DEPARTMENT OF ENVIRONMENTAL HEALTH SERVICES

SHANTY TOWN PROJECT 2013

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Shanty Towns- New Providence

FOREWORD

The Commonwealth of The Bahamas has been inundated with persons from the Republic of Haiti for many years. Communities have formed which generally do not meet environmental standards. These communities are commonly referred to as, "Shanty Towns." **"Shanty Town" is defined for the purpose of this study as a cluster of dwellings which do not meet minimum environmental or regulatory standards with respect to water supply, solid waste management, sewage disposal, general aesthetics and structure**

Many of the long term residents of these "shanty towns" have assimilated and are recognized as productive, law abiding citizens who contribute to the growth and development of this country. Historically, many of the older occupants in these areas were farm laborers who were hired by diverse persons from throughout our society. These laborers in some instances were allowed to occupy the land after the owners had ceased farming operations. In return, these occupants are expected to share a percentage of their crop and pay the landowner a varying small fee.

There are significant differences in the population density of towns in New Providence and the Family Islands. This project addresses the Family Islands and New Providence separately.

INTRODUCTION

The “shanty towns” resulting from Haitian migration, are focused primarily in New Providence and the larger populated Family Islands where the labour force is larger.

It was observed that most, if not all of these Shanty towns are on Government crown land issued to Bahamians families for the purpose of agriculture. As noted in the first Survey (conducted two (2) years ago), these "communities" are informally organized, overcrowded with illegal/poorly constructed dwellings, improper or no sewage disposal systems, compounded with derelict vehicles and garbage accumulation which give rise to the breeding of rodents , mosquitoes and other disease carrying vectors.

An emerging trend is the increasing number of Bahamians (or persons, who claim to be Bahamian) who live in or frequent these towns. Many of the long-term Shanty town occupants express that "new arrivals" do not have the same reverence for proper hygiene and respect for law and order resulting in the decline of the towns.

PURPOSE

The Department of Environmental Health Services, over a two week period undertook the mandate of the Minister of the Environment, gathered data, conducted interviews and collected samples to:

1. identify the environmental conditions existing inclusive of sanitary facilities, water supply, solid waste management, vectors, housing conditions and sewage disposal;
2. provide an estimate of population for each town;
3. assess groundwater quality and the factors impacting same;
4. provide recommendations to ensure compliance with environmental and other standards.

METHODOLOGY

1. The island of New Providence was subdivided into (4) four districts for inspection and collection of data

    a. Eastern District (bounded on west by East Street, north by Wulff Road, east and south by the sea)
    b. Northeastern/Central District (north of Wulff Rd, south of East Street, to the sea)
    c. Northwestern District (Faith Avenue, Carmichael Rd, Bacardi Road)
    d. Southwestern District (Cowpen Road, Spikenard Road, Gamble Heights)

2. Research participants comprising of Vector Control Officers and Health Inspectors were assigned to groups ranging from 3 to 5 officers, and were given designated areas of focus.
3. Members of the Public Analyst Laboratory were assigned to teams to collect samples of water for analysis.
4. Data was collected based on observation and interviews
5. Photographs were obtained to provide visual records.
6. Only properties having more than (10) ten houses are included in the definition of "shanty town" for New Providence.
7. Garbage bins within the text of this project refer to any hard container used to store garbage.

KEY

Eastern District

HC2ae – Joe Farrington Road – second left off Joe Farrington Road, drive to the end of this corner and make a right turn a quick left and you will see the community on the right hand side.

HC3ae – Sea Breeze Lane – turn S.W. on to Sea Breeze Lane at T junction S.W. side facing wind street.

Northwestern

HC1aw – Godet Avenue and Hamster Road (east) –

HC2aw – Floridell Avenue –off Bacardi Road.

HC4aw – Dirt Road off Floridell Avenue (past farm)

HC5aw – Second road on west off Golden Isles Road – (off Carmichael Road)

HC7aw –Dirt road off Carmichael Road on northern side next to the national well fields.

HC2awf – Faith Avenue western side after passing Oasis of Love Ministries International (between the brink of the hill and pole number 21

Southwestern

HC1asw –Blue Hill Road, past Carlton Francis School, the first corner on the left side and Cowpen Road

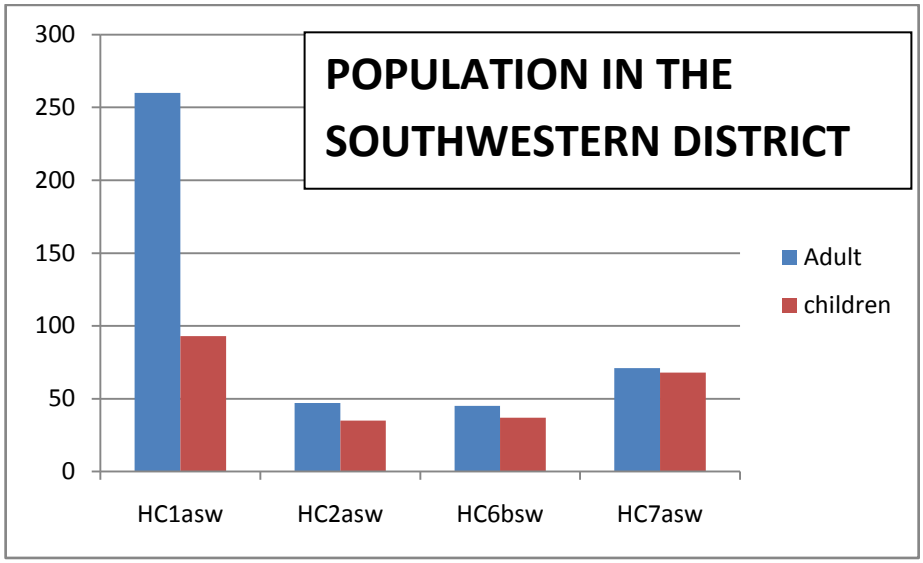
HC2asw –Dirt road off Cowpen Road just after pole #26.

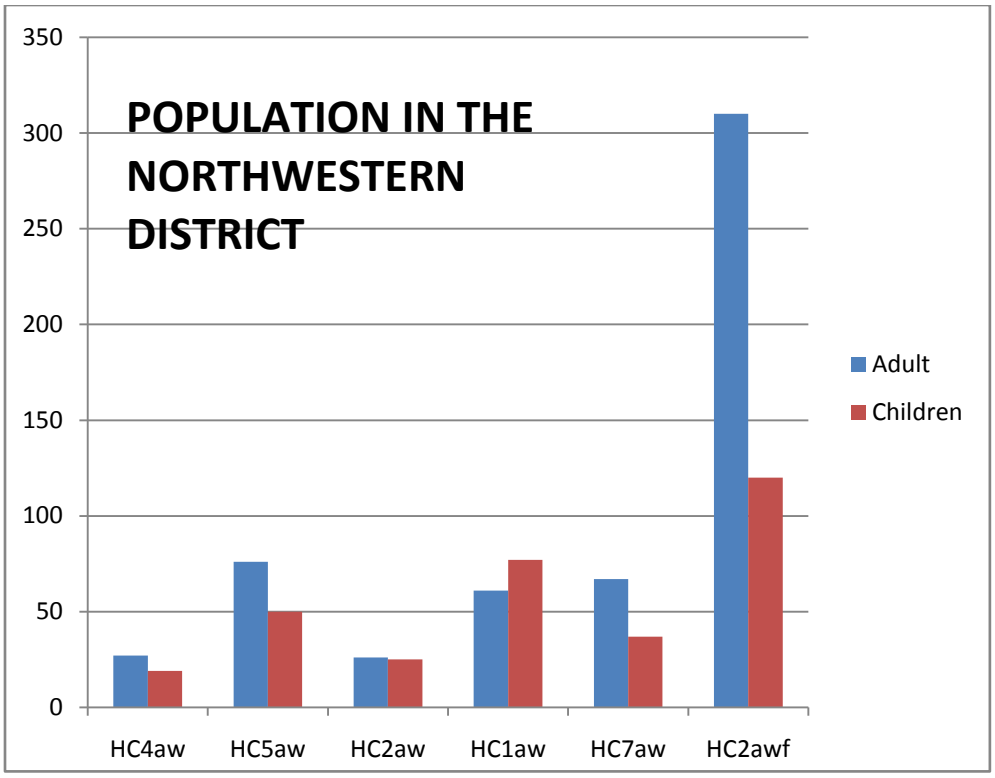
HC6bsw – off Spikenard Road.

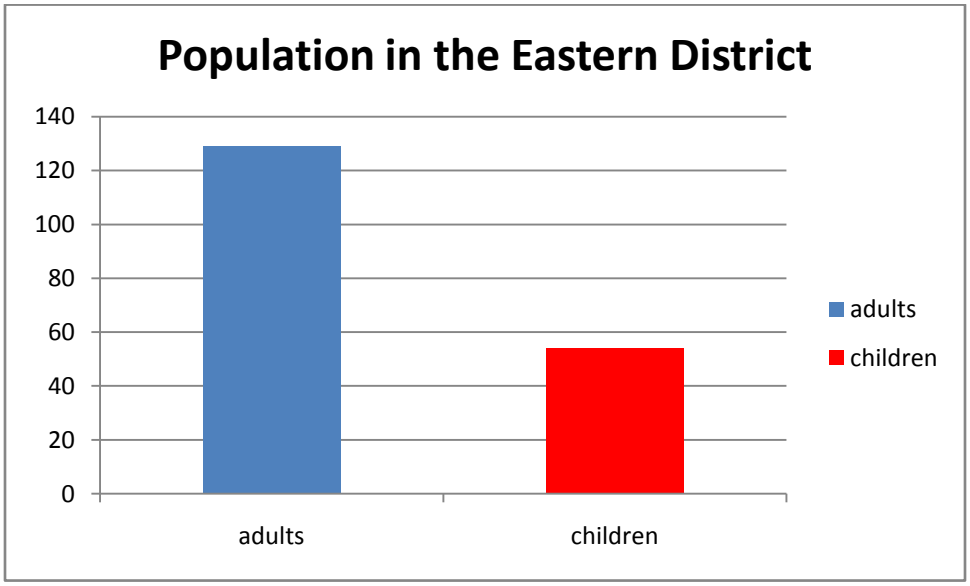
HC7asw –south of Bacardi and Cowpen Road (Miller Sound area).

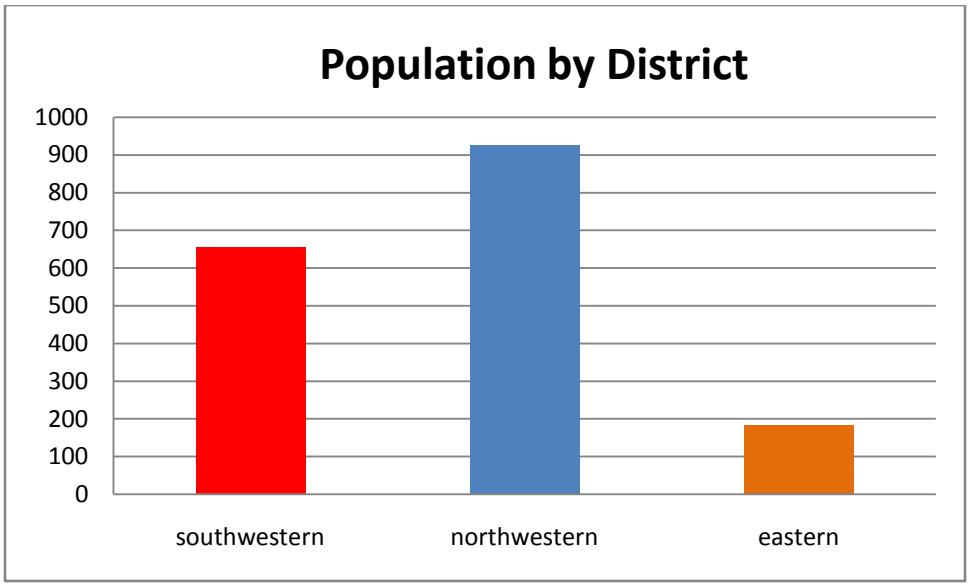
STATISTICAL REPORT

House and Population Count

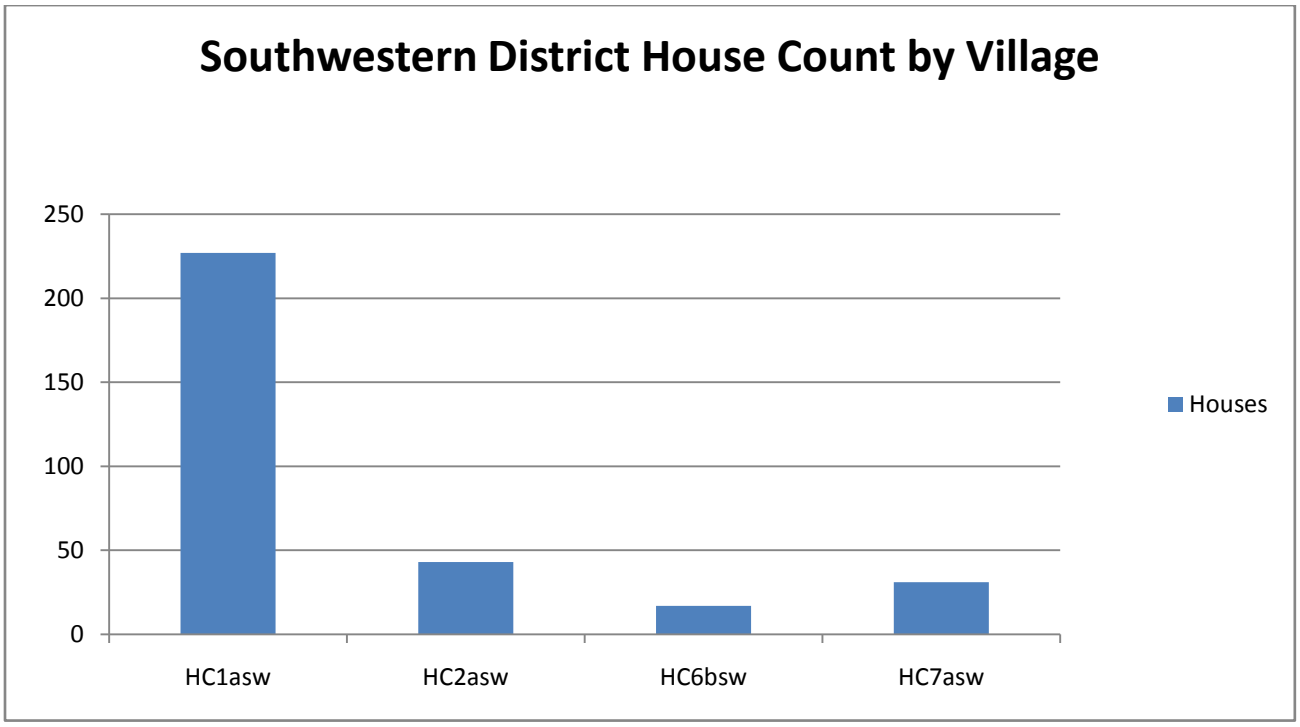


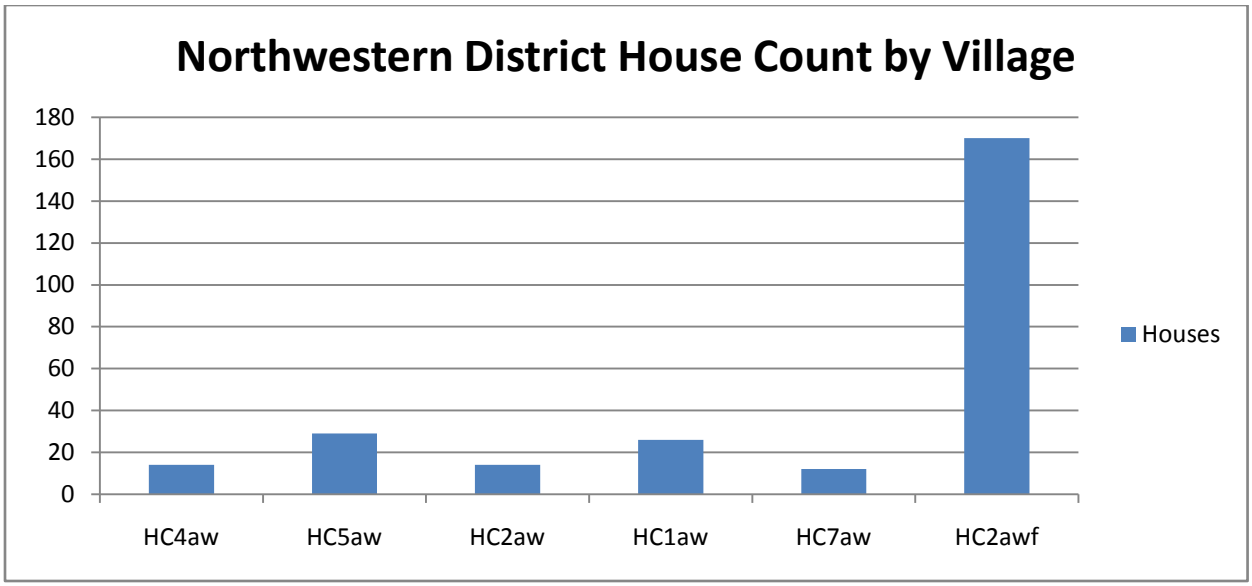

POPULATION IN THE NORTHWESTERN DISTRICT
350
300
250
200
150
100
50
0
HC4aw
HC5aw
HC2aw
HC1aw
HC7aw
HC2awf
Adult
Children

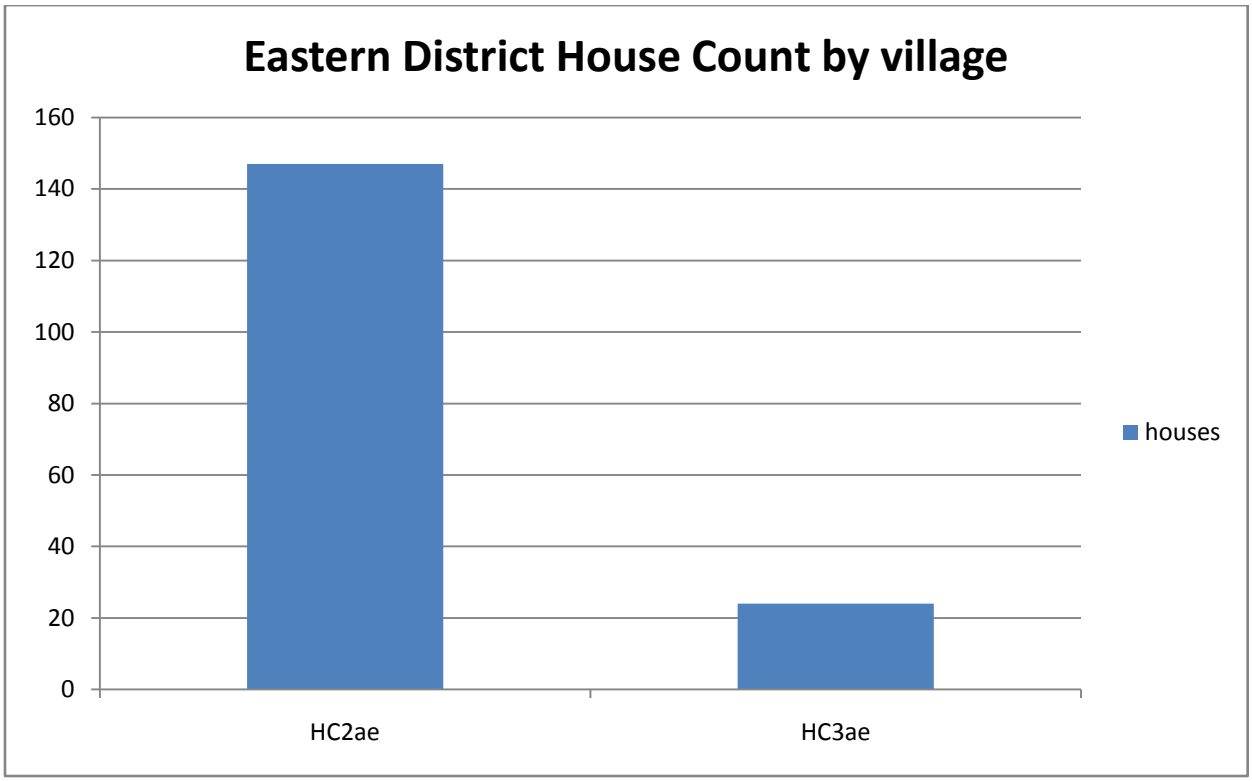

Population in the Eastern District
140
120
100
80
60
40
20
0
adults
children
adults
children

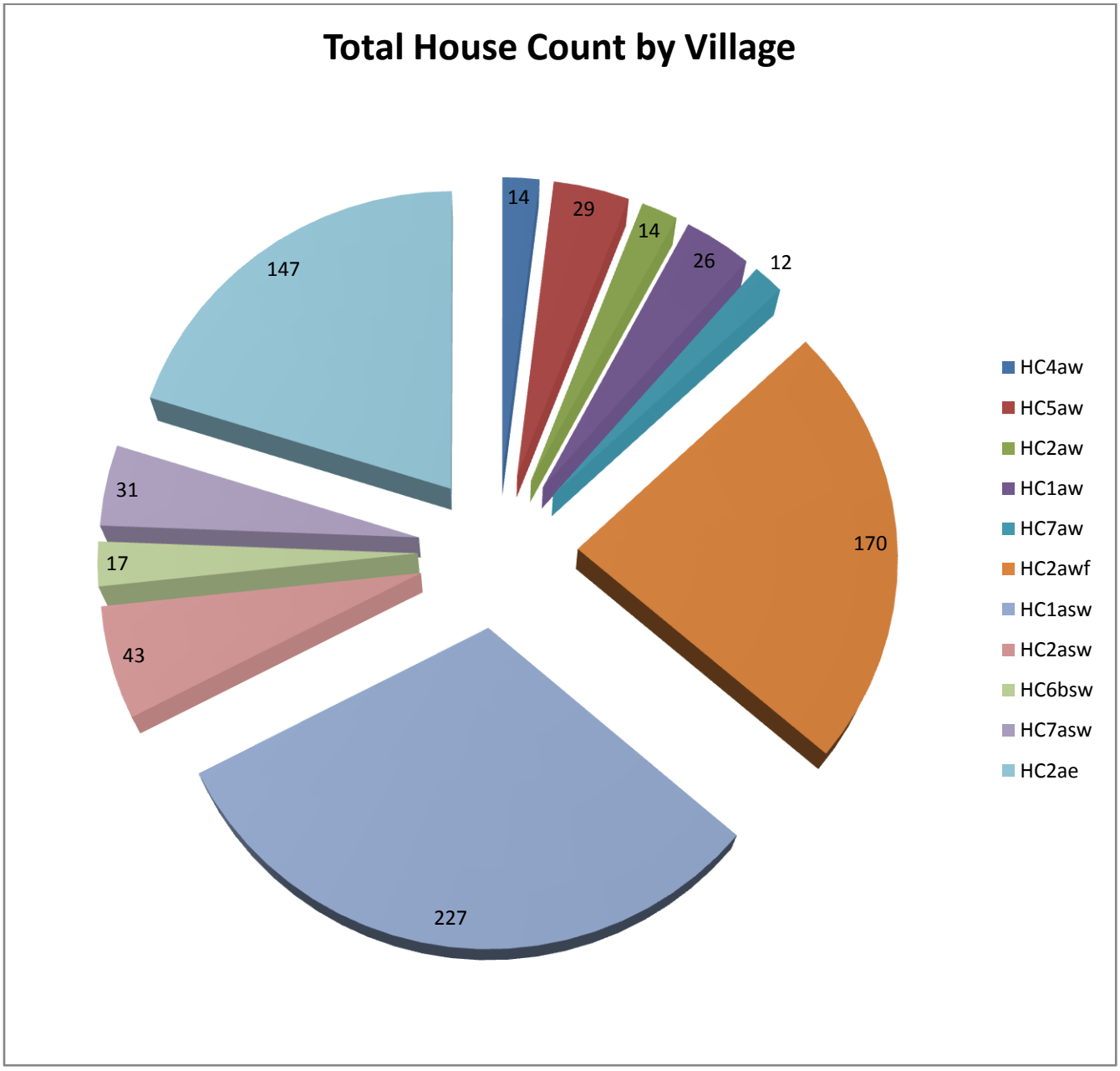


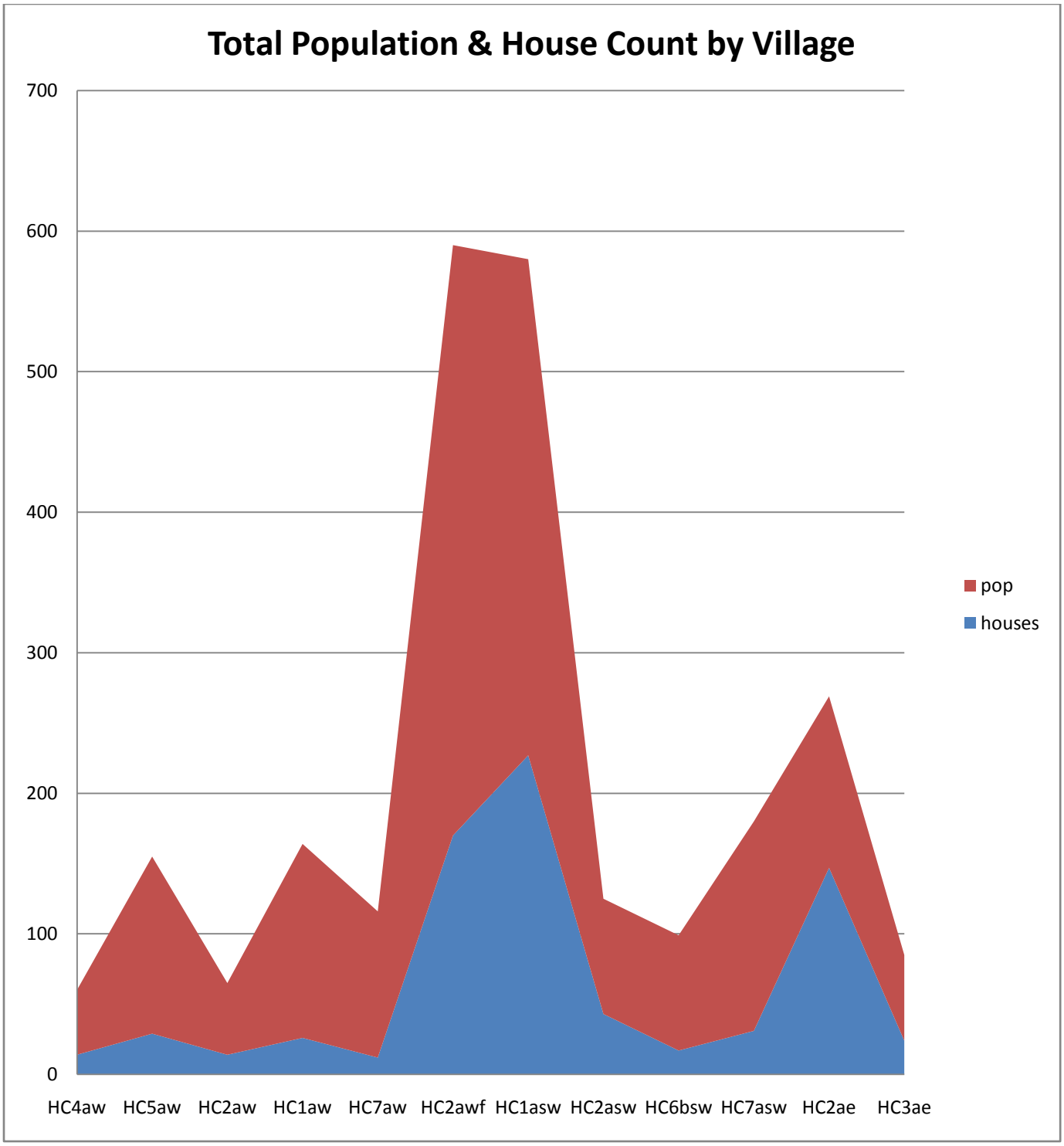
No communities met the definition of Shanty Town in the northeastern district



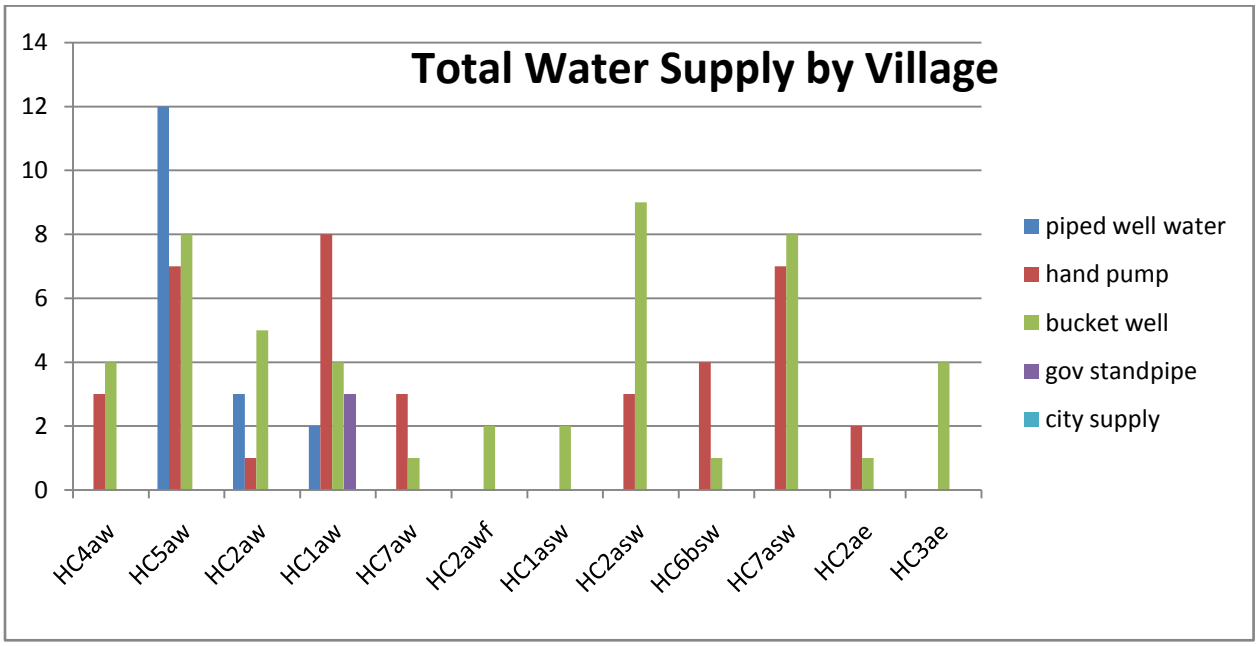

Northwestern District House Count by Village
180
160
140
120
100
80
60
40
20
0
HC4aw
HC5aw
HC2aw
HC1aw
HC7aw
HC2awf
Houses

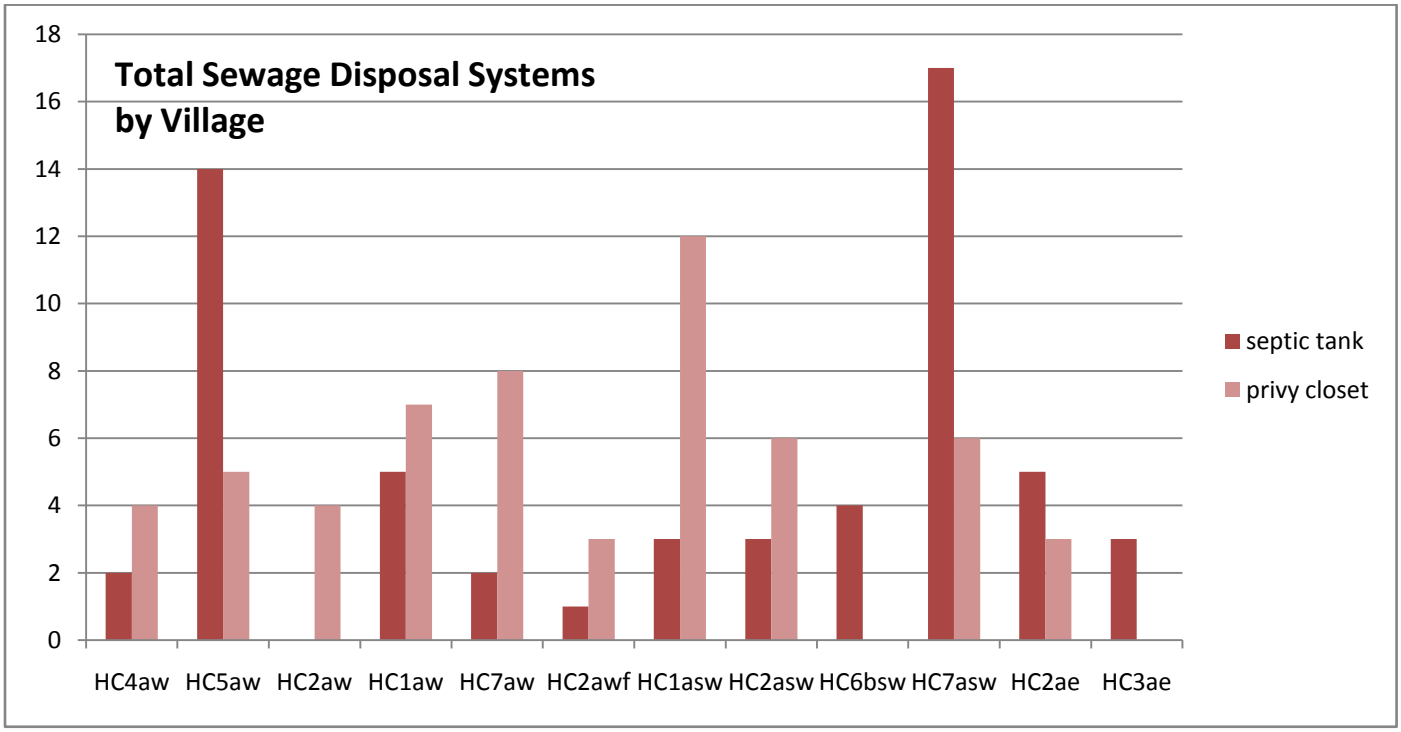

Eastern District House Count by village
160
140
120
100
80
60
40
20
0
HC2ae
HC3ae
houses


Total House Count by Village
14
29
14
26
12
170
227
43
17
31
147
HC4aw
HC5aw
HC2aw
HC1aw
HC7aw
HC2awf
HC1asw
HC2asw
HC6bsw
HC7asw
HC2ae

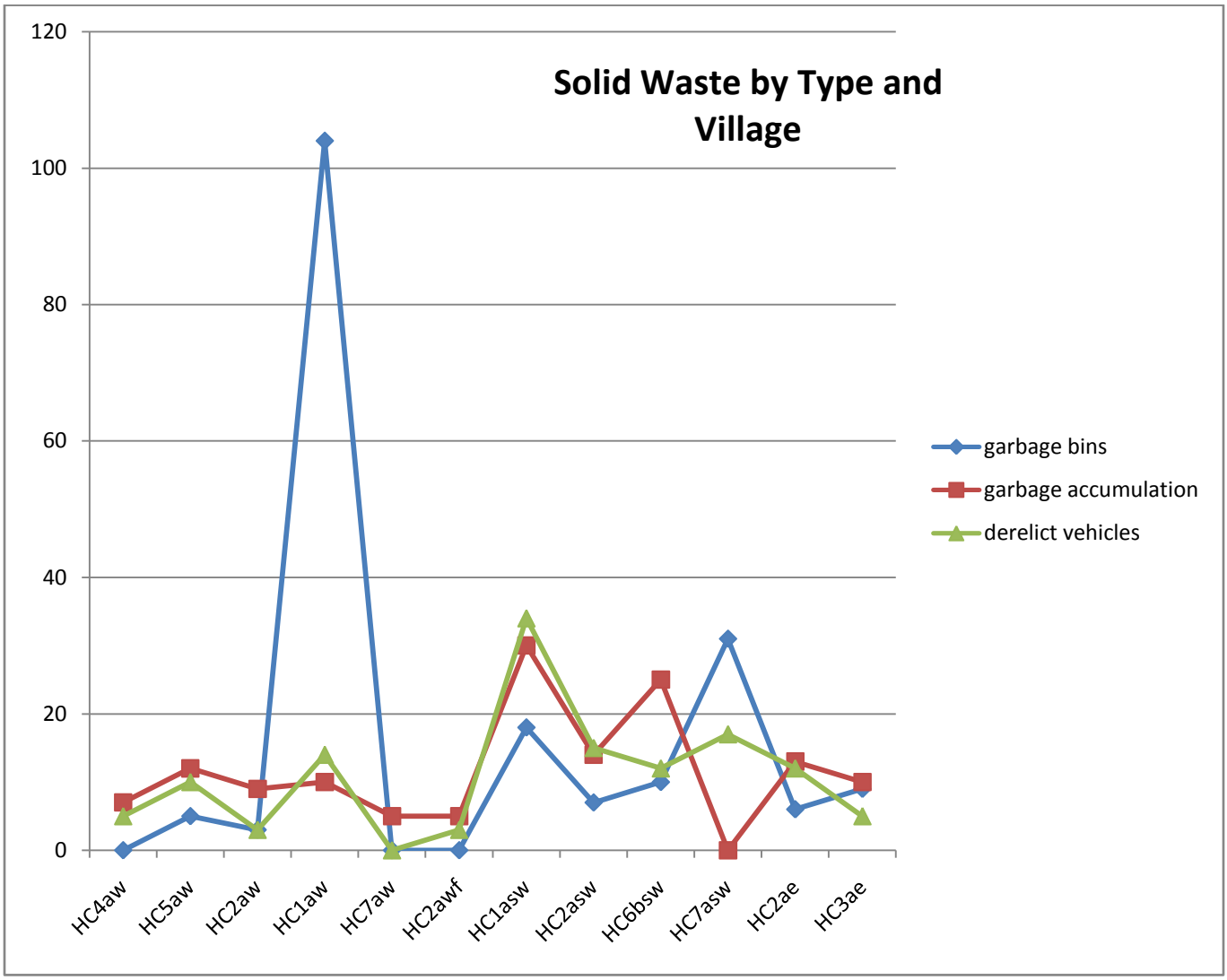

Total Population & House Count by Village
700
600
500
400
300
200
100
0
HC4aw
HC5aw
HC2aw
HC1aw
HC7aw
HC2awf
HC1asw
HC2asw
HC6bsw
HC7asw
HC2ae
HC3ae
pop
houses

Water supply and sewage disposal systems

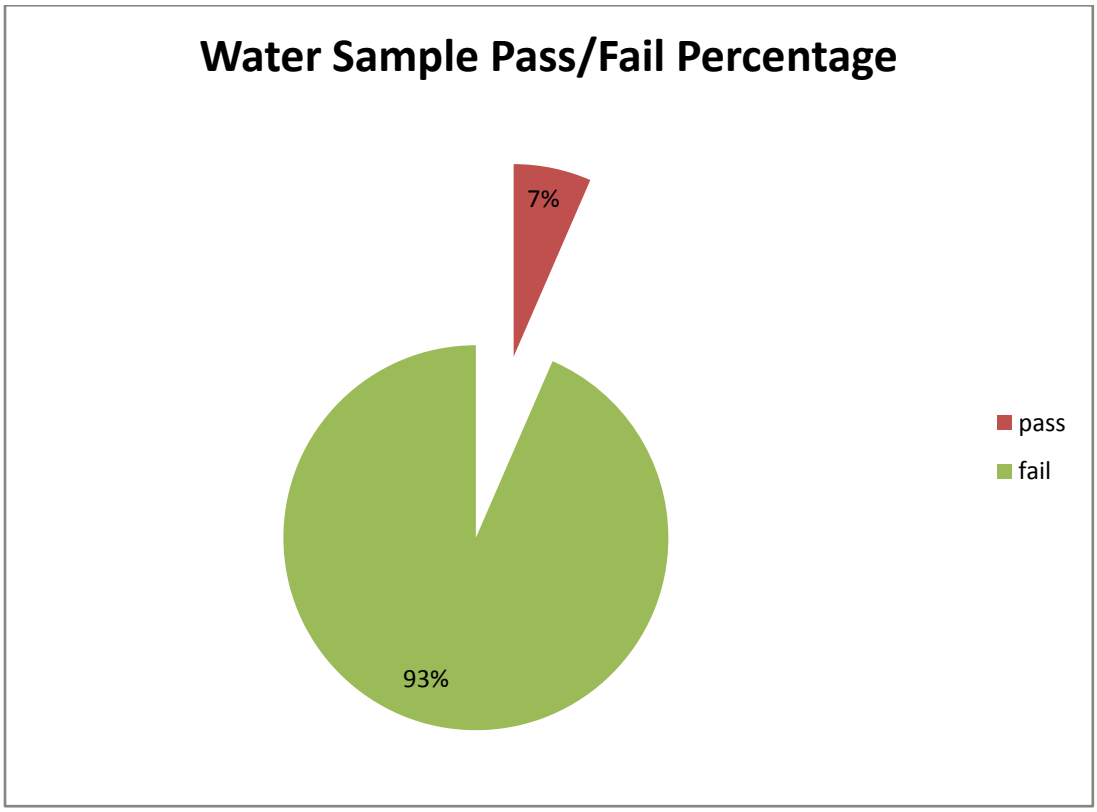


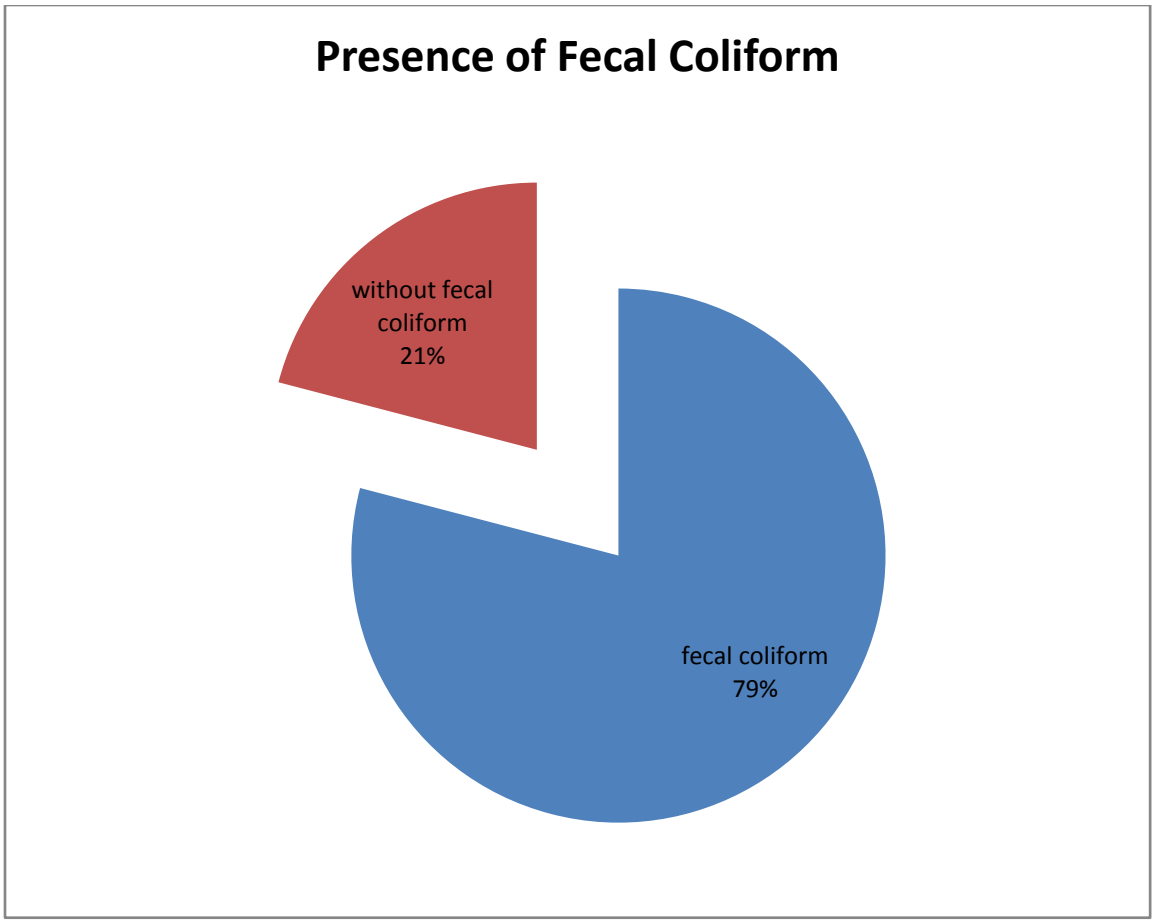


Solid waste management



Water Analysis




Presence of Fecal Coliform
without fecal coliform 21%
fecal coliform 79%

OBSERVATIONS

- All buildings in these “shanty towns” are made from discarded wood or metals without any regard for the Bahamas Building Code. Construction was ongoing in most of these “towns”.

- A number of the structures are now rented by Haitians to persons claiming to have Bahamian Citizenship and illegal immigrants.

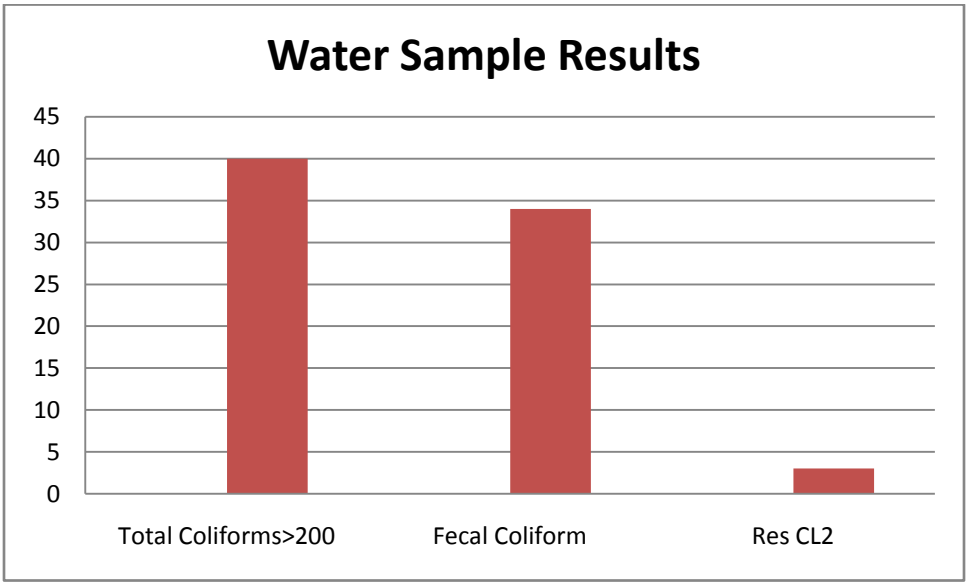
- Profitable businesses of varying nature, inclusive of liquor stores, convenience shops, numbers, animal rearing (chickens, sheep, goats, and pigs), cock fighting, recycling of bottles, and coal production, are being operated in these towns.

- The storage of bottles being housed in these “towns” gives rise to mosquito and other disease carrying vectors.

- Manufacturing of coal seems to be a big business. The Bahamian Pine is being utilized in disregard to the Forestry Act.

- Water is available in all “towns,” and in some instances being piped into houses. Of great concern is the biological quality of the water. Only three (3) of the forty six (46) samples taken meet World Health Organization (WHO) Standards. All the others failed with very high fecal coli form counts. Two of the samples had residual chlorine present.

  WHO standards defines potable water as having no coli form or fecal coli form and a residual chlorine between 0.2 and 2.0 ppm



Bucket wells are most common. These open, untreated water sources are undesirable due to their susceptibility to contamination from runoff and debris.

Closed well supplies are also unsatisfactory due to their improper construction, proximity to improper sewage systems and the natural fluctuation of groundwater quality.

- Attempts have been made to provide some form of sewage disposal. None of the structures provided conform with the law and in most cases are in a state of disrepair.

- The number of sanitary conveniences is not in proportion to the population. Human feces was observed in common walking areas between dwellings, in nearby bushes, and around animal pens. The inadequate disposal of sewage increases the risk of transmission of fecal-borne diseases and contamination of groundwater supply.

- Due to the layout of most of these “towns” the Department of Environmental Health is unable to provide individual residential collection. Residential waste placed at the front of the property in proximity to the main road is collected. This method is not very successful as most of the houses are located far away from the road and residents are reluctant to bring waste the distance required for proper disposal. This obviously results in garbage being deposited throughout these “towns,” and nearby bushes.

- Household refuse, mostly food byproducts, are routinely thrown outdoors, often within the pathway, around the houses, or wherever is convenient. There is strong indication of rodent infestation in and around living/sleeping quarters as evidenced by live rats, and burrows.



- The proliferation of derelict vehicles is a major concern as they serve as harborage for vectors such as mosquitoes and rodents.

- Unauthorized sale of prescription medications was noted

- The average house within these “towns” is approximately 80 square feet and houses a family of six (6). It is fair to assume that overcrowding is an issue. This issue is not as significant as the structural integrity, minimal (or lack of) sewage and water infrastructures and solid waste management issues.

- There is what seems to be an ocean hole near one of these “town” that became the dumping ground for whatever needs to be discarded.

- Domestic animals that are produced for food are permitted to roam throughout the town. This presents a major health concern, as the animals are in contact with fecal matter and other item they may consume for food making them unfit for human consumption.

Shanty Towns

Eleuthera

Bahamas

SHANTY TOWNS – ELEUTHERA

Blackwood, North Eleuthera

Location – Off the main Eleuthera Highway near to Jean's Bay Dock; the access road through this community leads to Gun Point, which is located at the end of the island.

The majority of persons living in the community of Blackwood are of Haitian descent and the properties and some of the houses are owned by Bahamians living on Spanish Wells. Some of the houses were built and/or portions added by the Haitians themselves.

Below, is a synopsis of the community as related to type and number of structures, solid waste management, sewage disposal, and water supply.

1. **Spanish Wells**

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	5	Private well	Insanitary privy closet Improper septic tank	Garbage & refuse Accumulation

Privy closet

Waste pipe leading to improper septic tank

2.

Housing	**Adults**	**Children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden Structure	4	2	Private well	Improper septic tank, Waste pipe not connected to septic tank	Refuse accumulation, No garbage storage bin

Septic tank

3.

Housing	**Adults**	**children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden structure	2	0	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

b)

Housing	**Adults**	**children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden structure	2	3	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

c)

Housing	**Adults**	**children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden structure	3	1	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

d)

Housing	**Adults**	**children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden structure	4	3	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

e)

Housing	**Adults**	**children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden structure	1	1	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

4.

Housing	**Adults**	**Children**	**Water Supply**	**Sewage Disposal**	**Waste Management**
Wooden structure	3	3	Private Well	Septic tank, not built to code	Derelict vehicle, No garbage storage bin

5.

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	4	2	Private Well	Septic tank, not built to code	Two Derelict vehicles Five derelict motor bikes No garbage storage bin

6. Building #1 has 3 sections, housing three separate families

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	3	4	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Shared Unit	1		Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Shared unit	1	1	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

2.

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	0	Private Well	Septic tank, not built to code	No garbage storage bins

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	4	2	Stand pipe	Shared septic tank, not built to code	No garbage storage bins Refuse accumulation

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	5	1	Stand pipe	Shared Septic tank not built to code	Derelict vehicle No garbage storage bins

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	2	Stand pipe	Septic tank not built to code	Derelict vehicle No garbage storage bins

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	1	5	Private well	Septic tank not built to code	Derelict vehicle No garbage storage bins

Housing	Adults	children	Water Supply	Sewage Disposal	Waste Management
Wooden structure			Private well	Insanitary privy closet	No garbage storage bins

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	4	Well water supply	Septic tank, not built to code	No garbage storage bins

Blackwood

Housing	Water Supply	Sewage Disposal	Waste Management
16 Wooden structures	Private Well	Septic tank, not built to code	Insufficient garbage storage bins Refuse accumulation

Property is occupied by twenty three (23) adults and twenty one (21) children.

Garbage storage

Derelict vehicles

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structures	2	5	Private well	Septic tank, not built to code	No garbage storage bins

REMARKS

Some of the properties have several septic tanks some of which were noticeable and others that were not. From observation, all of the septic tanks in Blackwood are not built to code. Every house in Blackwood has electrical supply from BEC.

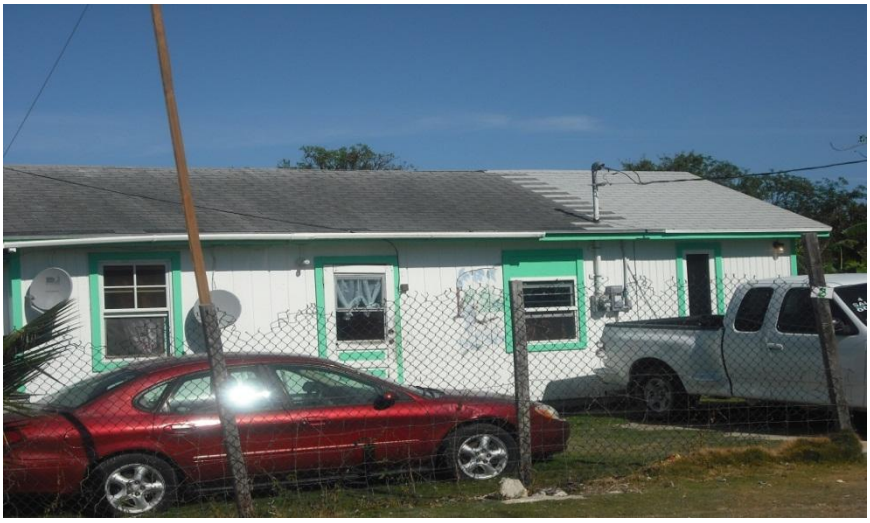
There is no municipal water supply in Blackwood and therefore owners of the properties have provided private wells to access water. The ground water supply is hard and residents informed that the well water is used for cleaning, washing, bathing and cooking. Bottled water is used for drinking. Water samples were collected from several premises and forwarded on to the Public Analyst Lab for chemical and biological analysis. Testing results have not been made available as yet.

There are numerous derelict vehicles in Blackwood (photos provided). Garbage accumulation and poor garbage storage were evident throughout the community. Additionally, the residents are without proper garbage storage bins.

Photo showing a derelict vehicle site in Blackwood

Piles of yard debris that were deposited near to the gated entrance of Gun Point

Photo showing the construction method of septic tanks



Example of water tanks in Blackwood

WEMYSS' BIGHT

Location – Off "Chris Brown Highway," formerly Cotton Bay Road

Housing	**Water Supply**	**Sewage Disposal**	**Waste Management**
2 structures (one stucco, one wooden)	Standpipe No running water	Insanitary privy closet	No garbage storage bins Refuse accumulation

Three (3) adults and one child live on the property.

Insanitary privy closet (outside view)

Privy closet (inside view)

GREEN CASTLE

REMARKS

This property was grossly insanitary with huge piles of refuse accumulation and septic tanks that are not built to code. Also, there was a Pit Bull dog on the compound which made it impossible to conduct a thorough inspection of the premises.

RUSSELL ISLAND

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	3	2	Stand pipe	Septic tank not built to code	No garbage storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	1	Stand pipe	No sanitary facilities	No garbage storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	3	0	City connection	Septic tank not built to code	No garbage storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	2	City connection	Septic tank not built to code	No garbage storage bins Refuse accumulation

Outside kitchen

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	2	0	City connection	Septic tank, Open drainage	Refuse accumulation/burning

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Concrete/Wooden structure	3	2	City connection	Septic tank not built to code	No garbage storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure	1	0	City connection	Septic tank	Storage bins

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Wooden structure/ 2 units	3	0	City connection	Shared Septic tank	Storage bins

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	2	4	City connection	Shared septic tank	Storage bins

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	3	0	Shared well	Shared septic tank	Storage bins Refuse accumulation

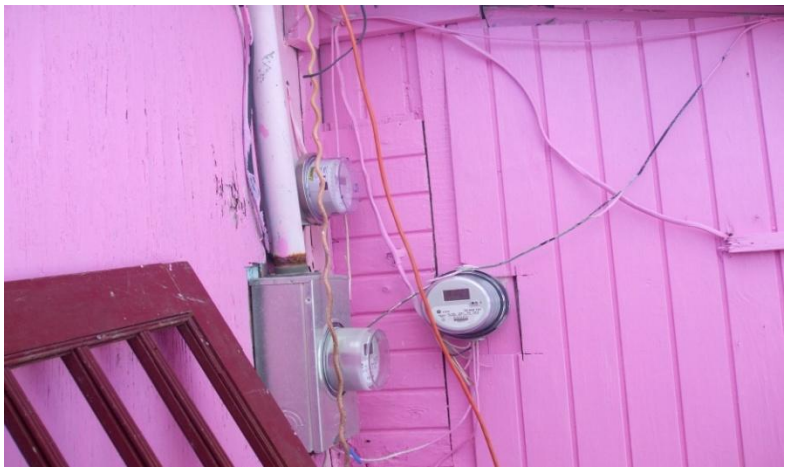
Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	2	1	Shared well	Shared septic tank	Storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	3	2	Shared well	Shared septic tank	Storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	2	2	Shared well	Shared septic tank	Storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	2	0	Shared well	Insanitary privy closet	Storage bins Refuse accumulation

Housing	Adults	Children	Water Supply	Sewage Disposal	Waste Management
Shared unit	2	3	Shared Well	Shared septic tank	Storage bins Refuse accum.



Remarks

All residents in the various Haitian communities were supplied with electricity. St. George's Power Company supplies power for Russell Island and Spanish Wells.

Shanty Town

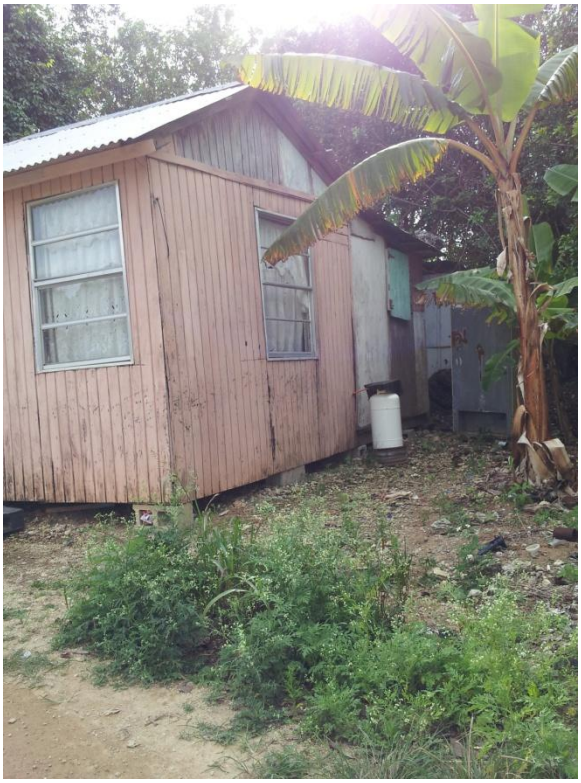
Central Andros

Bahamas

INTRODUCTION

The Shanty Town in Andros is located near the Heastie farm property, San Andros, Bahamas. Thirty (31) structures were in the village with some of the structures consisting of up to six (6) sections in the dwelling structure.

Three (3) residences have proper bathroom facilities, two (2) outside toilets are shared in the towns. Most residents use nearby bushes to dispose of waste.



Many of the premises are kept in a clean and sanitary condition, whereas others have household garbage accumulation and derelict vehicles at the rear of the property. Garbage and debris are disposed of in nearby bushes.

Hand pumps and open wells can be found throughout the town as there is no piped water with the exception of three (3) that have running water by the use of electric pump.

It is difficult to estimate the population of the towns, due to the fact that the time of inspection the residents were at work on the farms, however, it appears that the town is growing.

Shanty Town

George Town, Exuma

Bahamas

Within the Cooper's Yard town there are seven (7) structures.

Home one (1) has six (6) doors/units - occupied

- Home two (2) has three (3) doors/units – abandoned/dilapidated (pink)
- Home three (3) has two (2) doors/units- unoccupied.
- Home four (4) has five (5) doors/units -occupied.
- Home five (5) has two (2) doors/units – unoccupied (lime green).

Home six (6) – occupied

Home seven (7) - occupied

These homes have:

Two septic tanks – 2 buildings connected (green & white)

- Water is hauled from the Cooper's Yard pond for flushing toilets.

4 structures are without bathrooms & septic tanks

- Population about 20 – 25 people.
- Bottled water is purchased for drinking.
- No Electricity.
- No Running Water.
- Three Garbage Containers

Shanty Towns

Abaco

The Bahamas

There are three (3) main areas in Abaco where “Shanty Towns” exist, namely, The Mud, Sandbanks and The Peas.

Statistical Data

Sandbanks

Well Type and Number

a) Wells piped to house – 2
b) Draw bucket – 9
c) Hand pump – 0
d) Closed – 2
e) Stand pipe (government pump) – 0

Sanitary Facilities

a) Septic tanks – 10
b) Privy Closet (outside toilet) – 3

Buildings

a) No. of Homes/Residents – 124
b) No. Commercial shops (visible) – 6

Derelict Vehicles - 25

The Peas

Well Type and Number

a) Wells piped to house – 150
b) Hand pump – 2
c) Closed - 10
d) Draw bucket – 0

e) Stand pipe (government pump) - 0

Sanitary Facilities

a) Septic tanks – 150
b) Privy closet (outside toilet) – 15

Buildings

a) No. of buildings (homes/residents) – 300
b) No. of commercial shops (visible) – 30

Derelict Vehicles - 50

The Mud

Well Type and Number

a) Well piped to house – 55
b) Draw bucket – 6
c) Hand pump – 20
d) Closed – 45
e) Standpipe - 0

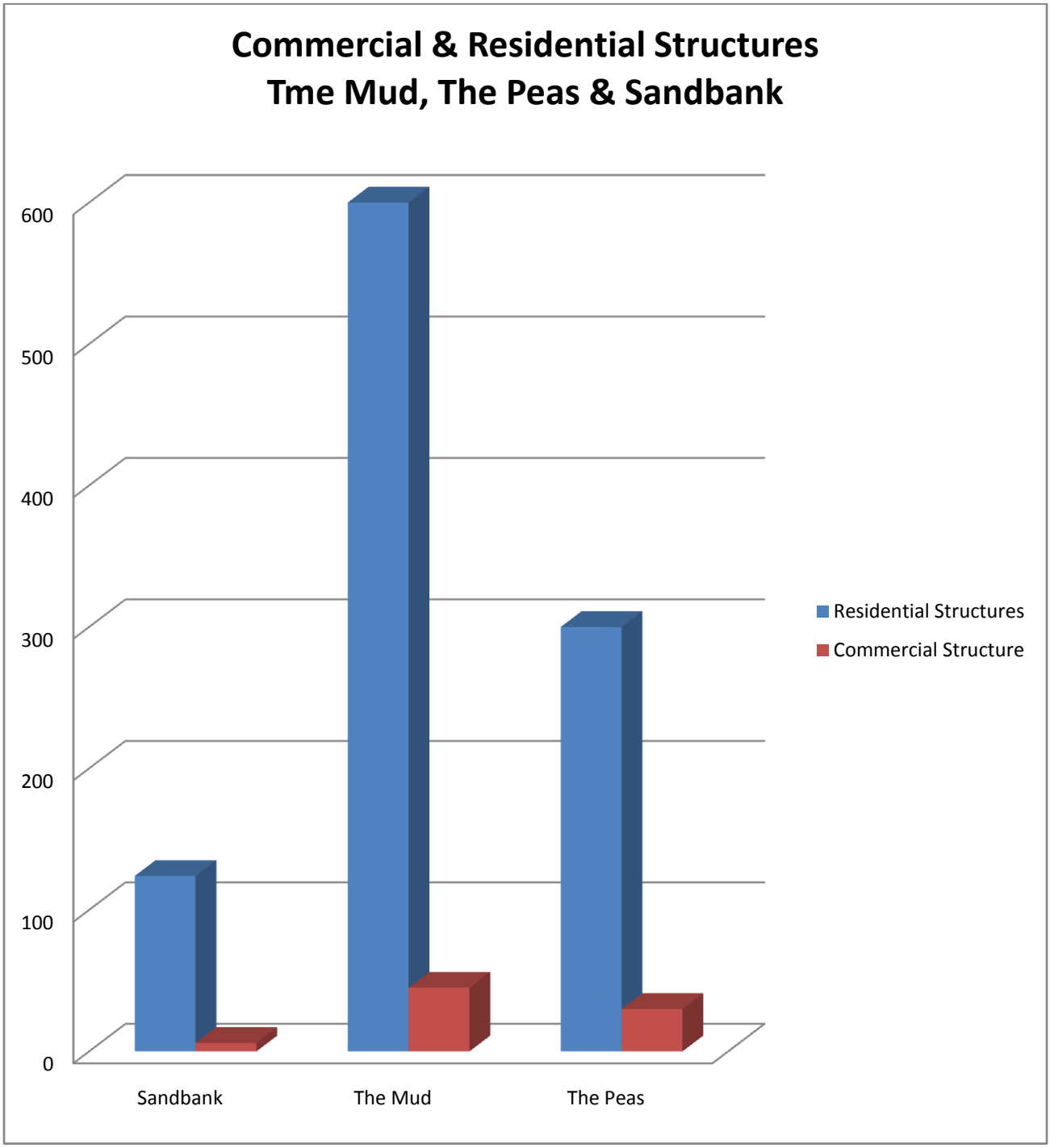
Sanitary Facilities

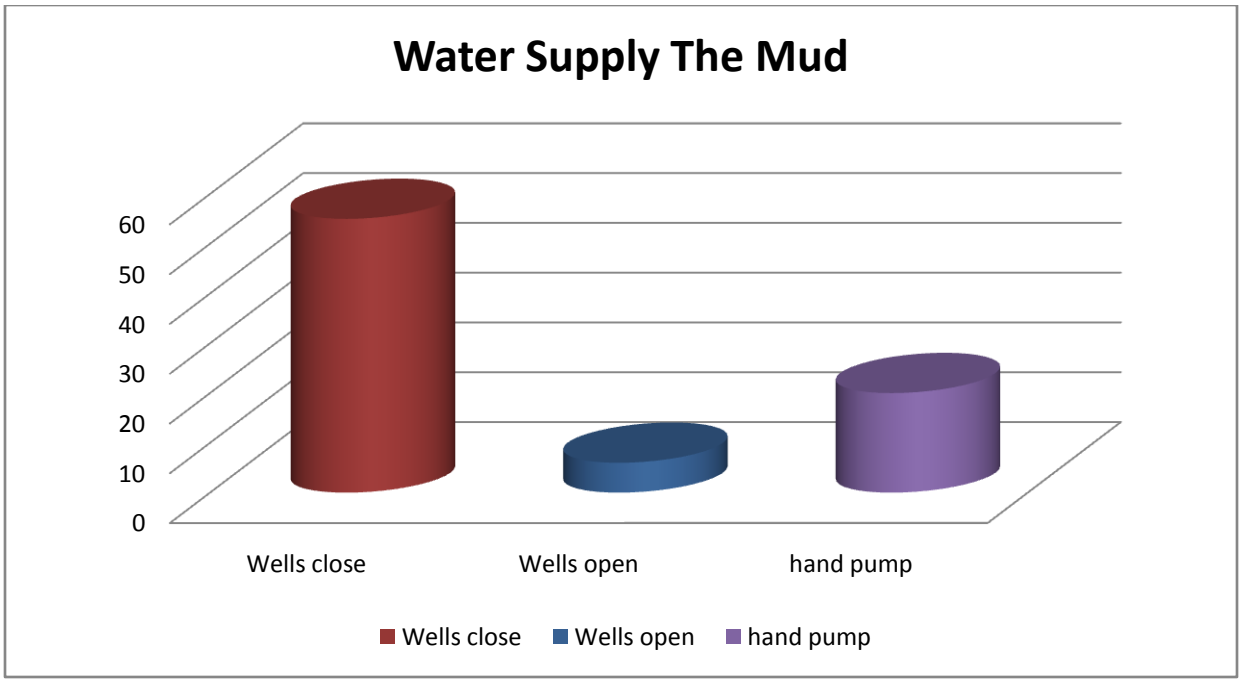
a) Septic tanks – 100
b) Privy Closet – 6

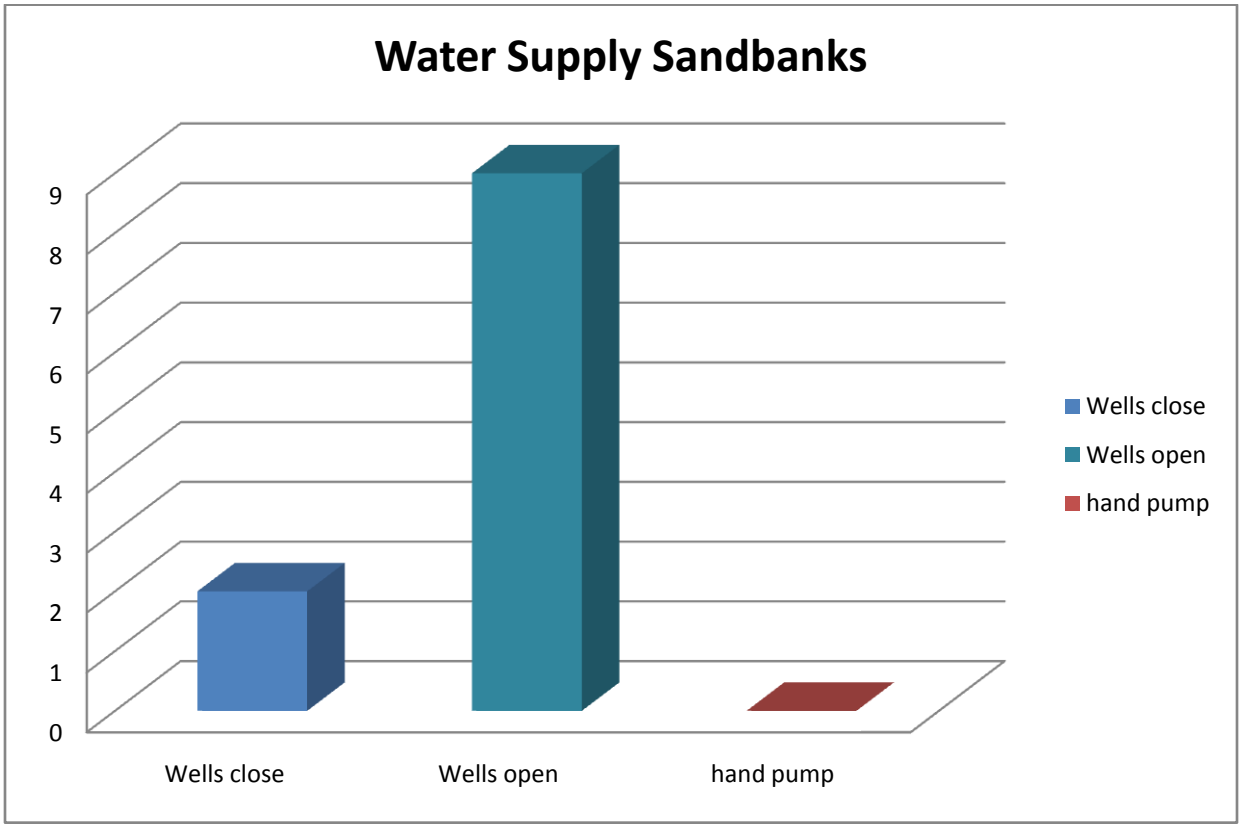
Buildings

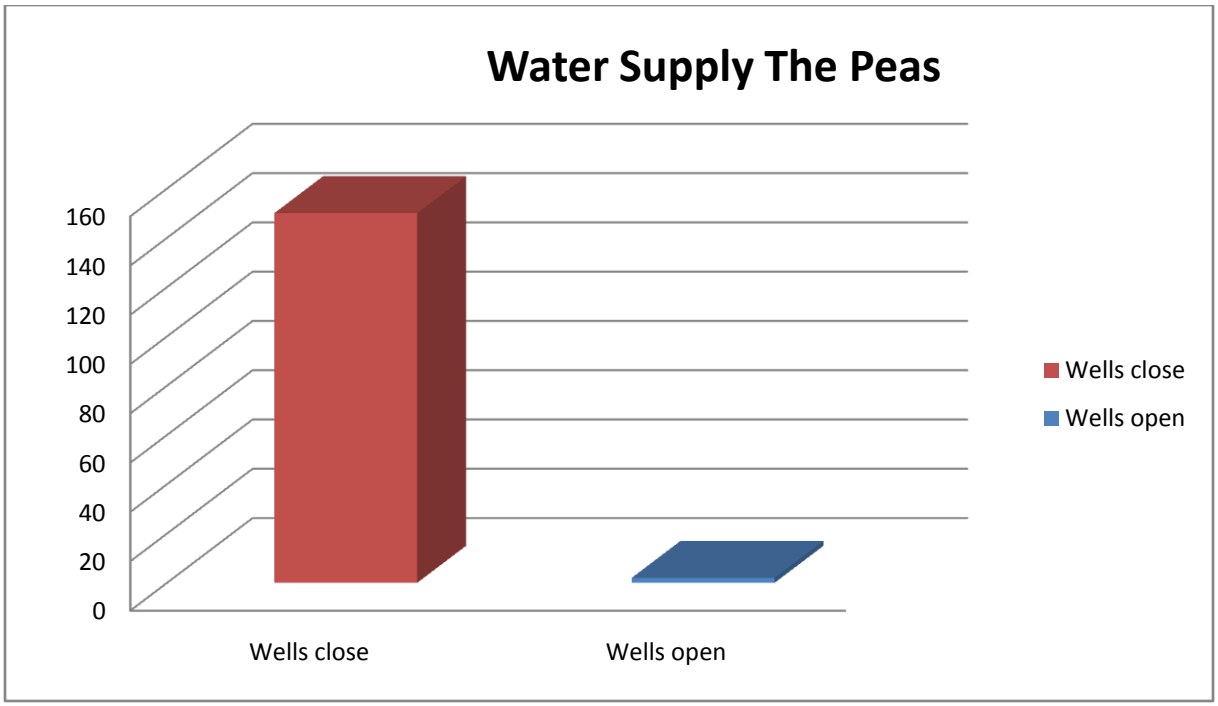
a) No. of Homes/Residents – 600
b) No. of Commercial shops – 45

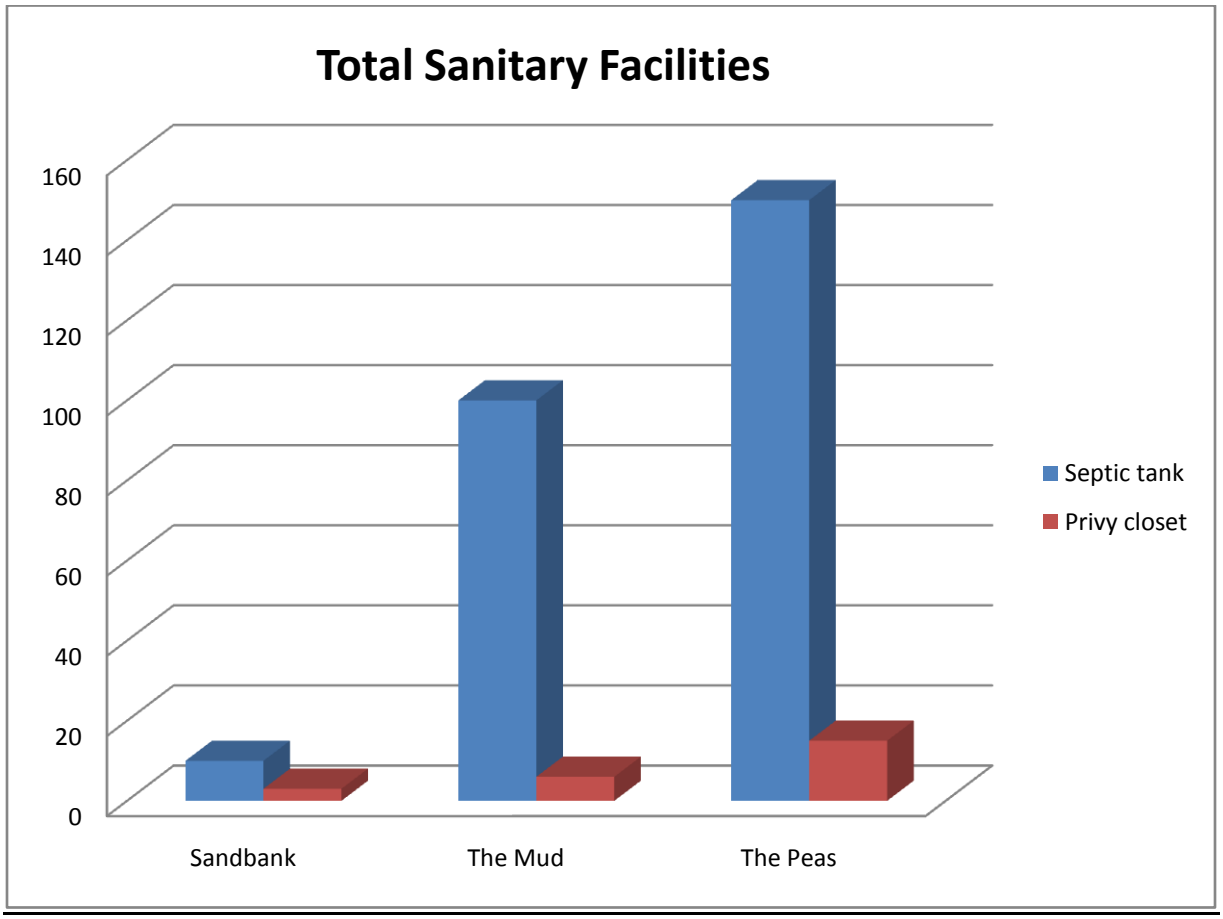
Derelict Vehicles – 68


Commercial & Residential Structures
Tme Mud, The Peas & Sandbank
600
500
400
300
200
100
0
Sandbank
The Mud
The Peas
Residential Structures
Commercial Structure


Water Supply The Mud
60
50
40
30
20
10
0
Wells close
Wells open
hand pump
Wells close
Wells open
hand pump


Water Supply Sandbanks
9
8
7
6
5
4
3
2
1
0
Wells close
Wells open
hand pump
Wells close
Wells open
hand pump


Water Supply The Peas
160
140
120
100
80
60
40
20
0
Wells close
Wells open
Wells close
Wells open


Total Sanitary Facilities
160
140
120
100
80
60
40
20
0
Sandbank
The Mud
The Peas
Septic tank
Privy closet

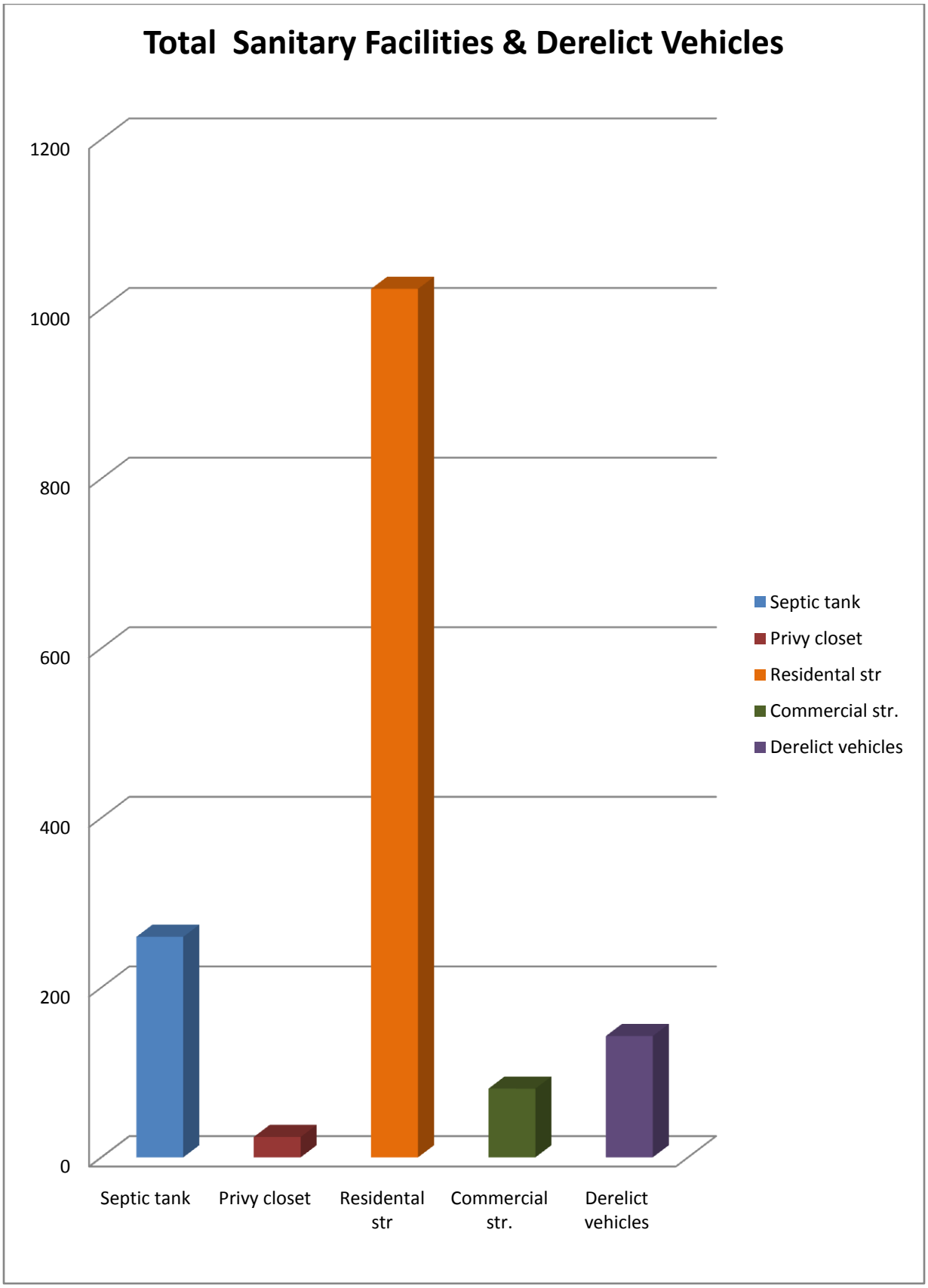

Total Sanitary Facilities & Derelict Vehicles
1200
1000
800
600
400
200
0
Septic tank
Privy closet
Residental str
Commercial str.
Derelict vehicles
Septic tank
Privy closet
Residental str
Commercial str.
Derelict vehicles

Photo of Towns