



Spanish Town

Annual Report



Constant Spring Road/Shortwood Road



East Kings House Road

2005 - 2006

Our Vision...

The National Works Agency will create a world class safe, quality main road network meeting the needs of our clients in the towns, community and districts where they vacation, work and live.

Our Mission...

To plan, build and maintain a reliable, safe, and efficient main road network and flood control system which:

Protects life and property

Supports the movement of people, goods and services.

Reduce the cost of transportation

Promote economic growth and quality of life.

Protects the environment.

Our Values...

We believe that our principal strength is our people and that our success will depend on our ability to provide them with the tools and the environment to allow them to excel.

We demonstrate trust and respect for each other, our partners and stakeholders through open and honest communication.

We respect the values, principles and opinions of the public as they help define our goals and evaluate our performance.

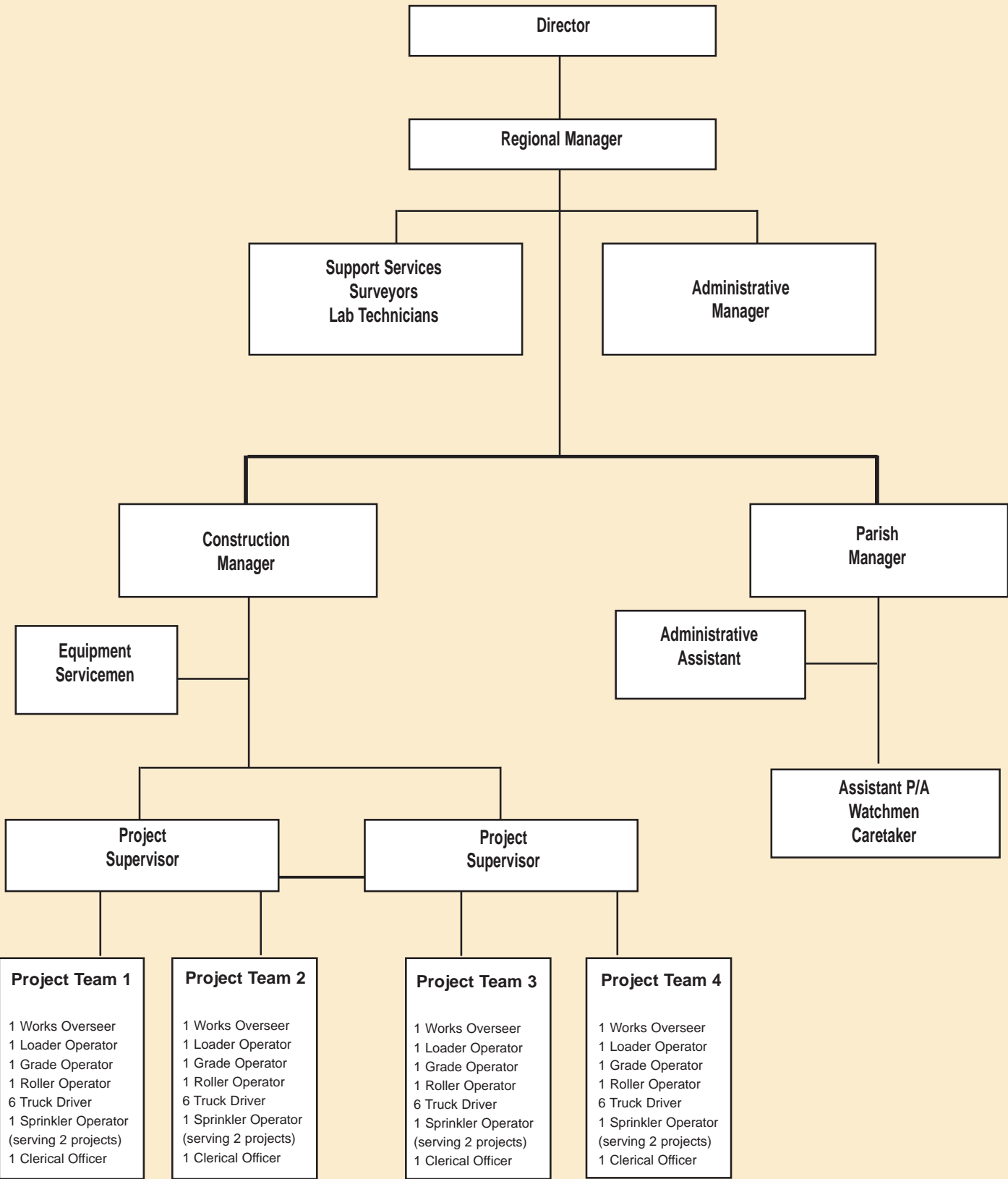
We continuously strive for excellence, quality service, value for money, fiscal prudence, flexibility, creativity and innovation.

We commit to treating all persons with whom we come in contact fairly and without regards to their sex, race, religion, political affiliation or the community to which they belong.

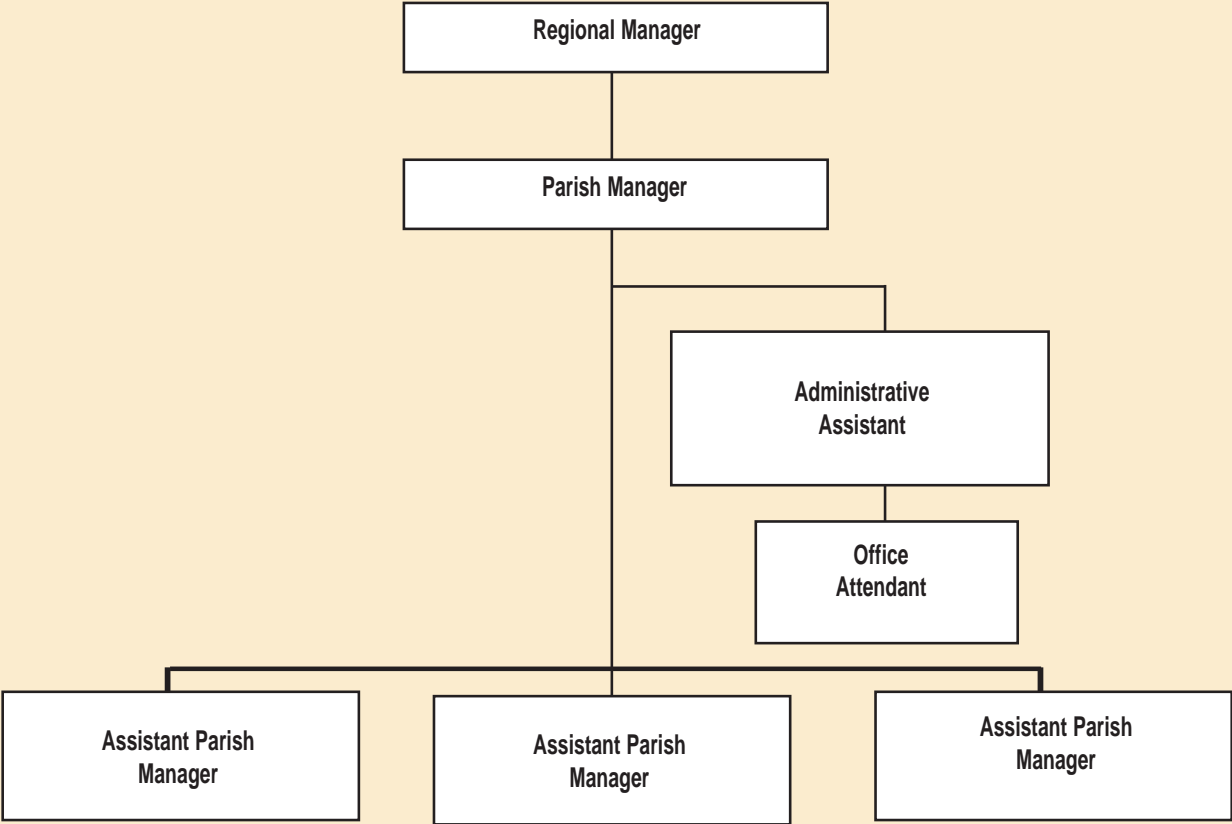
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Typical Regional Structure



Typical Parish Structure



Perspective

Hon. Robert Pickersgill
Minister of Transport & Works



Any organisation that has survived to see its fifth year of existence could quite rightly be described as having overcome the inevitable teething pains associated with the establishment and early growth of a new entity.

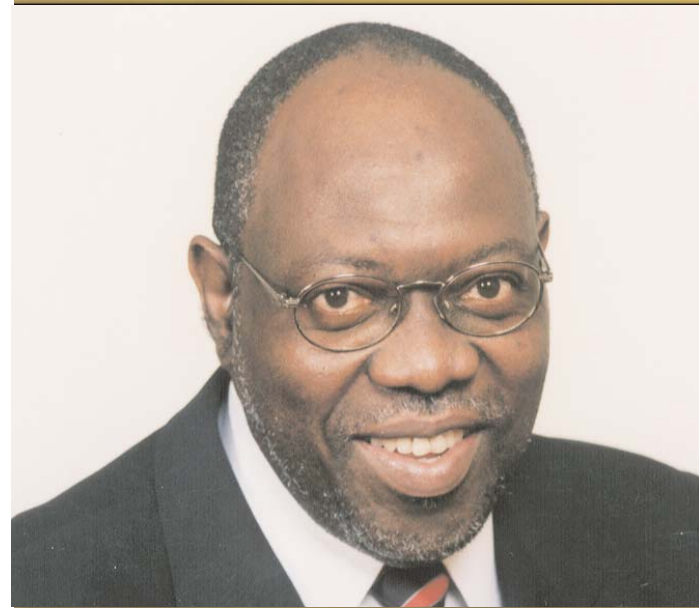
The National Works Agency (NWA) has emerged after five short years of existence to be a household name as far as being gatekeepers of the island's infrastructural network is concerned. Not only in this department is the work of the NWA evident, but also in other areas such as river training, sea defence and traffic management.

During the financial year 2005/2006, various major projects for which the Agency has responsibility continued to make progress. Segment Two of the Northern Coastal Highway Improvement Project is well underway and currently, the section between Falmouth and Ocho Rios is approximately 85% complete and is scheduled for a November completion date. Work on Segment Three which will run from Ocho Rios to Port Antonio, commenced in January and is proceeding full steam ahead. Other projects undertaken by the Agency included the Barbican Road/Russell Heights and the East Kings House Road/Barbican Road Intersection Improvement projects. Both projects entailed the widening of the roadway to accommodate two additional lanes of traffic, as well as improved drainage. Additionally, the intersections have been signalised to facilitate a smoother flow of traffic and the safety of pedestrians.

The Agency was also very active during the times of disaster such as flooding and damage experienced as a result of hurricanes. In fact, the Agency played a pivotal role on the national disaster response committee chaired by the Most Honourable Prime Minister.

The Agency continues to take its role of providing safe and efficient roads and other infrastructural amenities seriously. To that end billions of dollars have been spent to ensure that citizens of this country and indeed all those who have reason to use such facilities, are accorded the best there is. Not only that, care has been utilised in employing high calibre staff to carry out the mandate of the Agency so that the claim of having first world standard facilities will become a reality in the near future.

As the Minister with portfolio responsibility, I wish to congratulate the Agency on the publication of another edition of its Annual Report. I take this opportunity to laud all those involved in the work of the Agency and remind them to continue the thrust of achieving and maintaining standards of which we can all be proud.



Perspective

Hon. Dr. Fenton Ferguson
**Minister of State,
Ministry of Transport & Works**

Recognising the achievements of the National Works Agency during the past year is for me a distinct privilege. This organization, for which I have had responsibility since the Parliamentary Year 2002/2003 until recently, has experienced many challenges. It has overcome these challenges and has developed as an effective entity.

While recognising the challenges and achievements of the past, it is an occasion to look ahead at implementing other projects and measures that will further enhance the fulfilment of its mandate. The country has experienced several disasters during the past year to which the Agency responded commendably.

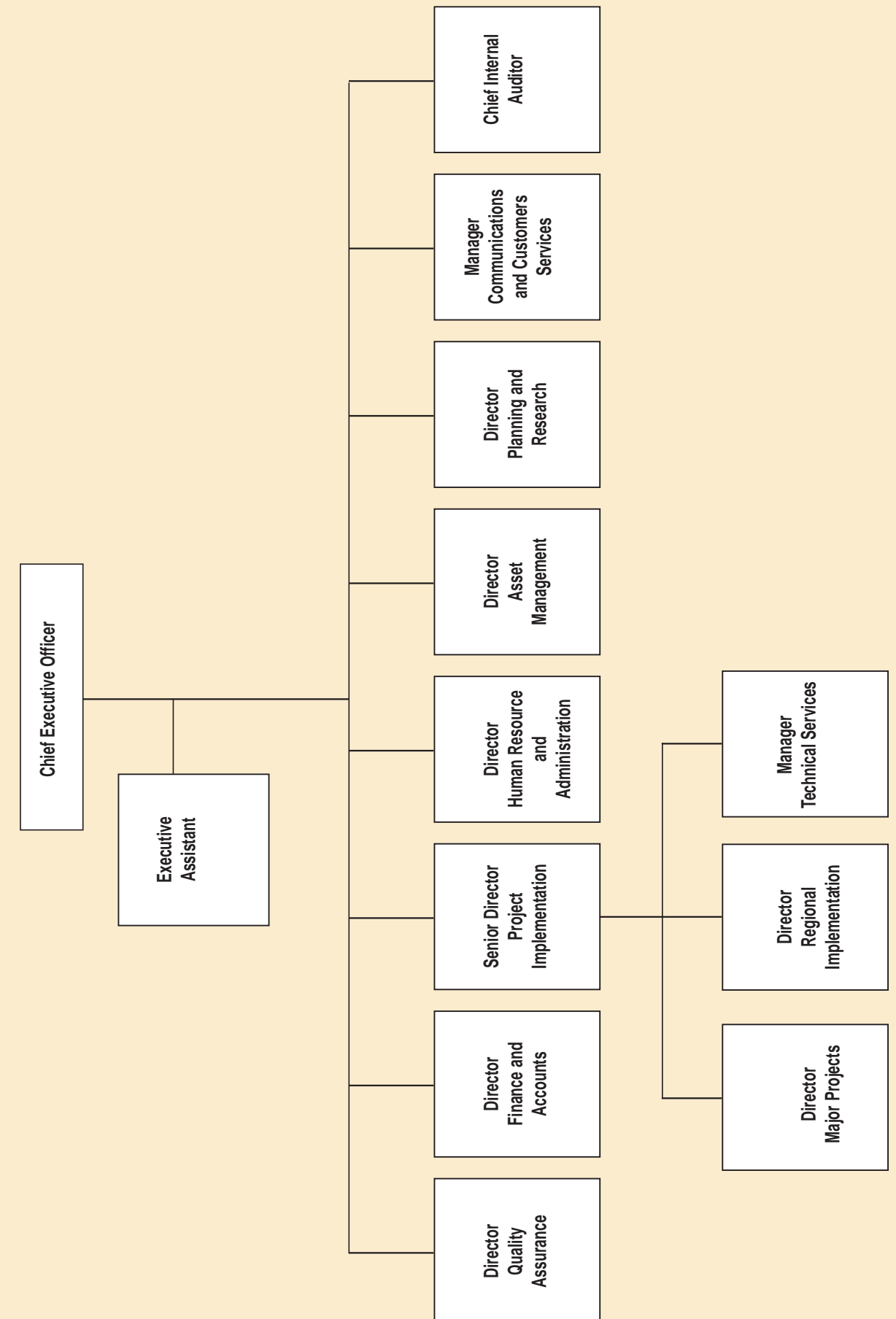
Floods, hurricanes, breakaways and landslides were the dominant features of these responses. Hurricanes Michele, Charley, Ivan, Emily, Dennis and Wilma stretched the Agency and its resources to their limits. Despite this, the Agency and its capable staff responded with distinction to these challenges. During the last year there were many important achievements including the commencement of the \$5.6-billion Segment Three of the North Coast Highway Improvement Project, from Ocho Rios to Port Antonio; the commissioning of traffic signals in Spanish Town and improvement of the Constant Spring/Shortwood Roads intersection.

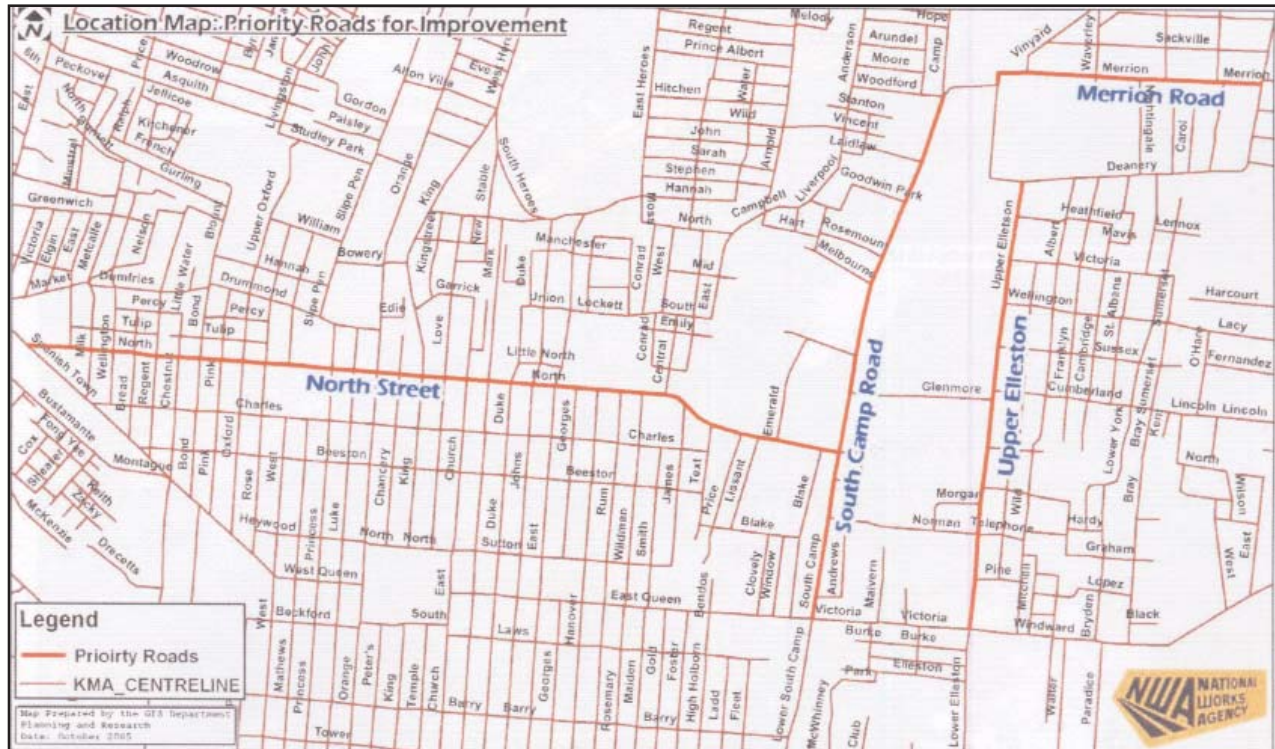
Considerable strides were made during the year, however there is more to be done. The Agency has developed a corporate plan which will serve the organization well in the short, medium and long terms. The Agency must continue to build on the positive achievements. More roadways must be rehabilitated, gullies cleaned and bridges repaired or rebuilt.

The core function of an Agency such as the NWA is service to its major customers - motorists and pedestrians. To the team at the NWA, the contractors, the many other road users/customers and my colleagues in the political sphere, I wish to say thanks for your patience, understanding and support.

While there is more for the Agency to achieve and while there is much more work to be done, it is my hope that the next five years will be even more rewarding, as the National Works Agency continues its mission to build Safe, Reliable and Quality Roads for all Jamaicans.

ORGANIZATIONAL CHARTS





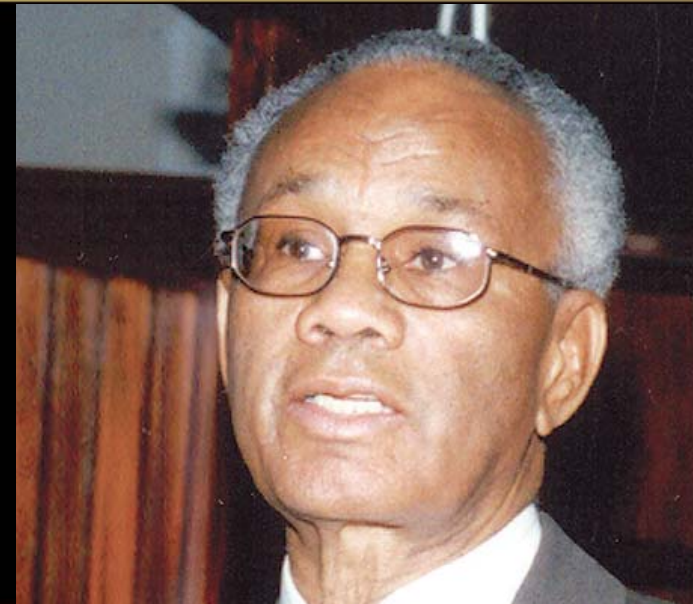
Priority Roads for improvement Kingston and St. Andrew



Priority Intersections for Improvement- St. Andrew

Perspective

Dr. Carlton Davis
Cabinet Secretary



The National Works Agency continues to justify the faith that was invested in it when it was created as an Executive Agency. The Organization has performed well despite the severe challenges posed by the adverse weather conditions the island has experienced over the last few years.

From all reports the organization has the attributes of an esprit de corps, greater transparency in its operations and much improved communication with the public.

There is, of course, much to do; and it goes without saying that the financial resources are very limited indeed. So the organization has to do its best to get as much “bung for the buck” as possible.

It has demonstrated over time that it is up to the task.

I with the organization well.



Perspective

Mr. Milton Hodelin
Chief Executive Officer

The National Works Agency, over the Financial Year 2005/2006, made significant strides towards its mission to Develop Safe, Reliable and Quality Roads. We undertook and completed a number of projects aimed at improving poor road conditions across the island.

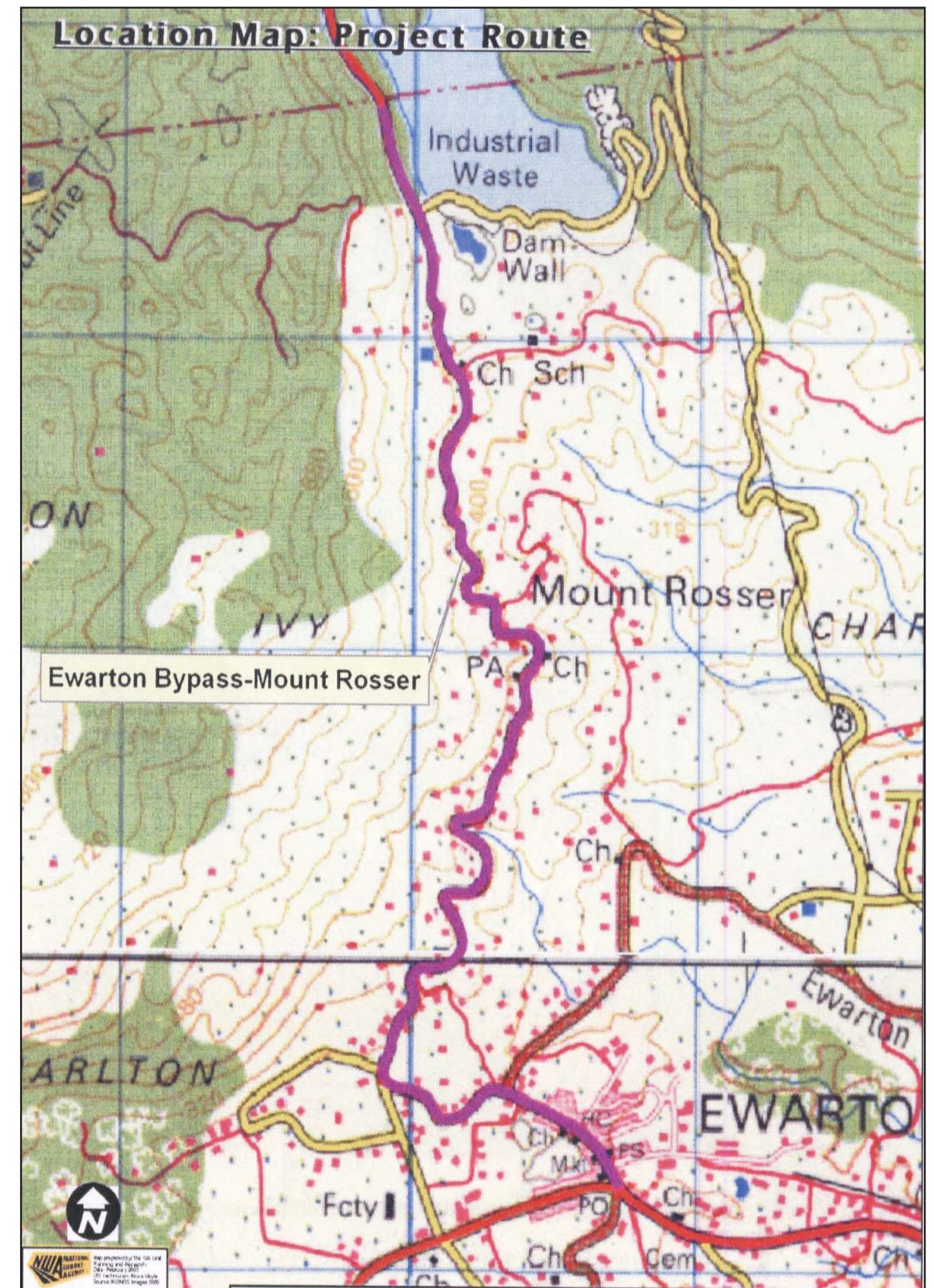
Our endeavours were not without impedance, however. The year in review was a challenging one. The island was hit by three (3) hurricanes in rapid succession. This resulted in flood rains that reached record proportions. The road network suffered tremendously, sustaining damage that amounted to some J\$5.77-billion. Nonetheless we were relentless in our drive to halt the bad road conditions prevailing on the island's road network.

With well over 400 reported cases of damage to the island's roads and their infrastructure, resulting from the 2005 hurricanes (Dennis, Emily and Wilma), the Agency's human and material resources were tautly stretched. However, the Agency responded estimably, moving promptly to address all reported cases of damage in record time.

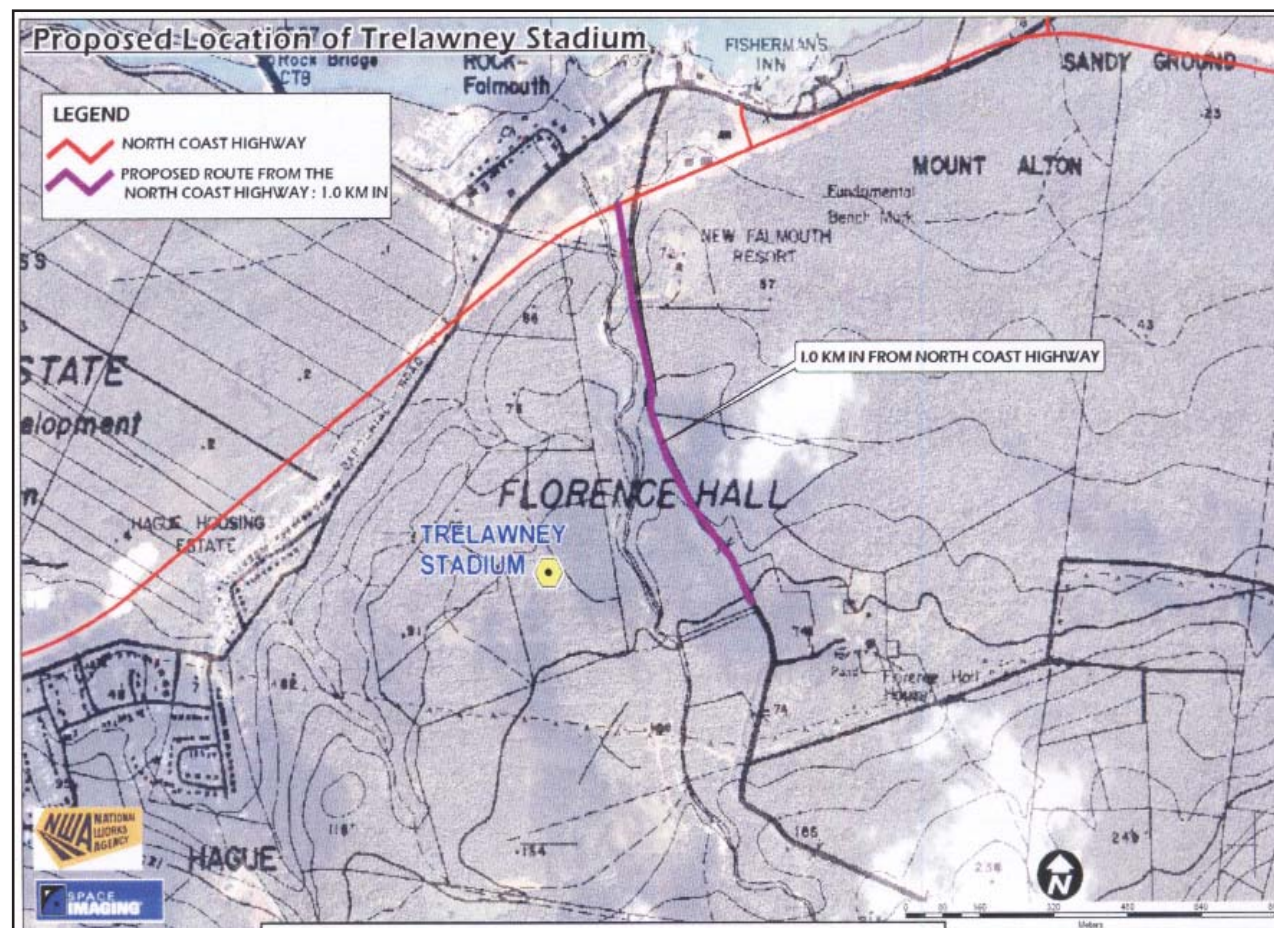
Our commitment to improve the main road network was continuously upheld throughout the fiscal year. A total of 668,264m² of roads were patched island-wide, via our in-house Spray and Hot Mix Patching Programmes, as well as our Microsurfacing and Patching By Contract Programmes. A further 178 kilometres of roads was repaired under the Inter-American-Development Bank (IADB) Flood Damage Rehabilitation Programme.

A total of nineteen (19) roads, spread across the island, were rehabilitated under our Special Flood Damage Programme and the Caribbean Development Bank (CDB) Flood Damage Rehabilitation Programme.

We also embarked on a Road/Intersection Improvement programme, under which we improved a number of urban and rural roadways and intersections. These included corporate area improvements at the Constant Spring Road/Dunrobin Avenue and the Constant Spring Road/Shortwood Road Intersections; Port Royal Street and Half Way Tree Road and its environs. We also started improvement works at the Barbican Road/Russell Heights Intersection and have done substantial work on East Kings House Road. Improvement works were also completed on the Stony Hill to Tom's River main road, in upper St. Andrew; the Spanish Town Bypass, in St. Catherine; and the Torrington to the Galloway and Truro Gate to Locust Tree main roads, in Weswtmoreland, through financing by the Kwaiti Fund.



Project Route Ewarton Bypass - Mount Rosser



Proposed Location - Trelawny Stadium

Under our Flood Mitigation (Drain) Programme, we completed long awaited repairs to the Three Miles River Road, in Westmoreland, as well as sections of the Sandy Gully in St. Andrew. We also restored the Roselle Main Road (Yallahs to Morant Bay), in St. Thomas, which was extensively damaged by Hurricane Ivan in 2004.

We carried out cleaning/de-silting activities on a number of rivers, including the Bull Park and Chalky Rivers at Nine and Ten Miles, the Westphalia (Robertsfield) River, and the Mahogany Vale River, in St. Andrew. The Morant Johnson River and the Yallahs River, in St. Thomas as well as the Montego/Irwin River in St. James were also de-silted.

We executed Training works at the Danvers Pen/Johnson River, the Morant River, Plantain Garden River, and Yallahs Rivers, in St. Thomas; and the Tangle River in St. James. The Flood Mitigation (Drain) Programme also saw to the substantial restoration of the Worthy Park Bridge, in St. Catherine and the Alley Bridge in Clarendon, which were ravaged by hurricane Wilma, in 2005.

Under our IADB Support for Hurricane Ivan Works Programme, we targeted sixty-one retaining walls for repairs, across the island and were successful in completing 88% of these. In addition, we have developed a Critical Retaining Wall Programme, under which we targeted over eighty retaining walls islandwide, for restoration/construction. We expect to execute these works in the next fiscal year.

We started Segment Three of the Northern Coastal Improvement Project, a 97km stretch of roadway, linking Ocho Rios, St. Ann to Port Antonio, Portland. The completion of this project, which is expected in June 2008, will facilitate greater efficiency in the movement of people, goods and services between these townships and of course between the urban city and the townships along the North Coast.

I must mention, as well, our commissioning, in March 2006, of the first set of state-of-the-art traffic signals in Spanish Town, St. Catherine, marking a historic event for the parish capital.

Indeed, the NWA has made considerable progress over the last fiscal year, notwithstanding the many obstacles that were encountered. This has given us the impetus to strive for continuously greater progress towards the accomplishment of our Mission, in the next fiscal year.

2005 - 2006 Performance Indicators & Targets

APPENDICES

MAPS

NETWORK ANALYSIS - WORLD CUP CRICKET 2007
PROPOSED TRAFFIC CHANGES/INTERSECTION IMPROVEMENT



Park and Ride Locations, St. Andrew

| Strategic Objective | Indicators | Weighting | Target |
|---|---|-----------|--|
| 1. Safety | Arterial roads blocked as a result of hurricane/heavy rain activities reopened | 10 | Response Team mobilised immediately after passage of storm and roads reopened within 7 days of dispatch |
| | Flood damage assement completed | | Preliminary Budget Assessment for clearing and reopen- ing of roads available within twenty (21) days after pas- sage of event |
| | Emergency restoration works com- pleted | | Restoration works commenced within 8 weeks of approval of funding and completed within specified timelines |
| | Project proposal for major restoration works submitted | | Cabinet Report/Submission proposal sent to Ministry with- in thirty (30) days after event including clearing and reha- bilitation of roads |
| | Number of accidents at "black spots" reduced | | Action Plan for 2 priority "black spot" locations submitted for funding approval December 2005 |
| 2. Reliability/ Availability of the Network | Employee safety measures in place | 50 | All supervisors and spray patching crews provided with safety gear |
| | | | Four (4) Safety Workshops conducted |
| | | | Contract Safety Manual/Specifications implemented |
| | Maintenance Annual Roughness Survey to deter- mine the condition of the entire main road network completed. | | Survey completed for 3,000km and baseline data avail- able within the RMMS by March 2006 |
| | Routine Maintenance contracts car- ried out along the entire network | | Stage 1 NRSIP contracts awarded by October 2005 for the following five (5) Parishes: St.Catherine (305 km); Westmoreland (339 km); St. Thomas (363 km); Portland (295 km); Manchester (420 km) |
| | Other maintenance activities in place | | Remaining nine (9) parishes covered under thirty-six (36) Interim Maintenance contracts by September 2005 |
| | On-going inspection of critical bridges | | 488,000 sq. m of patching completed (Spray Patching and Hot Mix) |
| | Enhanced Weigh Scale Programme | | Inspection Report for 50 bridges submitted to Ministry |
| Road Rehabilitation/ Improvement | | | Routine repairs/maintenance completed on five (5) bridges |
| | Segment 1 | | Introduction of weight in motion technology by December 2005 and procurement of additional weigh scales complet- ed by end of the financial year 2005/2006 (under NRSIP) |
| | | | Outstanding contracts final accounts and payments com- pleted by end of the financial year |

| 2005 - 2006 Performance Indicators & Targets | | | |
|--|----------------|--------------------|--|
| Achievements | | | |
| GoJ TBD | IDB | Other | |
| TBD | | | |
| TBD | | | |
| TBD | | | |
| Internal | | | |
| Internal | | Subject to Funding | |
| Internal | | Subject to Funding | |
| Internal | | | |
| TBD | | Subject to Funding | |
| 153,950,000.00 | 180,720,000.00 | | |
| 123,000,000.00 | | | |
| 109,000,000.00 | | | |
| Internal | | | |
| | | Mabey & Johnson | |
| 1,302,000.00 | 3,038,000.00 | Subject to Funding | |
| 70,000,000.00 | | | |

2005 - 2006 Performance Indicators & Targets

| Strategic Objective | Indicators | Weighting | Target |
|---------------------------|---|-----------|---|
| | Segment 2 - Section 1 | | Contract Awarded December 2005 |
| | Segment 3 North Coast Highway contract signed | | Work commencing in accordance with work plan |
| | <i>Reduction of congestion</i> | | |
| | Congestion along three (3) major corridors reduced | | Completion of RMF funded Corporate Area Improvement Programme (CARIP) works : East Kings House (September), Russell Heights/Barbican Road (September) intersections and Constant Spring/Dunrobin (December), Shortwood/Constant Spring (August) |
| | <i>Flood Mitigation</i> | | |
| | Flood Mitigation works commenced | | Execution of mitigation programme as per work schedule |
| | <i>Hurricane Dennis/Emily Rehabilitation</i> | | |
| | Commence construction of areas damaged to restore access in those areas which still have no access, in keeping with budget approval | | Wakefield - Hardware Gap Guava Ridge - Mahogany Vale Trinitiville - Mt Vernon Windsor Forest - Arntully Citron Valey - Barrowfield Hall Head - Morant River Bridge Bull Savannah - Spring Ground |
| | Commence construction of critical walls and other works in keeping with programme and approved budget. | | |
| | | | |
| 3. Efficiency | Increase the % of projects delivered within budget and on time | 5 | Strategies to reduce cost and time overruns on projects implemented by end of the financial year |
| | | | Enhanced quality assurance processes in place by end of the financial year |
| | | | Six (6) training sessions held for staff and contractors |
| | | | Revised/Standardised Manuals available by end of the financial year |
| 4. Development and Growth | | 5 | Commencement of the NRSIP Institutional Strengthening consultancy by December 2005 |
| | Post Project Audit criteria | | Post Project Audit criteria available and audits completed on Segment 1 and Section 1 of Segment 2 |
| | Right of Way Management criteria | | Management Procedures for excavations (road cuts) by utility companies and encroachments by private interests revised and implemented by December 2005 |

FINANCIAL STATEMENTS AND SALARY SCALES

| Resources Available | Resources Available | Resources Available | Achievements |
|---------------------|---------------------|---------------------|--------------|
| 540,200,000.00 | | | |
| 16,003,940.00 | | | |
| 25,000,000.00 | | | |
| | | Subject to Funding | |
| | | Subject to Funding | |
| Internal | | | |
| Internal | | | |
| Internal | | Subject to Funding | |
| Internal | | | |
| 18,600,000.00 | 43,400,000.00 | | |
| Internal | | | |
| Internal | | | |

2005 - 2006 Performance Indicators & Targets

| Strategic Objective | Indicators | Weighting | Target |
|---|---|-----------|---|
| 5. Environment | On-going Monitoring Programme | 5 | Semi-annual Monitoring Reports covering: Segment 2, NRSIP contracts submitted to Ministry |
| 6. Communication and Customer Services | Improved customer relations and satisfaction levels | 10 | Standarise satisfaction survey method utilised for all surveys by end of year; quarterly community/town meetings held; on-going radio programmes and news releases etc. Increase public awareness of issues affecting the road network e.g. overloading, inadequate funding for routine and periodic maintenance Make payments on outstanding certificates to contractors |
| 7. Development a cadre of high quality people | On-going Training & Development Programme | 15 | Training delivered in accordance with funding available Increased employee empowerment |
| | On-going Recognition of High Performing Employees Programme | | Align corporate and individual goals within the Performance Management System Improve internal communications |
| | | 100 | Annual Report submitted to Ministry for previous year (2004-05) by the end of September 2005 |

FINANCIAL STATEMENTS AND SALARY SCALES

FINANCIAL STATEMENTS AND SALARY SCALES

2005 - 2006 Performance Indicators & Targets

| Resources Available | Resources Available | Resources Available | Achievements |
|---------------------|---------------------|---------------------|--------------|
| Internal | | | |
| Internal | | Subject to Funding | |
| Internal | | | |
| Internal | | Subject to Funding | |
| Internal | | | |
| Internal | | | |
| Internal | | | |
| Internal | | | |
| Internal | | | |

THE NATIONAL WORKS AGENCY’S (NWA’S) SENIOR
MANAGEMENT TEAM



MILTON HODELIN
Cheif Executive Officer



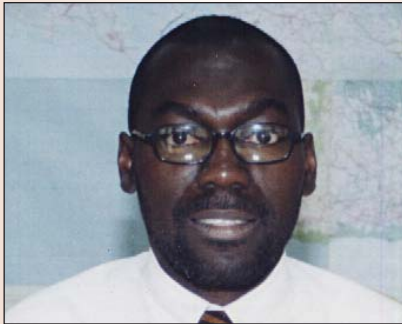
EARL PATTERSON
Senior Director - Project
Implementation



ELAINE NEITA
Director - Finance and Accounts



STEPHEN SHAW
Manager - Communications
and Customer Services



AINSWORTH SAVAGE
Cheif Internal Auditor



JENNIFER HENRY
Director - Human Resource
Management and Administration



JOHN WRIGHT
Act. Director - Major Projects



PATRICK ROSE
Director - Planning and
Research



RICHARD McHARGH
Act. Director - Regional
Implementation



ROGER SMITH
Manager - Technical Services



WAYNE ANDERSON
Director - Asset Management



YVETTE CASTELL
Director - Quality Assurance

FINANCIAL STATEMENTS AND SALARY SCALES

REGIONAL IMPLEMENTATION

The National Works Agency (NWA), through its Regional Implementation Directorate, employed a number of road management strategies during the Financial Year (FY) 2005/2006, in continuation of its efforts to improve and maintain Jamaica's main road network.

In seeking to alleviate the poor road conditions which prevailed across the Island, the Agency, over the last fiscal year, embarked on a rigorous thrust to impound this condition, in every parish, and by intensifying this endeavour, restarted the in-house Hot Mix Patching Programme to supplement it’s in-house Spray Patching Programme.

(In-House) Spray Patching Programme

Under this programme, the Agency targeted a total of 235,746m² of roads to be repaired islandwide, via spray patching, and realized one hundred per cent (100%) successful, at a competitive cost.

(In-house) Hot Mix Patching Programme

The Agency targeted a further 125,783.76m² of roads across the island to be patched in-house, using Hot Mix. Its performance in this activity was as well, one hundred per cent (100%) successful.

INTERIM ROUTINE MAINTENANCE PROGRAMME

During the year in review, the NWA implemented an Interim Routine Maintenance Programme which provided for the award of three-month contracts to conduct basic maintenance works, such as bushing and draining cleaning, in all parishes. This programme was executed via two (2) components, one being the Bushing and Draining Cleaning Programme and the other being the Patching by Contract Programme, which addressed those road sections which were not covered under the in-house Spray or Hot Mix Patching Programmes. These interim maintenance contracts are forerunners to the proposed three-year performance based contracts to commence soon.

Bushing and Drain Cleaning Programme

The Agency issued a total of fifty-five (55) contracts for both bushing and drain cleaning activities, islandwide. Of these contracts, ninety-two per cent (92%) of those issued for bushing was completed. Similar progress was made in the area of drain cleaning, where ninety-one per cent (91%) of the contracts issued were completed. This resulted in the Agency realizing an overall success of ninety-one per cent (91%), in these efforts, at a total cost of J\$57.2-million.

Patching (by Contract) Programme

This programme sought to address the poor road conditions which existed on the Agency's "A" roads (main, arterial roads), as well as on its "B" roads" (those which are less heavily trafficked but nonetheless link roads of regional importance to the main, arterial roads) and took into consideration, damage which was present prior to, as well as those arising as a direct consequence of, Hurricanes Dennis, Emily and Wilma, which occurred on July 6-8 , 2005, July 15-16, 2005 and October 13-20, 2005, respectively. The Agency, therefore, targeted a total 187,365m² of roads for patching by contract. Of this amount, 132,809m² represented additional quantities warranted by the passage of the hurricanes. At the end of the financial year, the Agency completed patching

on 127,604m² of the roads affected by the hurricanes, realizing a resolution of ninety-six per cent (96%). The Agency as well completed a further 53,346m², approximately ninety-eight per cent (98%) of the 54,556m² of "A" and "B" roads targeted for patching by contract, at the beginning of the reporting period.

MICROSURFACING PROGRAMME

Microsurfacing is a road repair process by which a slurry seal containing a special (polymeric) additive is used to reseal wearing courses. The Microsurfacing system is employed to restore surface elements of pavements to extend pavement-life. It may also be used for rut filling and to improve skid resistance. Microsurfacing can also be applied to concrete surfaces such as polished bridge decks. Under this programme, the Agency targeted and repaired a total of 125,784m² of roads.

FLOOD DAMAGE (EMERGENCY REPAIRS)

The three (3) major disaster events which occurred in the forms of Hurricanes Dennis, Emily and Wilma, in FY 2005/2006, were accompanied by extensive rainfall. In fact, the rains which accompanied Hurricane Wilma, was reported by the National Meteorological Centre, to be unprecedented to Jamaica. The resultant flooding was devastating to the Island's road network, which sustained damage amounting to approximately J\$5.77-billion. The Agency expended a total of J\$851.7-million over the reporting period, to effect initial clean-up activities.

The Agency received a total of four-hundred and seventy-seven (477) reports of damage to roads and their infrastructure, islandwide and responded promptly to reinstate road sections across the island, in record time.

Of the three-hundred and twenty-eight (328) reports arising from Hurricanes Dennis and Emily, in excess of one hundred and forty (140) main roads were affected by landslides, flooding and other cases of damage. The following table highlights some of the areas which were most adversely affected:-

Damage - Hurricane Dennis and Emily

| Table showing areas that were severely affected by Hurricanes Dennis and Emily | | |
|--|---|--|
| ST. ANDREW | ST. THOMAS | PORTLAND |
| Guava Ridge - Mahogany Vale | Bethel Gap - White Ford | Seaman’s Valley - Mill Bank |
| Redlight - Hardwar Gap | Seaforth | Wakefield - Hardwar Gap |
| Silver Hill - Guava Ridge | Trinityville - Cedar Valley Main Road & the communities of Trinityville and Cedar Valley | Cascade |
| Mahogany Vale - Hagley Gap | Petersfield | Rio Grande - Hope Bay (at Rio Grande Bridge) |
| Mahogany Vale community | Coley - Lowe Mountain Penlyne Castle | ST. CATHERINE |
| Newcastle Westphalia and Halls Delight (Parish Council Roads) | Windsor Forest - Arntully Mount Sinai loop road | Bog Walk Gorge |

The Rio Grande Bridge in Portland, Danvers Pen Bridge in St. Thomas, Kintyre Bridge in St. Andrew, the Sandy Gully Bridge in Kingston, and the Johnson River Box Culvert and the Yallahs Ford in St. Thomas, were also extensively damaged.

FINANCIAL STATEMENTS AND SALARY SCALES

Damage - Hurricane Wilma
One hundred and Forty-nine (149) roads, islandwide, were affected by landslides, flooding, scouring and failure of retaining structures. The estimated cost of repair works was J\$2.5-billion. Four (4) parishes recorded the greatest damage to the road infrastructure. These were St. Thomas, Clarendon, St. Andrew and St. Catherine. The main corridors affected were the Yallahs Ford and the Trinityville to Cedar Valley main road in St. Thomas; the Bog Walk Gorge, in St. Catherine; the Mandela Highway, in Kingston; Marcus Garvey Drive, in the vicinity of Tinson Pen, St. Andrew; and the Chapleton Main Road, in Clarendon.

The White Hall to Comsee main road, in St. Elizabeth; the Worthy Park Bailey Bridge and the Bog Walk Bailey Bridge, in St. Catherine; as well as the Alley Bridge in Clarendon, also sustained extensive damage.

The Agency realized ninety-five per cent (95%) success in reopening the affected roads, to at least single-lane traffic, within two (2) weeks of the passage of Hurricane Wilma. By the end of the fiscal year, the Agency had addressed all four hundred and seventy-seven (477) reported cases of damage arising from the three (3) hurricanes which occurred in 2005.



Bog Walk Gorge, St. Catherine - part of road structure disappeared below water.

Hurricane Wilma - Damage Pictorial

*Marcus Garvey Drive
(vicinity of Tinson Pen)- Kingston*

*Alley Bridge
- Clarendon*

*Section
- Portland*

*Chapelton main road
- Clarendon*

*Trinity Ville to Cedar Valley
- St. Thomas*

*White Hall Comsee
- St. Elizabeth*

FINANCIAL STATEMENTS AND SALARY SCALES

FINANCIAL STATEMENTS AND SALARY SCALES

TECHNICAL SERVICES

The NWA, in acting on the need for improvement of the road network's infrastructure with special emphasis on bridges and retaining walls, had during the reporting period, completed designs for the rehabilitation and construction of a number of structures, islandwide. The Agency is aware of the impact that its construction activities can have on the environment. Being committed to at least reducing any negative impact arising from its operations, the Agency has incorporated environmental impact assessments into the design process for all structures on the road network.

Some of the designs completed over the reporting period were to be implemented, under the Priority Bridge Programme, Local Flood Damage Bridge Programme and the Critical Retaining Wall Programme.

PRIORITY BRIDGE PROGRAMME

Under the Priority Bridge Programme, the Agency completed designs and drawings for twenty-seven (27) bridges across the island.

LOCAL FLOOD DAMAGE BRIDGE PROGRAMME

The Agency completed further designs for the following bridges, under its Local Flood Damage Bridge Programme:-

- Alley Bridge in Clarendon - reconstruction designs for the two spans that were washed away during Hurricane Wilma in October 2005. Contract value: J\$35-million.
- Worthy Park Bridge #1. Design of Emergency shoring for collapsed foundation and protective works. Two contracts; J\$1-million (shoring) and J\$3-million (gabion protection).
- Worthy Park Ford Bridge #2. Design of new Compact 200 Bridge, approach road and river training. Bridge contract and expenditure was J\$14-miilioin and river training J\$6-million.
- Janga Gully Bailey Bridge in Portland. River training designs were also done. Construction cost was estimated at J\$15-million.
- Treasure Beach Drainage scheme design; Construction cost was estimated at J\$50-million.

CRITICAL RETAINING WALL PROGRAMME

Designs and drawings for eighty-two (82) retaining walls islandwide, were completed. The total construction cost was estimated at J\$352-million.

ENVIRONMENTAL MANAGEMENT

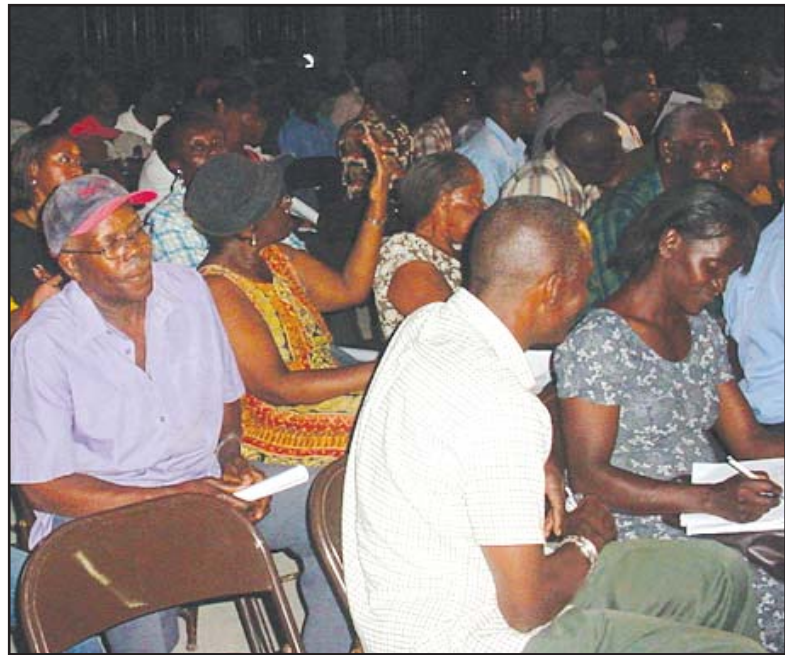
The National Works Agency is committed to developing and managing the road network in harmony with the environment, as well as contributing to the well-being of the community through the minimization of pollution, sustenance of eco-systems, conservation of cultural heritage and the enhancement of the amenity value of the environment. This commitment is further articulated in one of the Agency's environmental strategies expressed as follows:

"For an effective, environmentally sound road network, the National Works Agency will incorporate environmental considerations and community values and goals in every aspect of its decision-making, from early planning to operation and maintenance. The NWA will strive to become a leader among government agencies in carrying out an environmental ethic that encompasses the consequences of all its activities, internal as well as external."

All projects being undertaken by the Agency are covered under environmental guidelines that assign responsibilities to the Owner and Contractor to ensure that the aim, of the Agency is achieved, through rigorous implementation of mitigation activities. The following list comprises the areas which the Agency consistently monitors for construction and routine maintenance activities:-

- Dust control;
- Noise pollution;

- Surface water drainage and treatment from site facilities (workshops, asphaltic plant, concrete batching plant, crushing plant, fuel, oil, bitumen storage areas;
- Storage of materials (fuel & oil, fine materials, crushing & batching plants);
- Disposal of waste materials;
- Erosion and control of storm water;
- Liaison with National Heritage trust;
- Protection of Flora and fauna;
- Slope stabilization activities; and
- Community relations.



*Community members at the meeting in Yallahs, St Thomas -
Presentation of the findings done for the construction of a new bridge to replace the Ford
Environmental Impact Assessment Study - Yallahs Bridge Construction.*

Accomplishments

Over the fiscal year, the Agency was successful in carrying out the following activities:-

- Continued monitoring of Segment 2 of the North Coast Highway Improvement Project and commenced monitoring of Segments 2A and 3;
- Completed an inventory of flood prone areas along the Main Road Network;
- Reviewed and updated Disaster (hurricane) Response plans and procedures;
- Coordinated a Disaster Response Simulation activity for Regional and Parish Managers;
- Completed update of the Agency's Environmental Code of Practice and all other Environmental guideline documents for project development and construction;
- Prepared damage assessment reports for selected areas affected by flooding and break-a-ways (including Evergreen, Treasure Beach, Spauldings and Santa Cruz); and
- Reviewed over fifteen (15) Environmental Impact Assessments for development projects, such as housing, resorts, infrastructure and attractions.

FINANCIAL STATEMENTS AND SALARY SCALES

"Tree-mendous" Beautification: Adopt-a-Roadway Programme

The beautification of the island's roadways is important in asserting roads that denote world-class standard. The "Tree-mendous" Beautification: Adopt-a-Roadway Programme, officially launched by the Agency in 2004, with the sponsorship of five (5) corporate bodies, has, over the fiscal year, seen an increase in sponsorship of over one hundred per cent (100%), with a total of twelve (12) corporate entities now on board.



Area newly adopted by Co-operative Credit Union at Marescaux Road

MAJOR PROJECTS

SPECIAL FLOOD DAMAGE PROGRAMME

Flooding of the island's infrastructure has become a perennial problem. The road network has suffered greatly from flood damage, not only as a result of the passage of Hurricanes Dennis, Emily and Wilma, over the last fiscal year, but also from other disasters occurring over the last six (6) years. In an effort to arrest the continuing deterioration of the road network, the Government of Jamaica (GOJ), under the Special Flood Damage Programme, allocated a total of J\$2.5-billion in FY 2005/2006, for road repairs, as well as flood control and disaster mitigation works. These works covered islandwide drain cleaning and other flood control activities, construction of retaining structures and the rehabilitation of priority roads, which were damaged by flood events prior to the last fiscal year. This thrust will be continued in the next fiscal year (2006/2007).

The execution of the Special Flood Damage Programme is aimed at significantly improving the road network and protecting communities at risk from the ravages of further flooding. The following works were carried out, in 2005/2006:-

Road Rehabilitation

The Agency spent a total of J\$105,802,180, under the Special Flood Damage Programme, on the rehabilitation of the following road sections:-

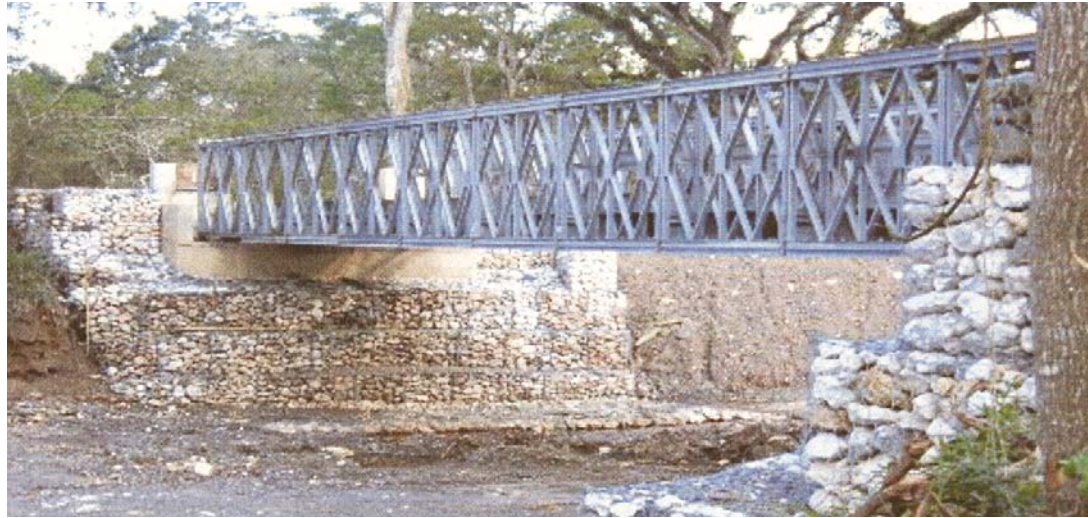
- Marcus Garvey Drive, Kingston;
- Spanish Town - Bog Walk, St. Catherine;
- Old Harbour Road - Sandy Bay, St. Catherine;
- The Mandela Highway, Kingston; and
- Four Paths to Whitney Turn, Clarendon.

The Agency has, as well, substantially completed rehabilitative work on the May Pen to Sour Sop Turn main road, in Clarendon. This being seventy per cent (70%) complete at the end of the fiscal year.

Bridge Repairs

Under the Special Flood Damage Programme, the Agency targeted five (5) bridges for repairs and at the end of the financial year, realized substantial completion on two (2) of these bridges. The following table illustrates:-

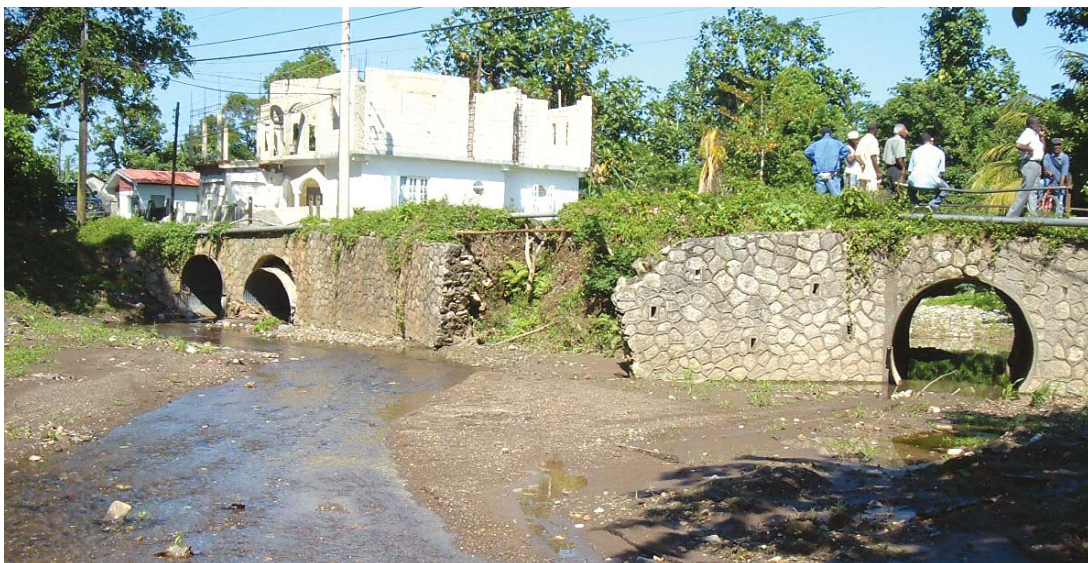
| Table showing status of repairs on targeted bridges | | |
|---|---|---------------------------|
| Bridge | % Status of Completion | Expenditure to Date (J\$) |
| Worthy Park Bridge - St. Catherine | 99% | 6,500,000 |
| Alley Bridge - Clarendon | 80% | 19,000,000 |
| Janga Gully Bridge - Portland | Work commenced within the last week of March 2006 | |
| Mahogany Vale - St. Andrew | Repairs under design | |
| Caenside Bridge - Portland | On hold due to budgetary constraints | |
| TOTAL | | 25,500,000 |



Substantial completion of restoration works on Worthy Park Bridge, St. Catherine



Work in Progress - Alley Bridge, Clarendon



Janga Gully in Portland - devastated by flood rains

COMMUNICATION AND CUSTOMER SERVICES

The NWA's rigorous Communication and Customer Services efforts to keep its customers informed about the Agency's operations and policies continued over the reporting period. The Agency believes that, not only does it have the responsibility to keep customers abreast of its activities but also to shape their attitude and behaviour towards the organization. The Agency values its customers, hence its quest to have them more involved in the planning and execution of its projects.

NWA's customers have become more sophisticated and some have partnered with the Agency in maintaining sections of roadways. This is an indication that the Agency's attempts at modifying behaviours, in respect of the maintenance and beautification of Jamaica's roadways, are bearing fruit.

Maintaining Strong Media Presence

Over the reporting period the Agency continued to disseminate accurate and timely information via news releases, public announcements, media advisories, newspaper articles, advertisements, and radio and television appearances. The Agency, through these and other programmes, such as, "On Our Roads with the National Works Agency", has maintained a stronghold in the media.

"On our Roads with the National Works Agency" Radio Feature

Through this programme, the Agency continued to highlight its islandwide activities. The programme also presented the Agency with a further opportunity to receive customer feedback on its various work programmes and projects, as well as provided customers with immediate, publicized responses to particular queries. Over the reporting period, the radio feature, "On Our Roads with the National Works Agency," was aired once weekly on RJR, Power 106, Hot 102 and, until February 2006, on KLAS FM89.

"One Road" Dedicated Customer Service Line

The Agency maintained its "One-Road" (663-7623) toll-free, dedicated Customer Service Line, which it had established in 2002 as a medium through which customers may put forward their concerns. Over the last fiscal year, this medium greatly increased contact between the Agency and its customers, providing an opportunity for the Agency to obtain invaluable customer feedback.

NWA's consistent contact with its customers, through its weekly radio feature and dedicated customer service line, was augmented by the representation of the Agency by team members, at regular meetings in various communities.



Meeting with the Disabled Community: A member of the disabled community (left) communicating in sign language to his peers during the meeting. Stephen Shaw (right), Communication and Customer Services Manager (NWA) listening to the concerns of the disabled community, regarding roads and sidewalks and how these affect their day to day lives.

MATERIAL TESTING AND ENGINEERING UNIT (MTEU) LABORATORY

The Agency's Soils and Materials Laboratory provided testing and consultative services on the following projects/programmes:-

Projects - Bridges:

- Flat Bridge - St. Catherine;
- Plantain Gardens, St. Thomas;
- Serge Island, St. Thomas; and
- Styxx River, Westmoreland.

Programmes:

- IADB Flood Damage;
- CDB Flood Damage;
- Hot Mix and Spray Patching; and
- Urban Traffic Management (Constant Spring Road).

Falling Weight Deflectometer

Falling Weight Deflectometer Studies were conducted for the following roadways:

- Hagley Park Road - St. Andrew
- Shortwood Road - St. Andrew
- South Camp Road - St. Andrew
- Twickenham Park, Jose Marti Round-about (Old Harbour By-pass) - St. Catherine

Pavement Thickness and Design

Pavement Thickness and Designs were done for the following roads in Kingston and St. Andrew:-

- Harbour Street
- Marcus Garvey Drive
- Dunrobin Avenue

Feasibility Studies

The following studies were conducted through the Agency's Quality Assurance System:-

- A feasibility study - for the MTEU's restarting of the Drilling Unit;
- Inspections - to facilitate the Petroleum Licensing Process; and
- Soil investigation and testing - for several landslides in various parishes.

INTERNAL AUDIT

During the last fiscal year, the Agency, through its Internal Audit unit, set out to conduct sixteen (16) internal audits, covering various aspects of the Agency's operations. Of this amount, eleven (11) scheduled audits were completed. Two (2) unscheduled audits were also done. This has resulted in an achievement of 81% of target.

In an effort to improve efficiency and effectiveness in the Agency's internal audit systems, a total of two hundred and forty-eight (248) man hours of training was undertaken.

FLOOD MITIGATION (DRAIN) PROGRAMME

A Flood Mitigation (Drain) Programme was implemented during the reporting period, to undertake flood mitigation works including river training, de-silting, and the cleaning of drains. The programme was executed in two phases, Phase One being implemented at a cost of approximately J\$25 million and Phase Two at approximately J\$100-million. The Agency expects to implement a Phase Three of this programme at a cost of J\$78-million, in the next fiscal year.

Road Repairs - Three Miles River Road

The Agency, as part of its flood mitigation effort, completed much needed repairs on the roadway in the community of Three Miles River. This road forms a section of the Goodens River to Glasgow main road in Westmoreland and was completed at a cost of approximately J\$5-million. The works included the construction of 305m of concrete drain and the lifting of the roadway, by over two feet.

The Agency is, as well, in the process of redesigning the existing bridge in the Three Miles River community, in order to accommodate the increase run-off that is expected on account of the completion of the drainage and road works.

FLOOD CONTROL

Repairs to the Sandy Gully

The Sandy Gully has suffered much damage over its lifetime and has deteriorated even further during the last fiscal year, with the passage of the three (3) hurricanes which hit the island in very close succession. Based on an assessment carried out by the NWA, the gully would require some J\$500-million to effect total repairs. With an allocation of J\$120 million, the idea of total repair was infeasible. The Agency chose four (4) sections, which it considered to be the worst, as the damage in these areas presented a threat to people's houses and other property. The areas covered the vicinities of Toronto Avenue/Queensbury/Roehampton; Sherlock Avenue; the Trade Centre/Blaise Industrial Park; and Halifax/Liguanea Preparatory School. The scope of works included the construction/ reinforcement of Random Rubble Gully Walls, and Concrete Inverts. Repairs were completed at a cost of J\$60 million. Another five (5) sections were identified for repairs in the next fiscal year (2006/2007).

De-silting of the Bull Park and Chalky Rivers at Nine and Ten Miles

Continuous silt deposits coming down from the Gypsum Plant located on the hill above the Nine and Ten Miles area, have over the years caused an enormous hoard of silt in the Bull Park and Chalky Rivers at Nine and Ten Miles, resulting in the rivers overflowing their banks whenever there is heavy rainfall such as that which accompanied the 2005 hurricanes. This situation had been a persistent problem for the residents of Nine and Ten Miles. The National Works Agency, in 2005, spent JA\$14-million to remove 200 cubic yards of silt from the river beds. This has given residents of the communities of Nine and Ten Miles, the relief they long sought. In continuation of the Agency's flood control efforts, further de-silting exercise is planned for these rivers in the upcoming fiscal year.

Other De-silting Activities

The Agency, over the reporting period, also carried out de-silting and restoration activities on five (5) other rivers, at a cost of J\$33-million. These included the Morant Johnson River/ Upper York Community and the Yallahs River (where ford was also restored), in St. Thomas; the Mahogany Vale River (where the ford was also restored) and the Westphalia (Robertsfield) River, in St. Andrew; as well as the Montego/Irwin River in St. James, where Gabion Protective Works were also carried out.

River Training

The Agency, under its Flood Damage Mitigation Programme, undertook training of five (5) rivers as well as the restoration of nearby roadways, at a cost of J\$103-million.

These included:-

- Johnson River/Danvers Pen, St. Thomas (also restored approach to Bridge);
- Morant River (below Seaforth), St. Thomas;
- Plantain Garden River, St. Thomas;
- Yallahs River, St. Thomas (also restored the Roselle Main Road - Yallahs to Morant Bay); and
- Tangle River, St. James (where the roadway is also being restored).

Critical Retaining Wall Programme

The NWA, under this programme will, during the next fiscal year, spend approximately J\$352-million to construct over eighty retaining walls in all parishes, except St. Elizabeth and St. James, for which no tenders were received. Included in this figure is a total of J\$120-million budgeted to carry out construction on critical walls in the Buff Bay Valley, Portland. The Agency will, as well, be concentrating its focus on other areas where breakaways have either become impassable or have reduced the roadways to single lane. Among the other areas that will be targeted is Lime Hall in St. Ann. Works will also be carried out on structures along the Newcastle and the Papine to Bull Bay main roads in St. Andrew, and the Lambkin Hill main road in St. Mary. Contractors have already been selected for over ninety per cent (90%) of these projects.

ROAD REHABILITATION PROGRAMME

Continuing works through its Major Projects Directorate, the Agency embarked on several road projects, under the Road Rehabilitation Programme, during the Financial Year 2005/2006. These included:-

THE KUWAITI FUND ASSISTED ROAD REHABILITATION PROGRAMME

Under the Kuwaiti Fund Assisted Road Rehabilitation Programme, the following projects were completed in St. Andrew and St. Catherine:-

i. Spanish Town Bypass - Twickenham Park to Old Harbour Road Roundabout (St. Catherine)

During the period under review, work was done on the main drainage structures and on some open drains, along the Spanish Town Bypass (Twickenham Park to Old Harbour Road Round-about), in St. Catherine. Traffic Management works as well as surfacing works, were also carried out. The works on this roadway were competed at a cost of J\$192-Million.



Re-surfacing works in Progress - Spanish Town Bypass, St. Catherine

QUALITY ASSURANCE

The National Works Agency's mission in the area of Quality Assurance (QA) is the consistent delivery of customer satisfaction by all employees, at all levels and in every function. In this regard, a number of activities were pursued and significant achievements made, over the period April 2005 to March 2006. These were as follows:-

ISO 9001 IMPLEMENTATION

ISO 9001 Implementation Action Plan

The Agency, through its Quality Assurance Directorate, developed an action plan which was aimed at ISO 9001 registration in December 2005. This was circulated to its Directors and Senior Management Staff, in April 2005. Items on the action plan were monitored, as per the due date for each action.

Internal Quality Audit (IQA) Programme

- Twelve (12) Internal Quality Audits were completed and reported, covering all departments/directorates within the scope of the Quality Management System (QMS);
- An evaluation of the performance of the Agency's Internal Quality Auditors, over the period January to December 2005, was carried out and feedback was given to the these auditors;
- Reviews and analysis of IQA reports and Corrective/Preventative Actions (C/PAR's) were done and the trends identified were highlighted and reported at Management Review Meetings.

Documentation

The following manuals were completed and issued during 2005/2006:-

- Procurement; and
- Asset Management - Equipment, Property, IT and Legal.

The following manuals were reviewed and updated:-

- Training and Development Standard Operating Procedures;
- Planning and Research;
- Quality; and
- Procurement.

Quality Awareness Training

Quality Awareness Training Sessions were held with ninety-one (91) persons across the Agency's four (4) administrative regions (North-Eastern, Central, Western & Kingston Metropolitan), as well as the Communications and Customer Services and Internal Audit Departments. A total of one thousand, two hundred and sixty-nine (1,269) man-hours of training were delivered.

Status Updates

Reports on the progress of the Quality Management System (QMS) were presented at Steering Committee and Quality Management Review Meetings throughout the year and periodic, comprehensive status reports were submitted to the CEO.

Routine Maintenance Activities and Active Programme/Projects Monitor

Routine parish visits were conducted by QA Officers to monitor and report on works being done by contractors. Monitoring of active programmes under the Quality Management System, were also done.

Project Take-Over

A total of one hundred (100) Take-Over Requests were processed for road sections/structures in several parishes. Eighty-one per cent (81%) of these requests were completed in less than seven (7) working days.

Employee of the Year Award

This award is presented at the end of the Calendar Year. The multi-skilled and talented Equipment Operator, Mr. Jeremiah Gordon of the Western Regional Office was given the award for his sterling contribution in that area.



*Minister of State, Ministry of Transport and Works, Hon. Dr. Fenton Ferguson
presenting the Employee of the Year Award to operator, Jeremiah Gordon*

The C.E.O's Certificate of Recognition

In addition to the Employee of the Year Award, a team was recognised for its members' contribution to the Agency during the 2005 flood rains. This team which comprised fifteen (15) members, received the CEO's Certificate of Recognition. The team members were as follows:

| | |
|-------------------|--|
| Steven Rowe | - Service Technician |
| Gervais Lawrence | - Regional Manager |
| Keith Brown | - Major Projects Manager |
| Orville Reynolds | - Senior Clerk of Works |
| Earl Tingle | - Driver |
| Desrick Litchmore | - Project Manager (Major Patching Programme) |
| Lloyd Heron | - Assistant Parish Manager |
| Sherwin Dennis | - Senior Clerk of Works |
| Douglas Moodie | - Parish Manager |
| Keith Russell | - Parish Manager |
| Triston Tulloch | - Site Supervisor |
| Earnest Clarke | - Assitant Parish Manager |
| Duran Barrett | - Service Technican |
| Carlos Clarke | - Labourer |
| Eric McKenzie | - Labourer |
| Keith L. Brown | - Inspector |



Completed Works- Spanish Town Bypass

ii. Stony Hill to Tom's River - St. Andrew

The Agency completed rehabilitation of the Stony Hill to Tom's River main road in St. Andrew in November 2005, at a cost of J\$261,419,839. The scope of works included the repair of existing drainage structures and the installation of new drains, as well as resurfacing of the roadway with Asphaltic Concrete. Safety barriers, road markings, reflectors and signposts were also installed along the roadway.



Works in progress along the Stony Hill - Toms River main road



Completed Rehabilitative Works- Stony Hill - Toms River Main Road

ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES (OPEC) FUND ASSISTED ROAD REHABILITATION PROGRAMME

Approximately J\$156.3-million was expended over the reporting period, for road rehabilitation projects in Westmoreland and Kingston, under the OPEC Fund Assisted Road Rehabilitation Programme. These were as follows:-



Completed roadway - Torrington - Galloway, Westmoreland

ii. Truro Gate to Locust Tree - Westmoreland

Truro Gate to Locust Tree Main Road in Westmoreland was completed in September 2005, at a cost of \$44,470,882. The Scope of works included the rehabilitation and improvement of drains and the reconstruction of 3,300m² of the existing road, which was resurfaced with Double Surface Dressing. Road markings, reflectors and traffic signs were also installed.



Completed roadway-Truro Gate - Locust Tree, Westmoreland



Works in Progress- Application of Crushed Stone Base along Port Royal Street, Kingston

i. Torrington to Galloway - Westmoreland

Rehabilitation of the Torrington to Galloway main road in Westmoreland was completed in May 2005, at a cost of J\$94,433,015. The scope of works included the rehabilitation and improvement of longitudinal and transversal drainage with new surface and subsoil drains, outlets, drainage protective works and culverts, as well as, the reconstruction of 35,700m² of the roadway which was resurfacing with Asphaltic Concrete. Road markings, reflectors and traffic signs were also installed.

iii. Port Royal Street

Sections of Port Royal Street were rehabilitated at a cost of J\$17,742,960. The Scope of works included the removal of old asphalt, scarifying, reshaping, applying Crushed Stone Base Course layer and surfacing with 50mm thick Asphaltic Concrete.

employees. A total of seventeen (17) loans, amounting to J\$718,864, was issued to employees.

Paid Study Leave, Day Releases and Time-off for Study

Three (3) members of staff were granted day releases to pursue studies and one (1) member was granted study leave.

AFFIRMING STAFF THROUGH REWARDS AND RECOGNITION

Rewards & Recognition (R&R) Programme

Over the Financial Year 2005/2006, the Agency continued to affirm staff through its R&R Programme which was established in 2004.

Employee of the Quarter Award

A total of twenty-four (24) awards were issued to employees in recognition of their exceptional performance. These were as follows:-

Awardees: April -June 2005

| | | |
|-------------------|---|----------------------------|
| Jeremiah Gordon | - | Western |
| Ainsworth Davis | - | Central |
| Eudell Walker | - | KMR |
| Lamour Stephenson | - | North Eastern Region (NER) |
| Barbara Faulknor | - | Corporate |

Awardees: July - September 2005

| | | |
|-------------------------|---|-----------|
| Bridgette Evans-Stewart | - | Western |
| Radcliffe Mullings | - | Central |
| Neville Fearon | - | Central |
| Norris Richards | - | Central |
| Jeffery Dixon | - | KMR |
| Angelina Brown | - | NER |
| Jennifer Murray | - | Corporate |

Awardees: October - December 2005

| | | |
|-------------------|---|-----------|
| Fred Murray | - | Western |
| Lloyd Cameron | - | Central |
| Clinton Cameron | - | KMR |
| Winston Wiggan | - | NER |
| Franklyn Manhertz | - | Corporate |
| Dane Lawrence | - | Corporate |
| Barrington Cross | - | Corporate |

Awardees: January - March 2006

| | | |
|------------------------|---|-----------|
| Ronald Dell | - | Western |
| Mary Smith | - | Central |
| Yvonne Jackson | - | KMR |
| St. Mary Parish Team:- | - | NER |
| • Robert Francis | | |
| • Angelina Brown | | |
| • Winston Wiggan | | |
| • Eudelly Pantry | | |
| • Juline Campbell | | |
| • Errol Jones | | |
| Judy-Kay Grant | - | Corporate |



HUMAN RESOURCE MANAGEMENT AND ADMINISTRATION

DEVELOPING A CADRE OF "HIGH QUALITY PEOPLE" THROUGH TRAINING AND DEVELOPMENT

In continuation of the Agency's commitment to create and maintain a knowledgeable, multi-skilled and competent workforce, the NWA, through its Human Resource Management and Administration Directorate, intensified its endeavours in the area of Staff Training and Development. A total of five thousand and ninety-nine (5,099) man hours of training for staff at all levels was realized over the fiscal year. This surpassed the targeted man hours of two thousand, two hundred and twenty-six (2,226), by one hundred and twenty-nine per cent (129%), a total of two thousand, eight hundred and seventy-three (2,873) man hours.

The Agency's strategy during FY 2005/2006 continued to include:-

- Overseas Training;
- Local External Seminars/Workshops;
- In-house Training;
- Loans for Educational Development; and
- Study Leave/Day Releases/Time-Off.

Overseas Training

The programmes overseas included the Routine Maintenance Management System (RMMS) in Guyana, Technical workshops, at the 85th Annual Meeting of the Transportation Research Board, in Washington D.C., GIS Workshop in Massachusetts and a two-day ISO 9001 Transition Auditor Training in England. The Oversees training was funded by the Inter American Development Bank (IADB), under the National Road Services Improvement Programme (NRSIP).

External Seminars/Workshops

Staff members attended a number of seminars and workshops. These included an Internal Audit Conference, Disaster Preparedness Seminars, a Minute Writing Workshop, Jamaica Association for Secretaries and Administrative Professionals' (JASAP's) annual seminar, a pension fund seminar, and a Training Needs Analysis Workshop.

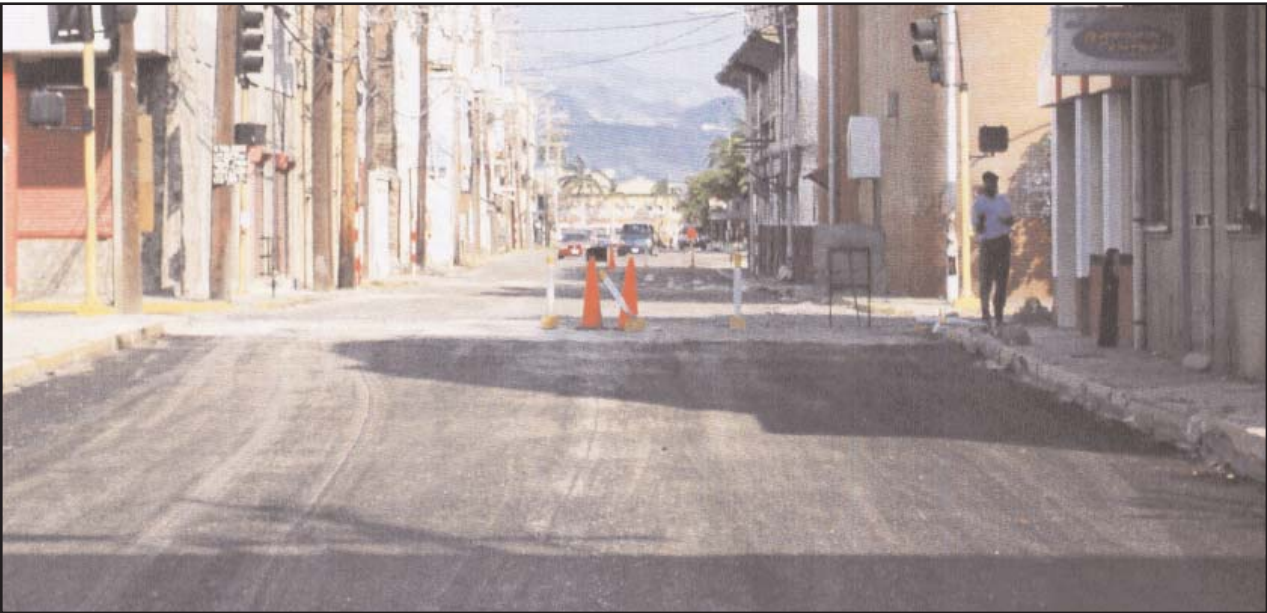
In-house Training

The in-house programme for technical staff involved continued training in the NWA Project Manuals, Volumes 2 and 3. Areas covered included "Variations, Interim Measurements, and Claims"; "Suspension of Works, Disputes and Termination of Contracts"; "Roles and Duties of the Engineer and His Representatives and the Set-up of Site Offices"; "Testing, Site Measurement and Valuation Checks"; "Sub-Contractors and Nominated Sub-Contractors"; "Progress Reports and Programmes"; "Suspension of Works and Default of the Contractor"; "Worksite Safety"; "Time Management"; and "Writing Business Minutes and Letters". Representatives from Dillon Consulting Firm (Canada) conducted sessions on Traffic Software, Pavement Management System as well as a follow-up on the RMMS.

The Senior Management group was exposed to training in "Managing Change and Managing Time" which was conducted by the Job Bank. A 'Train the Trainer' programme was conducted for employees who carry out in-house training and sensitization sessions were done for employees who were expected to use the upcoming NWA Electronic Customer Complaints System. Additionally, Business Communication and Records Management sessions were conducted for Administrative Professionals and a Leave Calculation Technique Session was presented by representatives from the Ministry of Local Government and Environment, for Human Resource personnel.

Loans for Educational Development

The Agency not only provided training, but also gave financial assistance toward the development of its



Surfacing works with Asphaltic Concrete - Port Royal Street, Kingston

ROAD MAINTENANCE FUND (RMF) ROAD IMPROVEMENT PROJECTS

Through the Road Maintenance Fund (RMF), five (5) main road improvement projects were undertaken in the corporate area, as follows:-

i. Constant Spring Road/Dunrobin Avenue Intersection

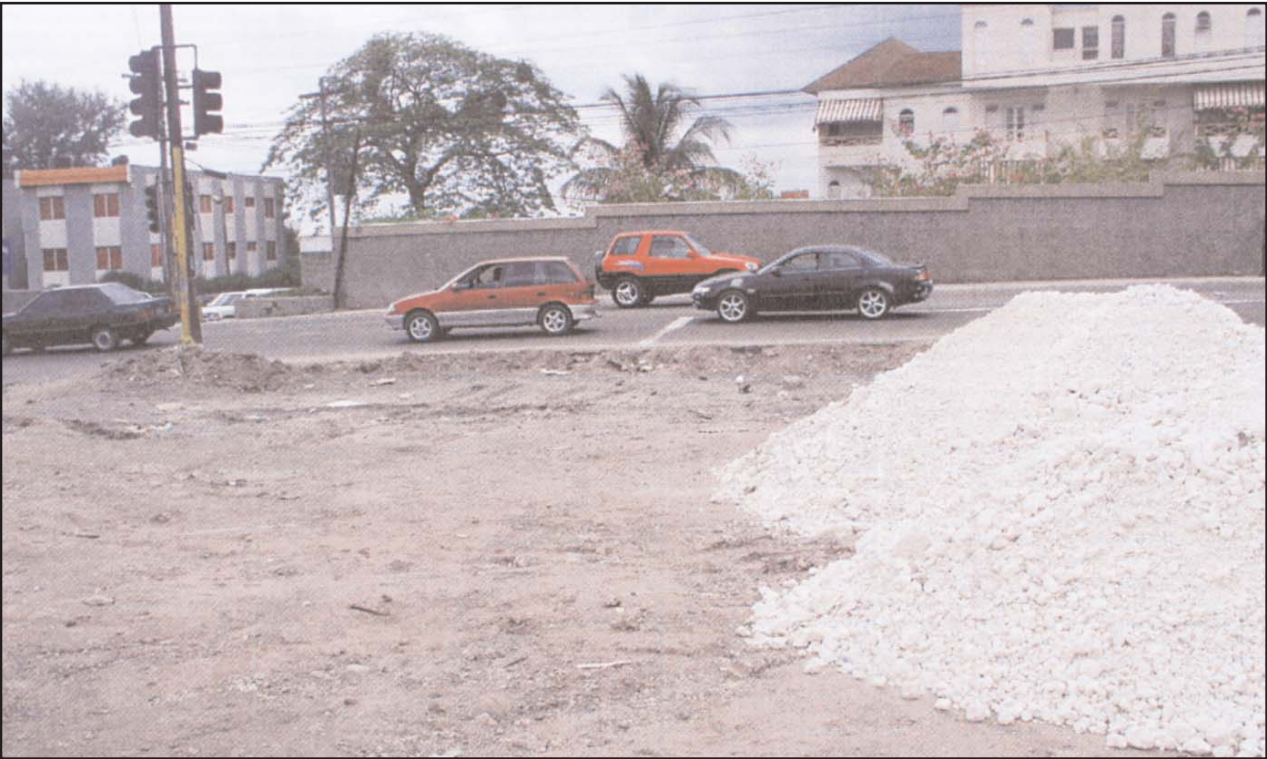
The Agency improved the Constant Spring/Dunrobin Avenue intersection by widening a section of Dunrobin Avenue, from Constant Spring Road to Washington Boulevard. A turning lane was constructed on Constant Spring Road, as well as additional lanes spanning approximately 200 metres, on Dunrobin Avenue. The works also involved the removal of existing kerb and sidewalk, relocation of utilities, installation of new kerb and sidewalk; and the laying of new road pavement. The Agency effected completion of this project, at a cost of J\$18.8-million.



Improved Intersection - Constant Spring Road/Dunrobin Avenue

ii. Constant Spring Road/Shortwood Road Intersection

The Constant Spring Road/Shortwood Road Intersection Improvement Project saw to the enhancement of turning lanes at the intersection, to enable greater through traffic along the corridor. The scope of works included the take-over of 454m² of the north-eastern quadrant, to facilitate smoother turning movement, minor demolition works, concrete works, traffic signals, kerb and sidewalk, road markings and signage, and landscaping. This project, with total expenditure of approximately J\$4.7-million, was completed on time and within budget.



Improvement works in progress - Constant Spring Road/Shortwood Road Intersection



Improved Intersection - Constant Spring Road/Shortwood Road

Internal Services

| DIRECTORATE/DEPT. (for which service was provided) | TYPE OF DATA SUPPLIED | No. OF REQUESTS |
|---|---|-----------------|
| Technical Services | Mapping of landslides and breakaways as a result of major flood events. Some critical flood prone areas, as well as alternate routes to critical bridges were identified. | 20 |
| Regional Implementation | Mapping of road sections under various projects. | 5 |
| Major Projects | Mapping of road sections under various projects. | 10 |
| Communications & Customer Service | Copies of new WSP maps. | 10 |
| Quality Assurance | Copies of new WSP maps. | 10 |
| Planning & Research | Various location maps for Development control and Planning & Research Map of locations of events and incidents such as blocked areas on road sections by parish due to major flood events. | 40 |
| Legal Department | Specific locations of roads. | 5 |
| CEO's Office | Reports submitted to the task force of the Kingston and St. Andrew Corporation (KSAC), on actions to be taken re: issues arising from Hurricane Ivan. | 10 |

Other Accomplishments

Other accomplishments of the Agency through its Geographic Information System (GIS) included:-

- Use of GIS in the planning process for Half Way Tree traffic changes;
- Production of Status and Report Maps for Hurricanes Emily, Dennis and Wilma. These were produced using information from MicroSoft Access Database developed for each hurricane, (Emergency Operation Centre [EOC] operations) capturing the major, islandwide events on the road network;
- Development of a GIS Database of Flood prone areas islandwide, using GPS mapping system; and
- Development of a project profile report on the Linstead By-Pass using 1:12,500 topographic sheets of St. Catherine and IKONOS Satellite images as background. The study captured the various accesses onto the bypass and also mapped the various economic activities located along the project route.

Mapping/Global Positioning System (GPS) Usage

The GPS equipment continues to be used extensively by the Agency to map roads and their features, which are then mapped onto the existing 1:50,000 Topographic Map of road areas surveyed. This information often assisted the Agency in making inferences on which to base relevant decisions about the road network. Over the reporting period, the Agency provided a number of internal and external services based on data obtained from the GPS equipment. This ranged from data on locations of settlements, roads, bridges, gullies, rivers, and specific project areas to traffic counts, proposed traffic flows, distance measurements, and existing/alternate routes to and from various locations. The following tables illustrate:-

External Services

| ENTITY/ ORGANIZATION | TYPE OF DATA SUPPLIED | MODE OF PAYMENT |
|--|---|---|
| Ministry of Land & Environment (H2K) | Digitized Road Network for all main as well as parochial roads - for identification of Court Houses; Traffic Counts for St. Catherine and Clarendon. | None -Donation (requested by C. Blake, National GIS Co-ordinator) |
| ODPEM | Information on the Road Network and List of NWA Equipment Sites and Parish Offices (after each major flooding event). | None -Donation (requested by ODPEM) |
| WSP Consultants (Nigel Lightbody, et al) | Parish maps of all the roads, including Parish Council roads, to assist the entity's re-classification exercise. Location boundaries for specific areas being considered for proposed projects. | Receipt of Printing and Plotting supplies |
| Ministry of Transport & Works University of | WSP Spreadsheet and Maps of Main Road Network. | None -Donation |
| Technology (UTECH) | Maps of project areas for research (Various student groups - undergraduate and post-graduate) | None -Donation |
| University of the West Indies (UWI) | Maps of project areas for research (Various student groups - undergraduate and post-graduate) | None -Donation |

iii. Half Way Tree Improvement Project

The Agency undertook improvement to the Half Way Tree area, to include sections of Eastwood Park Road, Constant Spring Road and Half Way Tree Road. This project was completed within two weeks of the commencement of works, at a cost of J\$37-million. There is now a smoother flow of traffic along these corridors.



Improvement works in progress Half Way Tree Road



Improved Half Way Tree Road

iv. East Kings House Road

Over the reporting period, the Agency undertook the improvement of East Kings House Road, the scope of works of which included the widening of the existing bridge, on the down-stream end of Sommerset Gully to create two (2) additional lanes along East Kings House Road, as well as the installation of a 1.8m wide side-walk; Asphalt Concrete surface; and turfing. The works were divided into two (2) phases. Phase One, the installation of an Armco Pipe structure, was completed in September 2005, at a cost of approximately J\$6.25-million and Phase Two which entailed widening of the roadway, was approximately seventy per cent (70%) complete at the end of the fiscal year, at a cost to date of J\$6.0-million.



Improvement Works in Progress - East Kings House Road



Installation of ARMCO PIPE STRUCTURE - East Kings House Road

| Table showing maps and digital information provided | | | | |
|---|--|------|--------------|--|
| ENTITY | DESCRIPTION OF DATA | COST | HOW ACQUIRED | PURPOSE OF DATA |
| University of the West Indies | Historical data on Flooding | None | Donation | To assist in identification of zones which are in close proximity to roads and which are susceptible to flooding. |
| Ministry of Land & Environment (Survey dept) | Planimetric Sheets for the parish of Kingston 1:2,500m | | Paid | To assist in the assessment of plans for development and in establishing possible land take requirements for projects. |
| Ministry of Land & Environment (Survey dept) | Topographic Sheets for all parishes except St. Catherine and St. Ann 1:12,500m | | Paid | To assist in assessment of plans for development and in establishing possible land take requirements for projects. |
| Ministry of Transportation & Works WSP Consultants | Drainage data compiled by the Ministry of Local Government | None | Donation | To assist in the identification of vulnerable zones (with respect to flooding) which are near to roads and drains etc. (in which case locations are to be kept clear). |
| ODPEM | Data received from a variety of sources such as the Water Resources Authority (WRA), was shared with the NWA | None | Donation | To assist in the determination of the population affected by events such as flooding and blocked roads. As a criteria for determining Road Prioritization Model. |

Network Analysis

The Agency conducted a Network Analysis for the implementation of traffic changes primarily at Greenfield, on the Rock to Stewart Town Road in Trelawny; and on South Camp Road, in Kingston, Jamaica's locations for World Cup Cricket 2007. Other areas proposed for traffic changes/intersection improvements, include:-

- Ewarton Bypass - Mount Rosser;
- Golden Grove to Greenwich Park, St. Ann - Alternate route #1;
- Golden Grove to St. Ann's Bay - Alternate Route #2;
- North Street, Kingston;
- North Avenue (links Old Hope Rd./Lady Musgrave to Stadium Blvd.);
- Merrion Road (links Deanery Road), Kingston
- Marcus Garvey Drive Intersection, St. Andrew;
- Mountain View Avenue, St. Andrew;
- Mountain View Avenue/Stadium Boulevard Intersection, St. Andrew;
- Upper Elleston Road, St. Andrew;
- Arthur Wint Drive/ Stadium Boulevard Intersection, St. Andrew; and
- South Camp Road, St. Andrew.

(Refer appendices for maps highlighting road sections identified for improvement).

COMMERCIAL VEHICLE WEIGHT LIMIT ENFORCEMENT PROGRAMME

Circulation of Short-term Strategy Paper

The Agency received the endorsement of the IADB to proceed with its proposed strategy for implementation of the Commercial Vehicle Weight Limit Enforcement Programme, for the period September 2005 to March 2006. Under this programme and following on efforts to stem the deterioration of the island's road surface by overloaded heavy units, the Agency conducted weighing exercises at four (4) locations.

Major glitches were experienced by the Agency's data collection crew and the police whose assistance was engaged in the process. The weight limits of 5,000kg for Front Axle-Single Tyre and 10,000kg per axle for Rear Axle-Dual Tyre, were exceeded on several occasions. This is a concern that the NWA is committed to resolving and will intensify its efforts in this regard during the next fiscal year.

SUBDIVISION AND BUILDING

During FY 2005/2006, the Agency's target of a fourteen-day processing time for sub-division and building applications, was effectively met.

A total of one thousand, two hundred and six (1,206) sub-division applications and five hundred and forty (540) building applications were processed and dispatched. From these operations, the Agency realized total revenue of approximately J\$16.04-million.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

The National Works Agency, through its GIS Department continues to build a database of information related to roads and waterways. A new set of maps which more accurately reflect the location and actual shapes of the roads identified in the WSP Consultants' database was completed and is now being used. Although gravely restricted by the unavailability of funds for basic training in the use of the GIS and image software, the Agency was able to provide maps and digital road information for the following bodies:



Improvement Works in Progress - East Kings House Road

v. Barbican Road/Russell Heights Intersection

The Agency undertook the improvement of the intersection at Barbican Road and Russell Heights, the scope of works of which entailed the widening of the existing bridge, on both the up-stream and down-stream ends of the gully. This included the creation of a passing and holding lane along Barbican Road; a slip lane along Russell Heights Road; the installation of a 1.8m wide side-walk; construction of kerb and channels; laying of Asphaltic Concrete surface; turfing; installation of traffic signals; and lane markings. The project was divided into two phases. Phase One, the construction of an Armco Pipe structure, was completed. Phase Two which involves the widening of the roadway/re-alignment and signalization was approximately 37% complete at the end of the fiscal year. Total expenditure at the end of the period was J\$12.9-million.



Improvement Works in Progress - Barbican Road/Russell Heights Intersection

IADB FLOOD DAMAGE REHABILITATION PROGRAMME

Under the IADB Flood Damage Rehabilitation Programme, the Agency was accorded an Emergency Reconstruction Loan Facility, by the Inter-American Development Bank (IADB) to address flood damage sustained during May/June 2002. This facility covered repairs and restoration of 178 kilometres of the road network's infrastructure as well as the reinstatement of services supplied by the National Irrigation Commission which accounted for 53km of canal systems; and the National Water Commission for which there were 6km of pipeline systems. This project was completed in the 3rd quarter of the Financial Year 2005/2006, at a cost of US\$9.2 Million.

IADB SUPPORT FOR HURRICANE IVAN RESTORATION (HURRICANE IVAN WORKS)

The funding for restoration efforts under the IADB Support for Hurricane Ivan Restoration (Hurricane Ivan Works) Programme, was established through the utilization of resources from a loan facility provided by the bank to effect repairs to retaining walls at sixty (61) locations across the island. This project was 88% complete at the end of the financial year 2005/2006. Total expenditure at the end of the period was US\$5.3-Million.



BEFORE CONSTRUCTION of Retaining Wall at Warsop, Trelawny



Completed Retaining Wall at Warsop, Trelawny



Traffic Changes - Half-Way Tree

Spanish Town Traffic Lights

In March 2006, the National Works Agency commissioned into service, new traffic lights in the St. Catherine parish capital. The lights, which were the first to be installed in Spanish Town, were erected at the Barnett Street/Bourkes Road Intersection and the Twickenham Park Road/Sligoville Road junction, and marked the final stage of the Agency's J\$241-million improvement works on critical roadways, in the old capital.

A research conducted by the Agency in 2003, had revealed that over twenty thousand (20,000) vehicles used the intersections over a twelve-hour period. Signalisation of the intersections became necessary for the effective management of the large number of vehicles that use the areas on a daily basis.



New Traffic Lights in Spanish Town

- iii. The development of:
 - An ITS project profile for the KMA, Portmore and Montego Bay, as well as project profiles for the island's National Public Safety Network and the KMA Incident Management System - Closed Circuit Television (CCTV);
 - Traffic simulation models for: the Half-Way Tree Transport Centre, as well as for Barbican Road; Munroe Road; Three-Miles; the Causeway; Ninth Avenue; and Marcus Garvey Drive;
 - Traffic Management Plan for Half-Way Tree Square;
 - An intersection re-design for the Spanish Town Bypass Signalization Project; and
 - A database of Computer Aided Designs (CAD) for existing and proposed signalized junctions in the KMA.
- iv. Assisted the Ministry of Housing, Transport, Water and Works (MHTWW) in the establishment of the Rights of Way Management - Fibre Optic Cable.

The Traffic Management Unit

The ongoing activities that were conducted by the Agency's Traffic Management Unit, over the financial year 2005/2006, were specifically geared towards safety and minimal traffic delays. Much of the works were performed in response to direct observation of the road network's operating facilities, as well as in response to customer reports of defects, especially as they related to signal lights, road markings and signage. Over the reporting period, fifty-four (54) new road signs were installed and a total of 30,478 metres of road lines (100mm, 200mm, 300mm and 600mm lines) was painted. This included the painting of the Palisadoes Road, Old Hope Road, Hope Road and Knutsford Boulevard.

Other achievements in the area of Traffic Management included road improvement activities, which comprised traffic changes in Half-Way Tree and intersection improvements in Spanish Town. A Network Analysis for traffic changes to facilitate World Cup Cricket 2007 was also done.

ROAD IMPROVEMENT

Half-Way Tree Traffic Changes

In December 2005, the Agency, effected traffic changes in Half-Way Tree, St. Andrew, in order to reduce delays in traffic movement along roadways in this area. This decision arose from the undertaking by the Ministry to construct a multi-million dollar Transport Centre in Half Way Tree. The changes implemented were as follows:-

The traffic flow along North Odeon Avenue was reversed, allowing vehicles to merge into the northbound traffic along Eastwood Park Road. The south side lane along North Odeon Avenue was converted into a Bus Bay. Bus Bays for Jamaica Urban Transit Company (JUTC), National Transport Cooperative Society (NTCS) and rural buses were relocated to Parish Place, Spencer James Avenue and North Odeon Avenue. Traffic signals located at the intersection of Constant Spring Road and North Odeon Avenue were adjusted to facilitate the installation of a Pedestrian Crossing at these signals. The exclusive bus lane along Half-Way Tree Road was discontinued and now accommodates regular traffic. Motorists who used North Odeon Avenue to get onto Constant Spring Road, must now use Derrymore Road.

These changes have significantly reduced the poor traffic condition that for many years had prevailed in Half Way Tree and its environs.

CARIBBEAN DEVELOPMENT BANK (CDB) FLOOD DAMAGE REHABILITATION PROGRAMME

The CDB Flood Damage Programme sought to address the rehabilitation of roads which were badly damaged by floods caused by the October 2001 and May/June 2002 rains, through a US\$35-million loan. In addition to this loan, a grant of US\$1-million was made available to the Agency. Under this programme, the Agency rehabilitated fourteen (14) roads sections across the island, over the reporting period.

NORTHERN JAMAICA DEVELOPMENT PROGRAMME (NJDP)

Under the NJDP, the NWA began works on Segment III of the Northern Coastal Highway Improvement Project. This segment of the highway covers 96.8 kilometres of roadway, from Ocho Rios, St. Ann to Port Antonio, Portland and is being done by E. Phil and Sons, at a contract cost approximately J\$5.7-billion. The scope of works includes the rehabilitation of twenty-four bridges, along the entire stretch of roadway, as well as the construction of eight (8) new structures, in the parish of St. Mary. At the end of March 2006, the Agency had completed the initial road repairs. Repairs to nominated detours at Islington and Highgate had started. Design details for the relocation of waterlines were issued for the length of roadway between Ocho Rios in St. Ann and Aqualta Vale in St. Mary. The agency had also completed:-

- Piling works on the bridges at Llanrumney, White River (No.2) and Otrum (No. 2);
- 111,000 cubic metres of earthworks which comprises 73,000 cubic metres of excavation and 38,000 cubic metres of fill;
- One (1) box culvert and commenced works on four (4) others;
- Sub-base site trial; and
- The identification of some JPSCo./CWJ utility poles and underground cables for relocation.



Works in Progress at Albion, St. Mary - part of Segment III - North Coast Highway Improvement Project

NATIONAL ROAD SERVICES IMPROVEMENT PROGRAMME (NRSIP)

The National Road Services Improvement Programme (NRSIP) was established as a three-year programme, focusing on institutional capacity building within the Agency, in the areas of planning, contracting and supervision of road works. NRSIP is jointly funded by the Inter-American Development Bank (IADB) and the Government of Jamaica (GOJ), in the amounts of US\$18.5-million and US\$10.5-million, respectively.

DESCRIPTION OF THE MAJOR COMPONENTS OF NRSIP

There are two (2) major components of NRSIP. These are the Institutional Strengthening Component and the Performance Based Routine Maintenance Contracts Component. There is, as well, an Administration Component.

1. Institutional Strengthening Consultancy Component - US\$2.9-Million

The Agency selected Dillon Consulting Limited, Canada, as the most responsive firm to the terms of reference issued for this component and they commenced their assignment in September 2005, working with the Agency's staff to improve capabilities and effectiveness in eight (8) main areas, namely:-

- i. Highway Maintenance Management Engineering, which encompasses Projects and Contract Management; Value Engineering, Maintenance Management, Geographic Information Systems (GIS) and Economic Analysis;
- ii. Transport Planning;
- iii. Transport Economics which includes Modelling Applications;
- iv. Road Safety, covering Road Safety Procedures/Measures, Geometric Design and Management of Heavy Vehicles;
- v. Project and Contract Delivery;
- vi. Quality Management Systems, Documentation;
- vii. Soils and Material; and
- viii. Communications and Customer Services as well as IT Integration.

Accomplishments Under the Institutional Strengthening Component

At the end of March 2006, the Agency had accomplished the following, under the Institutional Strengthening Component of NRSIP:-

- relevant staff have been trained in Project and Asset Life Cycle Management techniques, as well as in Highway Maintenance Management;
- Agreed operating processes and procedures have been documented and relevant staff have been trained in their application;
- Alternative pavement designs and materials have been identified;
- Suitable long-term network planning and modelling tools have been identified and training was conducted using these tools;
- Suitable Communication and Customer Service techniques have been identified and training in these techniques was conducted;
- Key Performance Indicators for the Agency have been documented; and
- Information Technology requirements have been identified.

2. Performance Based Routine Maintenance Contracts Component - US\$19.0 Million

Under this component of NRSIP, the issuing of the performance based contracts would see contractors assuming the responsibility for maintaining the roads within specified network packages, for a period of three (3) years. Contractors will be guided by a detailed set of terms and conditions, which will be monitored through the automated Routine Maintenance Management System (RMMS), located in all Parish Offices. The original scope of works (established in 2003) for these contracts, was amended based on the extensive damage sustained by the road network due to hurricanes and rain events which affected the island over the past few years.

The Agency completed on-site assessments of the various roads under the Programme, in collaboration with IADB representatives and, in March 2006, presented the revision of the scope of works to the bank. The

Agency is awaiting the response of the IADB, to implement this component of NRSIP. It is anticipated that the Bank will return a non-objection to the review submitted.

PLANNING AND RESEARCH

TRAFFIC MANAGEMENT

The NWA recognises the importance of a sound traffic management system which will allow people, goods and services to move quickly and safely to intended destinations. The Agency's Traffic Management System is divided into two (2) main areas of operation, namely, the Traffic Management Centre, which includes the Intelligent Transportation System (ITS), and the Traffic Management Unit.

The Traffic Management Centre and the Intelligent Transportation System (ITS)

The Traffic Management Centre and the ITS, are critical to the future planning of traffic movement across the island. Achievements in these areas, over the period April 2005 - March 2006, included the completion of the Kingston Metropolitan Area (KMA) Traffic Study. This involved:-

- Travel time surveys of 13 main corridors in the KMA;
- Intersection capacity analyses of 250 road junctions; Signal Warrant Analyses of 102 junctions; preliminary signal designs for 55 new signalized junctions and preliminary redesigns for 45 existing signalized junctions;
- Development of a set of criteria for selecting corridors and intersections for improvement; and
- Development of a Geographic Information System (GIS) Database for the Corridor Improvement Programme which is aimed at the improvement of the following areas:-

| Corporate area roads targeted for improvement - 2006-2007 | |
|---|---|
| TARGETED AREAS | SCOPE OF WORKS |
| Cross Roads | Dualization of Caledonia Avenue; Conversion of Old Hope Road to One-Way Traffic Flow. |
| Barbican Road | Widening of roadway to four (4) lanes from Arcadia Drive to Jacks Hill Road. |
| East Kings House Road/ Barbican Square | Widening of the roadway to three (3) lanes around the entire square; Installation of traffic signals at the intersection of East Kings House Road and Barbican Road. |
| Waterloo Road | Widening of roadway from Old Church Road to West Kings House Road and construction of a bridge over existing ford. |
| Manor Park Road | Construction of an alternative route from Constant Spring Market, over the gully, to Grosvenor Terrace. |

Other Achievements of the Agency through its Traffic Management Centre and the ITS included:-

- i. The implementation of an Automatic Vehicle Location System pilot project for the KMA.
- ii. The establishment of wireless communication between traffic signals and the Traffic Management Centre.