution:** grant of local authority to inspect septic systems; require local approval prior to occupancy and/or use
 - **Existing residential and commercial uses:** how to control ineffective sanitary waste disposal from existing users, particularly hotels which have already been ordered to install individual package plants, before Peninsula-wide sewage system goes on-line
 - **Possible solution:** testing of groundwater to determine where problems actually exist – are all existing hotels the source of the problem, only some hotels, or are residences more of a problem, then deal with problems on an individual basis
 - **Possible solution:** require defective sewage systems for commercial establishments to be repaired or replaced, as appropriate under the circumstances.
 - **Possible solution:** make pump-out services more accessible to more residents in all communities on the Peninsula.
- **Funding**
 - **Possible Funding Sources:**
 - The Plantation Development covenants require construction of a sewage treatment plant after x number of houses have been constructed, so funds should be available there for possible contribution to the cost of the system.
 - Sanitation Engineer in Department of Health may be able to assist in identifying possible funding sources.
 - Ministry of Works may be able to provide some assistance in feasibility and design phases, such as information on construction costs, vendors, etc.
 - **Cost of System:** Cost estimate can't be given now, but EWB team can accelerate process of cost estimate so that identification and solicitation of funding can begin earlier.
 - **Likelihood of Obtaining Funding:** EWB on a professional level is a young organization with very little history available to be able to make an educated guess on this question. (The organization actually started with student engineers undertaking and completing relatively minor projects.)
- **Location:** where will central treatment plant be located
 - **Possible solution:** donation by national government of national land for treatment plant

- **Possible solution:** high land on mainland across Placencia Lagoon from Seine Bight with submarine sewage line (community member stated that this was national land)
- **Note:** no one from Lands Department present at meeting. Area Representative also not present. Therefore, no government input available.
- **Large numbers of construction workers at sites without any sanitation facilities:** at some construction sites, 60 or more construction workers using beach as restroom, leaving human waste and papers soiled by human wastes laying on beach
 - **Possible solution:** DOE and Ministry of Health to require contractors to provide sanitation facilities
- **Disposal of water after treatment at treatment plant:** major issue, no discussion (brought up at very end of meeting)
- **Treatment of Storm Water:** large amount of annual precipitation on Peninsula could make treatment of storm water a massive undertaking

Miscellaneous

- Estimated cost of constructing individual package plants for hotels is approximately US\$1,000 per room (estimate provided by community member)
- Can existing sewage treatment plants be used as pre-treatment plants for Peninsula-wide sewage system? Can new ones not yet constructed be designed to perform this function more effectively?
- A fall-back plan needs to be designed in case funding is not available for Peninsula-wide sewage system.
- Hotels were targeted by DOE for required installation of package plants because they are income generating properties which are bringing more and more people to the Peninsula, leading to potentially greater problems than influx of new single family residences on individual lots.
- DOE will soon begin publishing water quality statistics for tourist areas, including regular testing program. Several members of the community volunteered to assist DOE in the testing.
- EWB doesn't yet have any clear idea of the best design for a Peninsula-wide sewage system – too early in the process, still fact finding/gathering information.