



**water & forestry**

Department:  
Water Affairs and Forestry  
**REPUBLIC OF SOUTH AFRICA**

**NORTH WEST PROVINCE**

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**Greater Taung Local Municipality  
Rainwater Harvesting Project  
Implementation Plan**

**31 March 2009**

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## **1. Executive summary**

The Mvula Trust has been appointed by DWAF, Northwest Regional Office to implement a pilot rainwater harvesting project which will involve the provision of support and training to targeted households in family food production and livelihoods strategies, and the construction of 50 above-ground rainwater harvesting tanks. This project forms part of DWAF's *Water for Growth and Development* national policy framework

Emphasis is placed on the involvement of all relevant stakeholders and institutions, both public and civil society to ensure an integrated approach in the project implementation process as envisaged in government's plan of action for poverty eradication. Key roleplayers identified include departments of social development, agriculture and DWAF, as well as municipalities, community based organisations and tertiary institutions.

The project envisages a participatory process to identify households which will qualify for the provision of rainwater harvesting tanks. This process will include information sharing and training in household livelihoods strategies, as well as the mobilization of a broad sector of the community that will engage in family food production activities.

Each rainwater tank will hold 30 cubic meters of water to provide beneficiary households with sufficient water for food production over the extent of the dry season. Project implementation in the construction phase is designed in a way that will maximize direct financial and economic benefits to local communities by using extended public works programme (EPWP) construction methods.

Post construction mentoring support will be given to beneficiary households that will ensure proper tank maintenance and safety, the appropriate use of water and ongoing food production activities.

## **2. Background and the project brief**

South Africa is a water scarce country and it ranks 30th among the driest countries in the world. The DWAF *Water for Growth and Development* policy framework envisions a South Africa where scarce water resources are developed optimally, and used equitably for sustainable economic development, and meeting social and environmental needs. The national objective is to optimise every drop: “Bringing water to the forefront of planning and for growth and development.”

Among the challenges bringing pressure to bear on this scarce resource are:

- Equitable access and allocation of water for sustainable economic growth, social and environmental sustainability
- Poverty alleviation
- Managing impact of climate change and increasing environmental degradation
- Understanding of the economic value of water by users and some decision makers

As part of the overall strategy to achieve equitable access to water through Government’s “Programme of Action” against poverty and its poverty alleviation strategy, DWAF, North West Regional Office, has appointed the Mvula Trust to implement a rainwater harvesting (RWH) programme with a view to extend the water conservation programme to rural communities that are largely dependent on underground water for domestic use, food production and small scale agricultural projects. The project will involve the provision of support and training to targeted households in food production and livelihoods strategies, the construction of 50 above-ground rainwater harvesting tanks, and post construction mentoring support to beneficiary households.

### **3. The Project Implementing Agent**

The Mvula Trust is the largest water and sanitation non-governmental organisation in South Africa. It is one of the 'delivery mechanisms' through which DWAF has been implementing water supply and sanitation programmes and projects. Furthermore, the Mvula Trust is an Approved Legal Entity (ALE) appointed by DWAF who participated in the Demonstration Phase of the Rainwater Harvesting Pilot Programme in three sites at Manamela (Limpopo), Mawa (Limpopo) and Bityi-Matheko (Eastern Cape). Five demonstration tanks were constructed in each of these sites, and the use and impact of these tanks on household food security is currently being monitored by the Policy Unit and shares in lessons learning with other DWAF ALEs and sector role players, including the Multiple Uses Systems (MUS) initiative. The Mvula Trust will use its extensive knowledge and experience in the implementation of the DWAF NorthWest RWH programme.

### **4. Profile of the Project Implementation Site: Dry Hearts, Myra and Sitting Poler**

#### **4.1 Local government**

- Which are the responsible District and Local municipalities and key role players (personnel) in these institutions (Greater Taung Local Municipality within the Dr Segomotso Ruth Mompati District municipality in the Northwest province)?
- Who is the Ward Councillor?
- Is there a functional Ward Committee and which interest groups are represented?
- Who are the Community Development Workers?

#### **4.2 Traditional authority**

- Are these traditional communities or semi-urban settlements?

- Is there a traditional authority structure?
- Who is the king/kgosi?
- Are there other sub-traditional leaders and structures?

#### **4.3 Geographic location**

- Map
- Narrative description of the location of the villages (each settlement)?
- Nearest economic centre?
- Co-ordinates of each village?
- Key national, provincial and regional roads?
- Rivers?

#### **4.4 Potential to implement this programme at scale**

- Number of households?
- Geotechnical?
- Topography?
- Soil types?
- Rain fall?

#### **4.5 Socio-economic profile**

- Population size
- Gender and age profile
- Heads of household
- Major economic activities
- Industries
- Employment
- Sources & levels of income
- Other livelihoods activities

#### **4.6 Key community level institutions**

- Clinics & hospitals
- Schools
- Churches & faith related organisations
- Civil society structures (CBOs & NGOs)

#### **4.7 Community's willingness to participate**

- evidence of food production activities at households
- evidence of any form of gardening
- commercial food production
- livestock
- evidence/knowledge of other similar intervention (is there a time line of such interventions)

#### **4.8 Community level infrastructure**

- Potable household water supply
- Sanitation
- Roads
- Storm water
- Other water sources
- Halls & recreation amenities

#### **4.9 Current Gardening Practices in Community**

- Household gardens
- Communal gardens
- Market gardens
- Small agricultural activities

## **5. The project objectives**

The project has the following key objectives

- To develop the necessary institutional and human resources capacity arrangements that will ensure the effective implementation of the project at scale in a single geographic site.
- To facilitate processes with key stakeholders such as national, provincial and local government, and civil society organizations that will ensure collaborative relations, buy-in and support of the RWH programme in the selected implementation site
- To facilitate processes within the target community that will create awareness of and interest in the objectives of the RWH programme, including training with particular emphasis on household food security initiatives
- To develop procedures and implement frameworks for the selection of households that will benefit from the provision of rainwater harvesting tanks.
- To facilitate, provide training and supervise the construction of 50 RWH tanks in the target community
- To provide mentoring support to beneficiary households in household food production, institutional food production, stock watering and the appropriate use of the RWH tanks.
- To monitor, evaluate and report on progress during the implementation of the project.

## **6. Scope of works**

### **6.1 Institutional and human resources capacity arrangements**

The Mvula Trust has the following staff structure in place to implement the Rainwater Harvesting Project in Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler):

- Overall project management and supervision will be the responsibility of the Mvula Trust North-West Regional Manager.
- Technical design and reservoir construction supervision
- ISD , including stakeholder liaison and household livelihoods support will be provided by
- Family food production (FFP) facilitator
- In addition The Mvula Trust will establish collaborative relations with agricultural extension workers of the Department of Agriculture to assist with household garden situation, layout, crop selection and rotation, and training in household food gardening.
- The Mvula Trust will also seek to obtain further training support from technical institutions such as the University of North-West.
- During the tank construction phase local artisans and labour will be utilized based on the Extended Public Works Programme (EPWP) approach and principles.
- A Project Steering Committee (PSC) consisting of three community representatives, a representative each from DWAF NW and Greater Taung LM, and the Mvula Trust project manager will be established to facilitate direct community participation in project implementation matters, and to ensure ongoing community support of the programme.

### **6.2 Facilitation of key stakeholder participation**

To ensure the successful implementation of the DWAF RWH programme the Mvula Trust will work towards high levels of collaboration, buy-in and support from a wide range of public and community stakeholders. Activities will include informing stakeholders of the progress being made and the lessons learnt from the Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler) project implementation, and to identify opportunities for collaboration and support for the roll out of the DWAF Rainwater

harvesting programme in NorthWest Province. This process is of importance to learn from the experiences of various stakeholders and to avoid wasteful duplication of processes and resources where this is possible. Stakeholders will include:

- DWAF North-West Regional Directorate
- Department of Agriculture
- Department of Social Development
- Department of Health
- Relevant North-West Provincial Government departments
- SALGA (North-West)
- Dr Segomotso Ruth Mompoti District Municipality. (IDP, WSDP, LED, Health, Social Development directorates)
- Greater Taung Local Municipality (Relevant Ward Councillor and Ward Committee members)
- NGOs active in household livelihoods and family food production fields.

### **6.3 Mobilisation of community awareness, participation and training**

The establishment of a Project Steering Committee (PSC) is an important first step to obtain community interest and to ensure wide spread participation in this project. Guided and advised by PSC members project staff will engage in communication and liaison techniques that will maximise household food security and livelihoods interest, appropriate food production methods and approaches to tank construction methods that support local economic development. It is envisaged that by the completion of the Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler) RWH project enough interest will have been generated so that the roll out of the programme will benefit additional households as a matter of course.

### **6.4 Facilitation of selection of beneficiary households**

The Mvula Trust will engage in a community inclusive beneficiary selection process that will ensure that selected households will commit to programme objectives as envisaged by DWAF. Household selection criteria include:

- Households that are already engaged in intensified gardening
- Willingness to provide a form of equity such as assisting with the constructioj of their

own rainwater tanks

- Willingness to receive, safely store and issue the building material to the builder
- Vulnerable households that include poor households, households with chronically ill people, child-headed households, elderly households and single female headed households.
- Any other criteria or relevance in the local communities that may influence the selection process.

Selection criteria would be agreed upon with the stakeholders, the community and the PSC. This process needs to ensure that there is rapid uptake of the project by households and to extend the benefits of the programme over the shortest possible period of time. It also needs to ensure that sufficient numbers of households participate in the programme that will allow for cost efficiencies of construction work undertaken at scale.

### **6.5 Establishment of intensive gardening methods**

The process will largely be driven by a Family Food Production Facilitator. The support of agricultural practitioners experienced in small scale household food production will be utilized where these are available. Households will be encouraged to adopt intensified gardening practices through training in various options of garden layout, recycling of grey water and food and nutrition with the objective of achieving a positive mindset change towards good practice in household food production. Cross learnings with other individual households and communities will be encouraged

Limited supplies of seedlings, particularly during the mobilization phase, will be used to encourage food production. Here again the exchange of seedlings among neighbours will be encouraged so that the community can generate an ongoing supply of seedlings which they can exchange or sell to one another.

### **6.6 RWH tank designs**

Tank design for the Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler) RWH project. All the RWH tanks to be constructed at Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler) will be cylindrical above-ground tanks, each consisting of reinforced concrete foundation footings, a concrete floor, cement

block walls plastered on the inside and outside and an iron roof on gumtree purlins. Tank capacity will be to hold 30 cubic meters of water. Design changes will be discussed with DWAF North-West Region before construction in order to maintain quality standards and the structural integrity of the tanks.

### **6.7 The purpose of 30 cubic meter tanks**

### **6.8 Construction of 50 RWH tanks, training and supervision**

Construction of the 50 RWH tanks is the essential output of the Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler) RWH project that will not only benefit the beneficiary household, but will also contribute largely to the economic development of the Greater Taung Local Municipality (Dry Hearts, Myra and Sitting Poler) communities. Quality tanks will have to be built that are safe. The Mvula Trust will ensure that quality standards are maintained through hands on supervision and to provide appropriate training to builders and support operations. Construction operations will include:

- Ongoing liaison between households and tank construction activities to ensure household participation in the building process
- Household support with tank siting for optimal rainwater catchment and gardening use
- Procurement of goods and materials. Cost efficiencies must be achieved and where possible materials should be purchased in bulk. Preference will be given to local materials suppliers.
- Storage and distribution of materials. A dedicated staff person will be responsible for the receipt, issue and movement of materials on site. Beneficiary households will be required to assist with the safe storage of materials.
- Materials and building operations administration. A dedicated staff person will be responsible for on site administration.
- Procurement of skilled builders and support workers. Preference will be given to community based builders. Training will be given to all builders and builders assistants.

- Quality assurance of completed work. All building operations will be subject to quality assessments.
- Formulate a post project Operation and Maintenance plan and provide tank maintenance training to households prior to the handover of the completed tank to the household.
- The head of the beneficiary household will be required to sign an indemnity and acknowledgement of receipt of a completed RWH tank

See the schedule below for the planned construction implementation phases:

### Activity Schedule for the construction of 50 tanks over 13 months

MONTH	MOBILISED		GARDENING		FOUNDATIONS		TANK CONSTRUCTION	
	group	to be mobilised this month	total mobilised	groups	to start gardening this month	total gardening	groups	to start building this month
1								
2								
3	A	5	5	A	3	3		
4	B	15	20	AB	6	9	AB	2
5	C	20	40	ABC	12	21	ABC	6
6	D	20	60	BCD	18	39	ABCD	12
7	E	20	80	CDE	18	57	CDEF	12
8	F	20	100	DEF	12	69	DEFG	12
9	G	10	110	EFG	6	75	EFG	6
		<b>110</b>			<b>75</b>			<b>50</b>

### 6.9 Household mentoring support

Throughout the project implementation households will require ongoing encouragement and support. During the initial mobilisation phase households will be made aware of the potential benefits of the household food security approach and supported to grow their own gardens. Once the households have been selected to qualify for RWH tanks their interest must be maintained during the construction phase. After completion of the tanks households will need to be guided in the use and maintenance of the RWH tanks.

### **6.10 Monitoring, evaluation and reporting**

The Mvula Trust will work closely with the DWAF North-West region and submit progress reports as required and participate in lessons sharing with stakeholders, document all best practice and lessons learnt for sector learning and to inform the roll out process.

### **7. Implementation methodology**

The Mvula Trust project implementation model is grounded in maximized community participation in all aspects of the implementation process. This involves the identification and active participation of community stakeholders such as traditional leadership structures, local government structures including ward councilors and committee members. We seek to identify vulnerable groups in the community who can derive direct benefits from the project implementation process and outcomes. The Mvula trust places strong emphasis on gender mainstreaming and endeavours to create a balance in decision making processes and employment opportunities. Where conditions permit persons with disabilities are provided with opportunities in all aspects of project implementation.

Skills and project related training are conducted through participatory methodologies such as PHAST and peer group knowledge exchange.

The Mvula Trust construction methods are based on the extended Public Works Programme (EPWP) approach, which include gender mainstreaming, local economic development, local skills capacitation, and local economic development.

## 8. Implementation Logical Framework Analysis

<b>Objective 1:</b> To develop the necessary institutional and human resources capacity arrangements that will ensure the effective implementation of the project at scale in a single geographic site.				
<b>Expected Results / Outcomes</b>	<b>Activities</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Assumptions &amp; Risks</b>
1. A project management structure is established capable of achieving the project objectives within an identified settlement area.	1.1 Geographic area for project implementation identified	Geographic area identified and named	Local municipality and geographic co-ordinates	Consensus among key role players on geographic area identified
	1.2 Mvula staff structure established for project implementation	Mvula has appointed skilled persons for project implementation	Mvula project organogram	Skilled persons are available to perform necessary tasks.
	1.3 Mvula appoints persons from existing staff and staff recruitment			
	1.4 Project management and liaison to be established with DWAF NorthWest	Mvula & DWAF structure in place	Name and position of DWAF liaison person	DWAF staff available to perform management & liaison function
	1.5 Identify key stakeholders essential for project implementation (Mvula, DWAF, Municipality & community structures)	Project steering committee is established and functional	Minutes of various meetings, field reports and project progress reports	<ul style="list-style-type: none"> <li>PSC members understand objectives and purpose project</li> <li>Dispute resolution mechanisms are understood and accepted by all</li> </ul>
	1.6 Facilitate PSC initiation meetings			
	1.7 Establish PSC			

**Objective 2:** To facilitate processes with key stakeholders such as national, provincial and local government, and civil society organizations that will ensure collaborative relations, buy-in and support of the RWH programme in the selected implementation site.

Expected Results / Outcomes	Activities	Indicators	Means of verification	Assumptions & Risks
2. Collaborative relations are established among spheres of government, civil society, academic institutions and project community structures that ensures maximized beneficitation of all inputs and available resources in the project community, including sharing of lessons learned.	2.1 Identify institutions relevant to the project objectives 2.2 Identify skills and resources among institutions that can enhance the achievement of the project objectives	<ul style="list-style-type: none"> <li>• Names of institutions and relevant contact persons</li> <li>• Active participation by institutions during project implementation</li> </ul>	<ul style="list-style-type: none"> <li>• List of institutions, contact persons &amp; type of collaboration</li> <li>• Records, minutes and notes on various collaborative activities</li> </ul>	<ul style="list-style-type: none"> <li>• Institutions are willing &amp; available to participate during project implementation</li> <li>• Institutions are willing and capable to contribute skills and resources</li> </ul>
	2.3 Facilitate lessons sharing activities	Project implementation is enriched through various collaborations	Project reports	Institutions are willing to participate
	2.4 Record lessons and identify advocacy materials	Lessons and advocacy materials produced	Documented lessons and advocacy materials	Institutions will share lessons learned and advocacy materials

**Objective 3:** To facilitate processes within the target community that will create awareness of and interest in the objectives of the RWH programme, including training with particular emphasis on household food security initiatives.

Expected Results / Outcomes	Activities	Indicators	Means of verification	Assumptions & Risks
3. Community members are informed of project objectives such as household food security and rainwater harvesting methods. 100 household mobilized and 74 household food gardens established	3.1 Develop and secure household livelihoods and food security materials	Livelihoods and food security advocacy materials are obtained and developed where necessary	<ul style="list-style-type: none"> <li>• Samples of materials</li> <li>• Project reports</li> </ul>	Materials are readily available
	3.2 Facilitate training sessions on livelihoods (mind mobilization / helicopter plan?) for households	100 households have undergone training	<ul style="list-style-type: none"> <li>• Samples of materials</li> <li>• Project reports</li> </ul>	<ul style="list-style-type: none"> <li>• Target community has more than 300 households</li> <li>• Materials and skilled trainers are available</li> </ul>
	3.3 Facilitate training in household food production	100 households have undergone training	Project reports	<ul style="list-style-type: none"> <li>• Target community has more than 300 households</li> <li>• Materials and skilled trainers are available</li> </ul>
	3.4 Secure materials and provide training in appropriate rainwater harvesting methods	<ul style="list-style-type: none"> <li>• Rainwater harvesting materials are available</li> <li>• Community members have undergone training</li> </ul>	<ul style="list-style-type: none"> <li>• Samples of materials</li> <li>• Project reports</li> </ul>	Materials and skilled trainers are available
	3.5 Distribute available materials on livelihoods food production & rainwater harvesting	Information and advocacy materials are distributed	<ul style="list-style-type: none"> <li>• Samples of materials</li> <li>• Project reports</li> </ul>	Materials are available
	3.6 Support households with establishing household food gardens	74 household food gardens established	<ul style="list-style-type: none"> <li>• List of 74 households with active food gardens</li> <li>• Project reports</li> </ul>	Target community has more than 300 households

**Objective 4:** To develop procedures and implement frameworks for the selection of households that will benefit from the provision of rainwater harvesting tanks.

<b>Expected Results / Outcomes</b>	<b>Activities</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Assumptions &amp; Risks</b>
4. 50/60/ households selected for provision of rainwater harvesting tanks	4.1 Develop criteria for household selection including contractual arrangements for provision of RWH tanks	Selection criteria & contracts developed	<ul style="list-style-type: none"> <li>• Selection criteria document</li> <li>• Contract document</li> <li>• Project reports</li> </ul>	Mvula drafts selection criteria and contract documents
	4.2 Obtain stakeholder consensus for selection criteria	Stakeholders agreement of selection criteris	Project reports	Stakeholder consensus on selection criteria and contractual arrangements
	4.3 Set up stakeholder structure to decide household selection based on criteria	Household selection committee established	Project reports	Stakeholder agreement on who serves on selection committee
	4.4 Popularise selection criteria among community members through community structures, institutions, public meetings & publicity handouts (fliers)	Selection criteria publicity materials developed and distributed	<ul style="list-style-type: none"> <li>• Publicity materials</li> <li>• Project reports</li> </ul>	
	4.5 Facilitate household application process	Applications received from prospective beneficiaries household	<ul style="list-style-type: none"> <li>• Completed household application forms</li> <li>• Project reports</li> </ul>	Households are assisted with application process
	4.6 Facilitate household selection process	50/60? households selected	<ul style="list-style-type: none"> <li>• List of selected households</li> <li>• Project reports</li> </ul>	Selection based on criteria
	4.7 Inform community of outcome of selection process	Stakeholders are aware of selection outcomes	Project reports	Fair and transparent selection process has been conducted
	4.8 Set up community based dispute resolution mechanism	Dispute resolution committee established	Project reports	Selection criteris have not been applied fairly and transparently
	4.9 Facilitate individual appeals process	Individual appeals are heard and decided upon	<ul style="list-style-type: none"> <li>• List of individual appellants</li> <li>• Project reports</li> </ul>	Complaints can be facilitated within the selection criteria and

				framework of the RWH project.
	4.10 Conclude contractual arrangements with selected households	Contracts concluded with 50/60? beneficiary households	<ul style="list-style-type: none"> <li>• Signed contracts</li> <li>• Project reports</li> </ul>	Household are willing to accept the contractual agreements for obtaining RWH tanks

<b>Objective 5: To facilitate, provide training and supervise the construction of 50 RWH tanks in the target community.</b>				
<b>Expected Results / Outcomes</b>	<b>Activities</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Assumptions &amp; Risks</b>
5. 50 Rainwater harvesting tanks built for selected households in accordance with criteria, standards & specifications	5.1 Obtain design standards & specifications for RWH tanks	Design standards & specifications secured	<ul style="list-style-type: none"> <li>• Appropriate documentation obtained</li> <li>• Project report</li> </ul>	Tank design standards & specifications are available
	5.2 Obtain necessary engineering supervision for tank designs and construction	Engineering supervision secured	<ul style="list-style-type: none"> <li>• Record of name, qualifications &amp; expertise of engineer</li> <li>• Project reports</li> </ul>	Engineering supervision services are available
	5.3 Establish Mvula's internal construction capacity in conjunction with activities 1.2 & 1.3 above	Mvula has secured necessary construction capacity	<ul style="list-style-type: none"> <li>• Mvula organogram</li> <li>• Project reports</li> </ul>	Construction expertise is available
	5.4 Establish Mvula site construction capacity including site supervision	Mvula site construction capacity obtained	<ul style="list-style-type: none"> <li>• Mvula organogram</li> <li>• Project reports</li> </ul>	Construction workers are available
	5.5 Support beneficiary households with appropriate tank siting that maximizes catchment potential & water use	Appropriate siting of RWH tanks on household stands	Project reports	Households have decided on tank sitings
	5.6 Identify community builders and support workers in line with EPWP principles	Builders and support workers identified	<ul style="list-style-type: none"> <li>• List of builders &amp; support workers</li> <li>• Project reports</li> </ul>	Construction workers are available
	5.7 Source building materials in line with EPWP and LED principles	Building materials & equipment supplies service providers identified	<ul style="list-style-type: none"> <li>• List of local service providers</li> <li>• Project reports</li> </ul>	Local service providers within local area are available or within reasonable distance
	5.8 Facilitate construction training in line with design standards & specifications	Construction training provided to builders and support workers	Project reports	<ul style="list-style-type: none"> <li>• Construction expertise is available</li> <li>• Sufficient number of persons available for training</li> </ul>
	5.9 Facilitate construction activities through site	All construction activities effectively supervised	Project reports	Supervision expertise is available

	supervision & quality management			
	5.10 Ensure quality and safety testing of all completed tanks	Construction quality management conducted	Project reports	Construction expertise is available
	5.11 Facilitate tank maintenance & safety training to households	Training provided to households on tank maintenance & safety	Project reports	Construction expertise is available
	5.12 Facilitate tank handover to households	Households understand all aspects of tank design, capacity & use	Project reports	Technical expertise is available
	5.13 Ensure acceptance of risk and liability by the households in the utilization and maintenance of the infrastructure provided	Acceptance of risks & liabilities by households	<ul style="list-style-type: none"> <li>• Signed acceptance of risks &amp; liabilities form</li> <li>• Project reports</li> </ul>	Households willingly accept risks & liabilities

<b>Objective 6:</b> To provide mentoring support to beneficiary households in household food production, institutional food production, stock watering and the appropriate use of the RWH tanks.				
<b>Expected Results / Outcomes</b>	<b>Activities</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Assumptions &amp; Risks</b>
6. An effective mentoring framework that supports households & local institutions in food production, stock watering & use of RWH tanks	6.1 Develop mentoring framework	Mentoring framework is in place	<ul style="list-style-type: none"> <li>• Mentoring framework document</li> <li>• Project reports</li> </ul>	Agreement on mentoring framework among stakeholders
	6.2 Identify skilled persons who will provide mentoring support	Skilled persons providing mentoring support	<ul style="list-style-type: none"> <li>• List of persons providing mentorship</li> <li>• Project reports</li> </ul>	Skilled persons are available
	6.3 Provide mentoring support throughout project implementation	Skilled persons providing mentoring support	Project reports	Skilled persons are available
<b>Objective 7:</b> To monitor, evaluate and report on progress during the implementation of the project.				
<b>Expected Results / Outcomes</b>	<b>Activities</b>	<b>Indicators</b>	<b>Means of verification</b>	<b>Assumptions &amp; Risks</b>
7. Ongoing M&E and reporting through project implementation	7.1 Develop M&E framework	M&E framework developed	<ul style="list-style-type: none"> <li>• M&amp;E framework document</li> <li>• Project reports</li> </ul>	M&E framework agreed on with DWAF
	7.2 Agree on reporting format including narrative & financial reporting	Reporting format developed and agreed on	<ul style="list-style-type: none"> <li>• Reporting format</li> <li>• Project reports</li> </ul>	Reporting format agreed between DWAF & Mvula
	7.3 Conduct M&E activities	M&E activities conducted	Project reports	Mvula capacity to conduct M&E activities
	7.4 Draft & submit monthly project reports & final project close out report	Monthly reports submitted & final project close out report produced	<ul style="list-style-type: none"> <li>• Monthly progress reports</li> <li>• Final project close out report</li> </ul>	Mvula capacity to provide monthly reports & final project close out report.

## 9. Project risk mitigation analysis

### Greater Taung LM (Dry Hearts, Myra & Sitting Polar) Implementation Risk Analysis

<b>Result/Outcome 1:</b> A project management structure is established capable of achieving the project objectives within a single geographic location as provided for in contract.			
<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
1.1 Contractual negotiations	DWAF & Mvula reached agreement to sign contract	Delays in contract signature compromises project implementation within stipulated time frames	Agreement is reached between DWAF and Mvula to stagger implementation period over subsequent DWAF budget years
1.2 Geographic area for project implementation identified	Consensus among key role players on geographic area identified	<ul style="list-style-type: none"> <li>• Top down decision making processes by DWAF and relevant municipality in geographic area selection</li> <li>• Selected geographic area (village) community members not accepting the RWH project</li> </ul>	<ul style="list-style-type: none"> <li>• Clarify Mvula's position with regard to village selection at the outset</li> <li>• DWAF &amp; responsible municipal structures undertakes to inform community members of selection decision making process</li> <li>• DWAF &amp; responsible municipal structures, supported by Mvula, informs community members &amp; institutions of the project objectives in as far as this is possible</li> </ul>
1.3 Mvula staff structure established for project implementation 1.4 Mvula appoints persons from existing staff and staff recruitment	Skilled persons are available to perform necessary tasks.	Delays in project implementation as a result of Mvula capacity constraints	Mvula Northwest obtains capacity support from Head Office (Policy Unit) as well as procurement of professional skills
1.5 Project management and liaison to be established with DWAF NorthWest	DWAF staff available to perform management & liaison function	Delays in project implementation time frames and different interpretations of project purpose and objectives	<ul style="list-style-type: none"> <li>• DWAF Northwest appoints dedicated staff person(s) that keeps management fully informed of project implementation processes</li> <li>• Where possible alternative back-up staff should be identified</li> </ul>

<p>1.6 Identify key stakeholders essential for project implementation (Mvula, DWAF, Municipality &amp; community structures)  1.7 Facilitate PSC initiation meetings  1.8 Establish PSC</p>	<ul style="list-style-type: none"> <li>• PSC members understand objectives and purpose project</li> <li>• Dispute resolution mechanisms are understood and accepted by all</li> </ul>	<ul style="list-style-type: none"> <li>• PSC members adopt their own interpretation of the project objectives and their roles &amp; responsibilities</li> <li>• PSC members demonstrate bias in dealing with members of the community</li> <li>• PSC members selection is biased in favour of certain interest groups</li> </ul>	<p>Transparent and inclusive PSC formation process &amp; regular review of project purpose &amp; objectives</p>
<p>1.9 Training PSC members on project purpose, objectives, results &amp; institutional roles &amp; responsibilities</p>	<ul style="list-style-type: none"> <li>• All PSC members available to attend project training</li> </ul>	<p>PSC members misinterprets project purpose, objectives &amp; roles and responsibilities</p>	<p>Regular review of project purpose &amp; objectives</p>

**Result/Outcome 2:** Collaborative relations are established among spheres of government, civil society, academic institutions and project community structures that ensures maximized beneficiation of all inputs and available resources in the project community, including sharing of lessons learned.

<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
2.1 Identify institutions relevant to the project objectives 2.2 Identify skills and resources among institutions that can enhance the achievement of the project objectives	<ul style="list-style-type: none"> <li>• Institutions are willing &amp; available to participate during project implementation</li> <li>• Institutions are willing and capable to contribute skills and resources</li> </ul>	Aloofness & antagonism among key role players	Identify areas of synergy and opportunities for collaboration among key role players
2.3 Facilitate lessons sharing activities	Institutions are willing to participate	Institutions working in silos contributing to wasteful duplication	Demonstrate the advantages of lessons & information sharing
2.4 Record lessons and identify advocacy materials	Institutions will share lessons learned and advocacy materials	Institutions working in silos contributing to wasteful duplication	Demonstrate the advantages of lessons & information sharing

**Result/Outcome 3:** Community members are informed of project objectives such as household food security and rainwater harvesting methods. 110 household mobilized and 75 household food gardens established

<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
3.1 Develop and secure household livelihoods and food security materials	Training materials are readily available	Delays in developing relevant training materials	<ul style="list-style-type: none"> <li>• Seek collaboration with institutions that specialize in this field</li> <li>• Procurement of required services in time</li> </ul>
3.2 Facilitate training sessions on livelihoods (mind mobilization / helicopter plan?) for households	<ul style="list-style-type: none"> <li>• Target community has more than 300 households</li> <li>• Training materials and skilled trainers are available</li> </ul>	<ul style="list-style-type: none"> <li>• Community has less than 300 households</li> <li>• Delays in developing relevant training materials</li> </ul>	<ul style="list-style-type: none"> <li>• Seek collaboration with institutions that specialize in this field</li> <li>• Procurement of required services in time</li> </ul>
3.3 Facilitate training in household food production	<ul style="list-style-type: none"> <li>• Target community has more than 300 households</li> <li>• Training materials and skilled trainers are available</li> </ul>	<ul style="list-style-type: none"> <li>• Community has less than 300 households</li> <li>• Delays in facilitating training workshops</li> </ul>	<ul style="list-style-type: none"> <li>• Seek collaboration with institutions that specialize in this field</li> <li>• Procurement of required services in time</li> </ul>
3.4 Secure materials and provide training in appropriate rainwater harvesting methods	Training materials and skilled trainers are available	Delays obtaining training materials & skilled trainers	<ul style="list-style-type: none"> <li>• Seek collaboration with institutions that specialize in this field</li> <li>• Procurement of required services in time</li> </ul>
3.5 Distribute available materials on livelihoods food production & rainwater harvesting	Training materials are available	Delays in obtaining training materials	<ul style="list-style-type: none"> <li>• Seek collaboration with institutions that specialize in this field</li> <li>• Procurement of required services in time</li> </ul>
3.6 Support households with establishing household food gardens	Target community has more than 300 households	Reduced project outputs	<ul style="list-style-type: none"> <li>• Seek collaboration with institutions that specialize in this field</li> <li>• Procurement of required services in time</li> </ul>

<b>Result/Outcome 4: 50 households selected for provision of rainwater harvesting tanks</b>			
<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
4.1 Develop criteria for household selection including contractual arrangements for provision of RWH tanks	Mvula drafts selection criteria and contract documents	<ul style="list-style-type: none"> <li>Mvula does not have necessary capacity to develop criteria</li> <li>Delays to develop selection criteria &amp; contract docs</li> </ul>	Procurement of necessary skills in time
4.2 Obtain stakeholder consensus for selection criteria	Stakeholder consensus reached on selection criteria and contractual arrangements	Discontent among stakeholders over selection criteria	Extensive publication and facilitate workshops on criteria among stakeholders in order to reach consensus
4.3 Set up stakeholder structure to decide household selection based on criteria	Stakeholder agreement on who serves on selection committee	Disagreement among stakeholders among stakeholders over persons serving on the selection committee.	Ensure ongoing stakeholder participation in selection processes
4.4 Popularise selection criteria among community members through community structures, institutions, public meetings & publicity handouts (fliers)	Good cooperation with community structures & institutions	Community members opposed to RWH project implementation	Ensure ongoing stakeholder participation in project implementation processes
4.5 Facilitate household application process	Households are assisted with application process	Organized opposition against household applications	Apply conflict resolution processes or project withdrawal through relevant stakeholders
4.6 Facilitate household selection process	Selection based on criteria	Corrupt selection processes	Apply conflict resolution processes
4.7 Inform community of outcome of selection process	Fair and transparent selection process has been conducted	Corrupt selection processes revealed	Apply conflict resolution processes
4.8 Set up community based dispute resolution mechanism	Project implementation is fair & transparent	Selection criteria & processes have not been applied fairly & transparently	Apply conflict resolution processes
4.9 Facilitate individual appeals process	Complaints can be facilitated within the selection criteria and framework of the RWH project.	Corrupt appeal processes	Apply conflict resolution processes
4.10 Conclude contractual arrangements with selected households	Household are willing to accept the contractual agreements for obtaining RWH tanks	Organised opposition against household participation	<ul style="list-style-type: none"> <li>Apply conflict resolution processes</li> <li>Higher level stakeholder intervention</li> <li>Abandon project (withdrawal) through relevant stakeholders</li> </ul>

<b>Result/Outcome 5: 50 Rainwater harvesting tanks built for selected households in accordance with criteria, standards &amp; specifications</b>			
<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
5.1 Obtain design standards & specifications for RWH tanks	Tank design standards & specifications are available	<ul style="list-style-type: none"> <li>Delays to obtain designs &amp; specifications</li> <li>Inappropriate designs &amp; specifications</li> </ul>	Secure appropriate design specifications in time
5.2 Obtain necessary engineering supervision for tank designs and construction	Engineering supervision services are available	Delays to find engineering supervision	Early search for engineering supervision
5.3 Establish Mvula's internal construction capacity in conjunction with activities 1.3 & 1.4 above	Construction expertise is available	Delays to find skilled construction expertise	<ul style="list-style-type: none"> <li>Secure skilled construction expertise in time</li> <li>Secure expertise from outside of the target community where required</li> </ul>
5.4 Establish Mvula site construction capacity including site supervision	Mvula has available site supervisors	Delays in construction of tanks	Procurement of construction site supervisors in time
5.5 Support beneficiary households with appropriate tank siting that maximizes catchment potential & water use	Households have decided on tank sitings	<ul style="list-style-type: none"> <li>Land (topography) conditions makes tank siting difficult</li> <li>Roof &amp; other catchment surfaces not appropriate for rain water catchment</li> </ul>	<ul style="list-style-type: none"> <li>Negotiate tank siting with neighbours</li> <li>Consider alternative tank designs (under ground?)</li> <li>Abandon tank construction</li> </ul>
5.6 Identify community builders and support workers in line with EPWP principles	Construction workers are available	<ul style="list-style-type: none"> <li>Delays to find skilled construction workers</li> <li>Unreliable construction workers</li> <li>Construction workers not skilled enough</li> <li>Strike action</li> </ul>	<ul style="list-style-type: none"> <li>Secure skilled workers in time</li> <li>Clear working conditions &amp; fair remuneration for work done</li> <li>Provide training based on tank construction requirements</li> <li>Find workers from outside the community</li> </ul>
5.7 Source building materials in line with EPWP and LED principles	Local service providers within local area are available or within reasonable distance	<ul style="list-style-type: none"> <li>Local suppliers not available</li> <li>Unreliable supply of goods &amp; services</li> </ul>	<ul style="list-style-type: none"> <li>Stock piling of materials</li> <li>Source goods &amp; materials from outside of target community</li> </ul>
5.8 Facilitate construction training in line with design standards & specifications	<ul style="list-style-type: none"> <li>Construction expertise is available</li> <li>Sufficient number of persons available for training</li> </ul>	Potential workers are not suitable for training	Secure trained workers from outside community
5.9 Facilitate construction activities through site supervision	Supervision expertise is available	Organised opposition to construction phase	<ul style="list-style-type: none"> <li>Apply conflict resolution framework</li> </ul>

& quality management		Strike action	<ul style="list-style-type: none"> <li>Household members to assist with construction activities</li> <li>Find construction workers from outside community</li> <li>Higher level stakeholder intervention</li> <li>Abandon project intervention</li> </ul>
5.10 Ensure quality and safety testing of all completed tanks	Engineering & Construction expertise is available	<ul style="list-style-type: none"> <li>Poor construction quality</li> <li>Building defects</li> </ul>	<ul style="list-style-type: none"> <li>Strict building supervision</li> <li>Reconstruction of building defects</li> </ul>
5.11 Facilitate tank maintenance & safety training to households	<ul style="list-style-type: none"> <li>Construction expertise is available</li> <li>Maintenance &amp; safety schedule developed</li> </ul>	<ul style="list-style-type: none"> <li>Households unwilling to be trained</li> <li>Poor maintenance of tanks</li> <li>Safety measures ignored</li> </ul>	Mvula, DWAF & Local government indemnified of any responsibility
5.12 Facilitate tank handover to households	<ul style="list-style-type: none"> <li>Technical expertise is available</li> <li>Handover procedures in place</li> </ul>	Households unwilling to accept ownership of tanks	PSC & high level stakeholder intervention
5.13 Ensure acceptance of risk and liability by the households in the utilization and maintenance of the infrastructure provided & signature of indemnity forms.	Households willingly accept risks & liabilities	Households unwilling to accept risks & liabilities	PSC & high level stakeholder intervention

<b>Result/Outcome 6:</b> An effective mentoring framework that supports households & local institutions in food production, stock watering & use of RWH tanks			
<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
6.1 Develop mentoring framework	Agreement on mentoring framework among stakeholders	Mentoring support not provided over time	DWAF, DoA & municipalities commit to ongoing involvement & support
6.2 Identify skilled persons who will provide mentoring support	<ul style="list-style-type: none"> <li>• Skilled persons are available</li> <li>• Ongoing household &amp; community interest in food security &amp; livelihoods activities</li> </ul>	Project collapse after construction phase	DWAF, DoA & municipalities provide ongoing support
6.3 Provide mentoring support throughout project implementation	<ul style="list-style-type: none"> <li>• Skilled persons are available</li> <li>• Ongoing household &amp; community interest in food security &amp; livelihoods activities</li> </ul>	Project collapse after construction phase	DWAF, DoA & municipalities provide ongoing support

<b>Result/Outcome 7: Ongoing M&amp;E and reporting through project implementation</b>			
<b>Activities</b>	<b>Assumptions</b>	<b>Risks</b>	<b>Risk Mitigation</b>
7.1 Develop M&E framework	M&E framework agreed upon between DWAF & Mvula	<ul style="list-style-type: none"> <li>M&amp;E framework not implemented as part of project implementation process</li> <li>Project does not achieve objectives &amp; agreed results</li> </ul>	<ul style="list-style-type: none"> <li>Mvula applies strict project management procedures</li> <li>DWAF applies due diligence measures</li> </ul>
7.2 Agree on reporting format including narrative & financial reporting	Reporting format agreed upon between DWAF & Mvula	<ul style="list-style-type: none"> <li>Project extends beyond time frames and exceeds budget</li> <li>Inappropriate application of funds</li> <li>Project implementation processes compromised</li> <li>Corrupt dealings</li> </ul>	<ul style="list-style-type: none"> <li>Mvula applies strict project management procedures</li> <li>DWAF applies due diligence measures</li> </ul>
7.3 Conduct M&E activities	Mvula capacity to conduct M&E activities	Mvula failing to conduct M&E activities	<ul style="list-style-type: none"> <li>Mvula applies strict project management procedures</li> <li>DWAF applies due diligence measures</li> </ul>
7.4 Draft & submit monthly project reports & final project close out report	Mvula capacity to provide monthly reports & final project close out report.	<ul style="list-style-type: none"> <li>Late submission of reports compromises M&amp;E activities</li> <li>Mvula fails to submit reports &amp; project close out report</li> </ul>	<ul style="list-style-type: none"> <li>Mvula applies strict project management procedures</li> <li>DWAF applies due diligence measures</li> </ul>

**10. Implementation Gantt Chart**

Refer Excel Spreadsheet

**11. Project Budget**

Refer Excel spreadsheet

## **12. Cash Flow Analysis**

Refer Excel spreadsheet

**13. Tank cost**

Refer Excel spreadsheet