SIHLANZIMVELO STREAM CLEANING PROGRAMME

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• In 2009 the Engineering Department acknowledged that the majority of local watercourses in the eThekwini Municipality were severely blocked and polluted and that there was a lack of coordination between various departments in resolving these issues.

• The majority of “watercourses” were clogged with invasive weeds and polluted with litter. This resulted in storm water blockages and pollution downstream of high density areas as well as health and safety hazards for its inhabitants.

• The eThekwini Roads and Stormwater Maintenance Department (RSWM) together with various line departments within the city developed an operations manual for an integrated sustainable programme to focus on the worst affected streams in high density areas of the city.
The programme aim was to ensure that all watercourses are brought up to an appropriate standard to reduce storm water blockages and pollution downstream of these high density areas.

This programme was then aligned to address the eThekwini Municipalities objective of creating work opportunities, experience and skills for local contractors and communities within the wards of the streams being targeted.
FOCUS AREAS

• Due to budget constraints the initial focus areas are in the INK (Inanda, Ntuzuma and Kwamashu) and Umlazi areas.

• Field investigations were carried out to:
  ▸ Assess the magnitude of the problem;
  ▸ Water quality assessments
  ▸ Determine the scope of work required for each stream
  ▸ Prioritise streams which were in the worst condition
  ▸ Capture each targeted stream spatially in 5km sections
  ▸ Capture photographic evidence of each stream
FOCUS AREAS...

On completing the field investigations some of the problems that were observed and recorded were:

- Overgrown/dense vegetation on streams,
- Constant culvert blockages,
- Overflow of sewerage pump stations and sewer line ruptures resulting in sewerage flowing into the streams and
- Excessive illegal dumping on streams.

It was therefore imperative to carry out an initial cleanup which mainly comprised of removing the overgrown vegetation and the removal of any debris that may affect the flow of water.
There are approximately 800km of rivers, streams and open storm water channels within the target areas of Inanda, Ntuzuma and KwaMashu (INK) and Umlazi.

Various departments, ward councilors and ward committees within the municipality were consulted and assisted in identifying the worst affected watercourses according to condition and the impact they have on surrounding communities within the pilot project areas.

This resulted in 100km of stream being selected in the Umlazi area and 300km in the Inanda, Ntuzuma and Kwa-Mashu (INK area). Each co-operative was allocated 5km of stream that they had to clean/clear and maintain.
An expression of interest was advertised, where cooperatives were asked to respond by submitting their company documents.

Qualifying Co-ops that responded and who reside within the project area were selected to be part of the programme which will assist in maximizing employment opportunities for community members that reside within the local area.

Each cooperative has between 5 and 8 members.
**SCOPE OF WORK**

Co-operatives are contracted for a 36month period to perform tasks and paid at a pre-determined rate on tasks completed for the month:

**SCOPE OF CONTRACT**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NATURAL STREAMS – DEBRIS</strong></td>
<td>Remove all rubble and refuse blocking the free flow of the stream and disposed of at a designated Municipal disposal site. The Stream is to be kept clear of all debris for the duration of the contract.</td>
</tr>
<tr>
<td><strong>NATURAL STREAMS – ALIEN VEGETATION REMOVAL</strong></td>
<td>Invasive and alien vegetation removed and disposed of at a designated Municipal disposal site. The project area is to be kept clear of all alien vegetation for the duration of the contract.</td>
</tr>
<tr>
<td><strong>NATURAL STREAMS - EROSION PROTECTION</strong></td>
<td>Stream bed and stream banks to be protected against erosion by constructing and maintaining erosion bolsters as per the municipality’s standards. Minor scour areas must be backfilled with rock and compacted. Rocks can be collected from the surrounding area or supplied by the Roads and Stormwater Maintenance Unit.</td>
</tr>
<tr>
<td><strong>GRASS &amp; VEGETATION MAINTENANCE</strong></td>
<td>All grass and vegetation must be cut, and kept to a maximum height of 150mm. Width from either side of stream edge will be defined but not less than 3m. Cuttings must be disposed of at a designated Municipal disposal site.</td>
</tr>
<tr>
<td><strong>LITTER CONTROL</strong></td>
<td>Emptying of bins and Picking up litter, refuse and debris found in the stream and disposed of at a designated Municipal refuse disposal site. The project area is to be kept clear of all litter for the duration of the contract.</td>
</tr>
</tbody>
</table>
Protective Clothing

As part of the contract, each cooperative is required to be equipped with the following protective clothing:

- Heavy duty, non-tear overalls;
- Vulcanized canvas gloves;
- Disposable gloves;
- Hip boots and/or gum boots;
- Hats;
- Safety glasses
As part of the contract document each cooperative had to be equipped and provide the following equipment as a requirement:

- Garbage/ refuse bags for collection and dumping of trash
- Axe and bow saw for large trees
- Bush knife for lighter vegetation
- Shovels for root extraction and silt removal
- Rakes for debris clearing
- Wheelbarrows for carting debris
Over the years that co-ops have been in the programme, they have been provided with the following contractor development training:

- Business Management and Marketing Management (basic training)(Training was facilitated by SEDA)
- Book keeping
- Health and safety (facilitated by Ethekwini Municipality)
- Alien vegetation removal (facilitated by WESSA)
- Construction mentorship of minor infrastructure

Mentorship of Co-operatives (Co-operatives are being mentored on a continuous basis.)
GENDER

GENDER PERCENTAGES IN THE PROGRAMME

- MALES: 59%
- FEMALES: 40%
- DISABLED: 1%
NTUZUMA
CHALLENGES

- No co-ops or not enough stream length within the targeted wards resulting in co-operatives working in areas they do not reside in creating political instability.
- Illegal sewerage discharged from households into the streams
- Illegal dumping (by households, street vendors, and local business centres; taverns and tuck shops, etc.)
- Safety of co-operatives on site – streams that are situated in remote areas and the workers on site can be easy targets for criminals
STREAMS IN BAD CONDITION
MAINTAINED STREAM CONDITIONS

• The programme has been largely successful in improving the ecological environment of targeted streams as well as creating approximately 640 work opportunities at a local level.

• Currently there are 400km of streams maintained by 80 co-operatives
The current cooperative’s contracts will come to an end in December 2019

New co-operatives were invited for the next phase of the programme

( expression of interest which is facilitated by Supply Chain Management)

99 Co-operatives will be allocated work in Wards they reside in covering approximately 990km

Each co-operative will be allocated 10km which they will work on in two month cycles (5km per month)

Training will be provided for all co-operatives in different aspects (Health and Safety, Technical, Business, alien invasive identification and removal etc… )
THANK YOU

QUESTIONS?