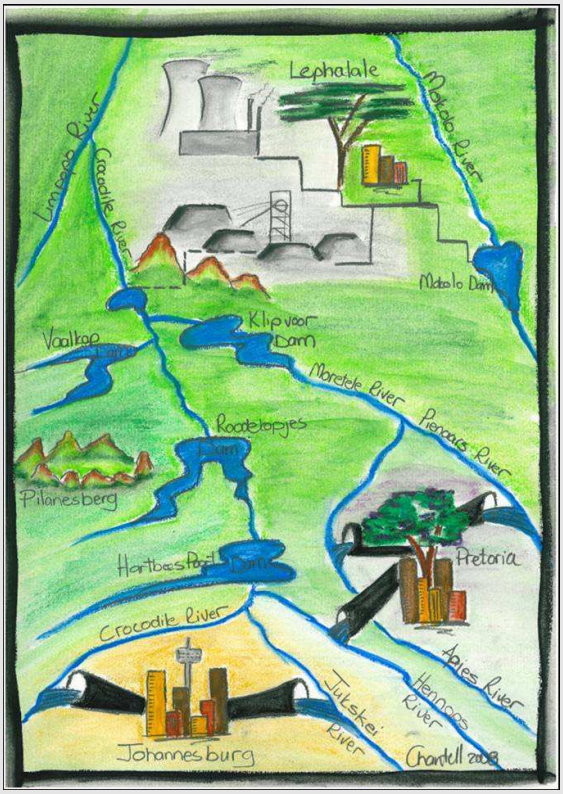
water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

MOKOLO AND CROCODILE RIVER (WEST) WATER AUGMENTATION PROJECT (MCWAP)

Phase 1: Augment Supply from Mokolo Dam



Amended Plan of Study for Environmental Impact Assessment

[DEA REF. NO. 12/12/20/1465]

March 2010

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TITLE AND APPROVAL PAGE

Project name:	***Mokolo and Crocodile River (West) Water Augmentation Project (MCWAP) - Phase 1: Augment Supply from Mokolo Dam***
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Aurecon

Approved for Project Coordinator by:

SC Vogel

Project Coordinator & Manager

DEPARTMENT WATER AFFAIRS (DWA)

Approved for Chief Directorate: Integrated Water Resources Planning by:

OJS van den Berg

Chief Engineer: Options Analysis North

LS Mabuda

Director: Options Analysis

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1 INTRODUCTION

This report serves as the amended Plan of Study for the Environmental Impact Assessment (EIA) for the proposed Mokolo and Crocodile River (West) Water Augmentation Project (MCWAP) – Phase 1: Augment the supply from Mokolo Dam. This Plan of Study was prepared in accordance with Regulation 29(1)(i) of Government Notice No. R. 385 of 21 April 2006, promulgated in terms of Chapter 5 of the National Environmental Management Act (No. 107 of 1998).

The original Plan of Study was submitted to the Department of Environmental Affairs (DEA) as part of the final Scoping Report on 17 December 2009, and the Department thereafter requested the following amendments:

1. Consider the relevant guidelines for specialist studies and include the required detail in terms of the procedures and methods to be followed during the EIA phase, including the specialist studies; and
2. Incorporate the issues raised by the Interested and Affected Parties (I&APs) clearly into the specialist terms of reference to ensure that they are adequately addressed.

Note that the details of MCWAP Phase 1 are not contained within this report, and the reader is referred to the Scoping Report for any additional information pertaining to the project.

2 EXECUTION OF THE EIA PROCESS

This sections aims to provide a description of the tasks to be performed during the EIA phase of MCWAP Phase 1.

2.1 Key Environmental Issues Identified During Scoping Phase

The issues raised by I&APs during Scoping (as contained in the Comments and Response Report), to a large extent, determine and guide the investigations during the EIA phase.

Pertinent environmental issues identified during Scoping, which will receive specific attention during the EIA phase through specialist studies, technical input and suitable mitigation measures, are tabulated below.

Pertinent Issues (Construction Phase) for prioritisation during the EIA

Potential Issues / Impacts
• Erosion at steep areas – e.g. access road from Mokolo Dam and at Rietspruitnek
• Impacts on river structure at watercourse crossings (construction phase)
• Impacts to wetlands and pans
• Creation and rehabilitation of borrow pits
• Disposal of large quantity of spoil material
• Disturbance of the aquifer from blasting
• Damage to riparian vegetation at river crossings.
• Impacts to animals on game farms
• Impacts to protected species
• Loss of income from hunting, game viewing, and crop production
• Damage to property
• Loss of agricultural land within servitude
• Damage to heritage resources
• Increase in traffic from construction vehicles
• Lowering of Mokolo Dam level

Pertinent Issues (Operational Phase) for prioritisation during the EIA

Potential Issues / Impacts
• Water availability for users downstream of Mokolo Dam
• Reduction of biodiversity of aquatic fauna downstream of Mokolo Dam, should curtailments apply.
• Impact to terrestrial animals downstream of Mokolo Dam due to availability of water, should curtailments apply.
• Potential curtailment of water use downstream of the Mokolo Dam
• Loss of land with registration of permanent servitude / extension of existing Exxaro pipeline servitude
• Reduction in property value
• Loss of agricultural land within servitude • Agro-economical impact • Food security

2.2 Specialist Studies

According to Münster (2005), a 'trigger' is "*a particular characteristic of either the receiving environment or the proposed project which indicates that there is likely to be an issue and/or potentially significant impact associated with that proposed development that may require specialist input*". The requisite specialist studies 'triggered' by the findings of the Scoping process, aimed at addressing the key issues and compliance with legal obligations, include:

- Ecological Study – Terrestrial;
- Ecological Study – Aquatic;
- Traffic Management Plan;
- Heritage Impact Assessment;
- Socio-Economic Study; and
- Social Impact Assessment.

The Terms of Reference (ToR), both general and specific, for the abovementioned specialist studies follow in the sub-sections below. Amongst others, the *Guideline for determining the scope of specialist involvement in EIA processes* (Münster, 2005) was used in compiling the general Terms of Reference for the specialist studies. The following

guidelines were also employed to prepare the specific ToR for the respective specialists (where appropriate):

- Guideline for involving biodiversity specialists in EIA processes (Brownlie, 2005);
- Guideline for involving visual and aesthetic specialists (Oberholzer, 2005);
- Guideline for involving heritage specialists in EIA processes (Winter & Baumann, 2005); and
- Guideline for involving social assessment specialists in EIA processes (Barbour, 2007).

For the inclusion of the findings of the specialist studies into the EIA report, the following guideline will be used: *Guideline for the review of specialist input in EIA processes* (Keatimilwe & Ashton, 2005). Key considerations will include:

- Ensuring that the specialists have adequately addressed I&APs' issues;
- Ensuring that the specialists' input is relevant, appropriate and unambiguous; and
- Verifying that information regarding the receiving ecological, social and economic environment has been accurately reflected and considered.

2.2.1 Terms of Reference – General

1. Address all triggers for the specialist studies contained in the subsequent specific ToR.
2. Address issues raised by I&APs, as contained in the Comments and Response Report, and conduct an assessment of all potentially significant impacts. Additional issues that have not been identified during Scoping should also be highlighted to the EAP for further investigations.
3. Approach to include desktop study and site visits, as deemed necessary, to understand the affected environment and to adequately investigate and evaluate salient issues. Indigenous knowledge (i.e. targeted consultation) should also be regarded as a potential information resource.
4. Assess the impacts (direct, indirect and cumulative) in terms of their significance (using suitable evaluation criteria) and suggest suitable mitigation measures. In accordance with the mitigation hierarchy, negative impacts should be avoided,

minimised, rehabilitated (or reinstated) or compensated for (i.e. offsets), whereas positive impacts should be enhanced. A risk-averse and cautious approach should be adopted under conditions of uncertainty.

5. Consider time boundaries, including short to long-term implications of impacts for project life-cycle (i.e. pre-construction, construction, operation and decommissioning).
6. Consider spatial boundaries, including:
   a. Broad context of the proposed project (i.e. beyond the boundaries of the specific site);
   b. Off-site impacts; and
   c. Local, regional, national or global context.
7. The provision of a statement of impact significance for each issue, which specifies whether or not a pre-determined threshold of significance (i.e. changes in effects to the environment which would change a significance rating) has been exceeded, and whether or not the impact presents a potential fatal flaw or not. This statement of significance should be provided for anticipated project impacts both before and after application of impact management actions.
8. Recommend a monitoring programme to implement mitigation measures and measure performance. List indicators to be used during monitoring.
9. Appraisal of MCWAP Phase 1 alternatives (including the No-Go option) by identifying the Best Practicable Environmental Option (BPEO) with suitable justification. Münster (2005) defines BPEO as the alternative that "*provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term*".
10. Advise on the need for additional specialists to investigate specific components and the scope and extent of the information required from such studies.
11. Engage with other specialists whose studies may have bearing on your specific investigation.
12. Present findings at a workshop with MCWAP project team, where key discussion points will include the evaluation of alternatives, recommended management measures and monitoring programme.
13. Present findings and participate at public meetings, where EIA Report is to be presented to I&APs.

14. Information provided to the EAP needs to be signed off.
15. Review and sign off on MCWAP Phase 1 EIA Report prior to submission to DEA to ensure that specialist information has been interpreted and integrated correctly into the report.
16. All communication to project team should occur through D. Henning, as the EIA Project Manager. Note that strict protocol exists with regard to access to farms, which needs to be adhered to. All communication to I&APs and arrangements for access should occur through S. Pienaar, as the Public Participation Coordinator.
17. The appointed specialists must take into account the policy framework and legislation relevant to their particular studies.
18. All specialist reports must adhere to section 33 ("specialist reports and reports on specialist processes") of Government Notice No. R385 (2006), as part of the EIA Report.

2.2.2 Terms of Reference - Specific

Ecological Study - Terrestrial

KEY ISSUES & TRIGGERS IDENTIFIED DURING SCOPING

- I&AP issue - owner of Farms Wolvenfontein 645 & Witbank 647 requested specific attention to sensitive species that occur on these properties.
- I&AP issue - impacts posed to environmental-related organisations (e.g. SANParks).
- I&AP issue - provision must be made for the migration of animals and their access to water points during construction.
- Impacts associated with watercourse crossings. Affected watercourses include Mokolo River (tributary only), Rietspruit (tributary and main stem), Kutangspruit (tributary and main stem) and Sandloop River (tributary and main stem).
- Impacts to wetlands and pans. From a desktop perspective, wetlands are situated at the crossings on the Rietspruit and Kutangspruit.
- Impacts to protected fauna and flora species.
- Impacts to animals on private game farms.
- Impacts to riparian vegetation, resource quality and fauna downstream of Mokolo Dam.
- Rehabilitation of affected construction footprint and control of exotic vegetation.
- Mokolo Dam is situated within the core zone of the Waterberg Biosphere. Specific

requirements of Waterberg Biosphere Reserve Management Committee and UNESCO need to be considered.

- Mokolo Dam is a provincial nature reserve, and any related requirements need to be duly considered.

APPROACH

- Undertake baseline survey (reconnaissance) and describe affected environment within the project footprint (i.e. alternative pipeline corridors and all associated infrastructure) from a biodiversity perspective.
- Take into consideration the provincial conservation plan.
- Assess the current ecological status and the conservation priority within the project footprint and adjacent area (as deemed necessary). Provide a concise description of the importance of the affected area to biodiversity in terms of pattern and process, ecosystem goods and services, as appropriate.
- Undertake sensitivity study to identify protected species, Red Data species, Orange Listed species, alien species and medicinal species. Prepare a biodiversity sensitivity map with the use of a Geographical Information System (GIS), based on the findings of the study.
- Consider cause-effect-impact pathways for assessing impacts to biodiversity related to MCWAP Phase 1.
- Identify potential fatal flaws associated with the project and its alternatives from a biodiversity perspective.

NOMINATED SPECIALIST

Organisation:	Galago Environmental			
Name:	Vanessa Marais	Dr. J.V. Van Greuning	Dr. I.L. Rautenbach	Mr. W.D. Haacke
Discipline:	• Coordinator • Environmental Impacts	Flora	• Mammalogy • Zoological review	Herpetology
Qualifications:	BL Landscape Architecture	Pri. Sci. Nat: D.Sc	Pri.Sci. Nat Ph.D, T.H.E.D.	Pri. Sci. Nat: M.Sc
No. of years experience:	16	40	45	50

Ecological Study - Aquatic

KEY ISSUES & TRIGGERS IDENTIFIED DURING SCOPING

- I&AP issue - impact to river downstream of Mokolo Dam during the operation phase of the transfer scheme.
- Impacts associated with watercourse crossings, including effect to resource quality (i.e. water quality, flow, morphology and aquatic biota). Affected watercourses include Mokolo River (tributary only), Rietspruit (tributary and main stem), Kutangspruit (tributary and main stem) and Sandloop River (tributary and main stem).
- Impacts to riparian vegetation, resource quality and fauna downstream of Mokolo Dam.
- Impacts to wetlands and pans. From a desktop perspective, wetlands are situated at the crossings on the Rietspruit and Kutangspruit.

APPROACH

- Undertake desktop study (topographical maps and aerial photographs) and baseline aquatic survey and describe affected aquatic environment within the project footprint (i.e. alternative pipeline corridors and all associated infrastructure). Provide overview of catchment, including the Tertiary Catchment (i.e. Mokolo River).
- Determine ecological status of the receiving aquatic environment, including the identification of endangered or protected species.
- Delineate all wetlands in accordance with the guideline: *A practical field procedure for identification and delineation of wetlands and riparian areas* (DWAF, 2005). This includes assessing terrain, soil form, soil wetness and vegetation unit indicators to delineate permanent, seasonal and temporary zones of the wetlands. Allocate conservation buffers from the outer edge of the temporary zones of the wetlands (provincial-specific).
- Provide a concise description of the importance of the affected aquatic environment in terms of pattern and process, ecosystem goods and services, as appropriate.
- Provide suitable mitigation measures to protect watercourses during project life-cycle.
- Recommend monitoring programme and indicators for project life-cycle, where findings from survey would serve as baseline data.

NOMINATED SPECIALIST

Organisation:	Enviross Environmental Impact Studies CC
Name:	Mathew James Ross
Qualifications:	MSc – Aquatic Health Presently completing a PhD – Aquatic Health
No. of years experience:	6
Affiliation (if applicable):	• South African Society for Aquatic Scientists (SASAqS) • Aquatox Forum (Environmentek, CSIR)

Traffic Management Plan

KEY ISSUES & TRIGGERS IDENTIFIED DURING SCOPING

- Transportation of fill material from borrow pits.
- Transportation of spoil material to dumping site.
- Delivery of construction material (particularly pipelines) to site.
- Use of steep roads (i.e. access roads to Mokolo Dam and Rietspruitnek).

APPROACH

- Desktop and field study (as deemed necessary) to understand regional and local traffic situation.
- Assess impacts and suggest suitable management measures to prevent or reduce identified traffic impacts associated with MCWAP Phase 1.
- Recommend monitoring programme for traffic management, which primarily focuses on the construction phase.

NOMINATED SPECIALIST

Organisation:	Inroads Consulting
Name:	Rajen Govender
Qualifications:	BSc Hons (Transportation)
No. of years experience:	18
Affiliation (if applicable):	ECSA

Heritage Impact Assessment

KEY ISSUES & TRIGGERS IDENTIFIED DURING SCOPING

- Potential occurrence of heritage resources, graves and structures older than 60 years within project footprint.
- Mokolo Dam is situated within the core zone of the Waterberg Biosphere. Specific requirements of Waterberg Biosphere Reserve Management Committee and UNESCO need to be considered.
- Mokolo Dam is a provincial nature reserve, and any related requirements need to be duly considered.

APPROACH

- Undertake a Phase 1 Heritage Impact Assessment in accordance with the South African Heritage Resources Act (No. 25 of 1999).
- Undertake baseline study (historical research, desktop and field study) indicating the siting and location of heritage resources, the nature and degree of significance and the present physical condition.
- Prepare a heritage sensitivity map (GIS-based), based on the findings of the study.
- Identify heritage resources to be monitored.

NOMINATED SPECIALIST

Name:	Leonie Marais-Botes
Qualifications:	• BA Hons (Cultural History) • Post Grad Dip in Museum Science • Post Grad Dip in Heritage
No. of years experience:	15
Affiliation (if applicable):	N/A

Socio-Economic Study

KEY ISSUES & TRIGGERS IDENTIFIED DURING SCOPING

- I&AP issue - Loss of income from hunting, game viewing, and crop production during construction.
- I&AP issue - Potential curtailment of water use downstream of the Mokolo Dam.

- I&AP issue - Loss of income from crop production during the operational phase, should curtailment of water use be implemented.
- I&AP issue - Reduction in property value.
- Potential agro-economical impact from reduced crop and food production, due to the potential curtailment of water use downstream of Mokolo Dam.
- Potential impact on food security, which is of national concern.

APPROACH

- Assess socio-economic impacts (positive and negative) associated with the project, and quantify the economic impacts.
- Key economic activities to be considered include
  - Irrigation Agriculture;
  - Livestock (Cattle);
  - Game;
  - Tourism;
  - Mining;
  - Other Economic Activities; and
  - Hartbeestpoort Urban Development.
- Economic tools to be used include a Water Impact Model (WIM), macro-economic model (Social Accounting Matrix) and cost-benefit model.

NOMINATED SPECIALIST

Organisation:	Conningarth
Name:	Dr David Mullins
Qualifications:	D Com (Economics)
No. of years experience:	33
Affiliation (if applicable):	SA Economics Society

Social Impact Assessment

KEY ISSUES & TRIGGERS IDENTIFIED DURING SCOPING

- I&AP issue - Influx of people seeking employment and associated impacts (e.g. foreign workforce, cultural conflicts, squatting, demographic changes, health-related impacts, safety and security).

- I&AP issue - security during construction phase.
- Social implications associated with potential curtailment of water and building of pipeline (and associated infrastructure).

APPROACH

- Describe community to be affected by MCWAP Phase 1. Consider demographic profile, social drivers, social context and network, development plans (including the Lephalale Spatial Development Framework). A combination of a technocratic and participatory approach is suggested (at discretion of specialist).
- Collect baseline data on the current social environment and historical social trends.
- Identify and collect data on impact assessment variables and social change processes related to MCWAP Phase 1.
- Undertake a thorough review of the following:
  - Environmental and Social Screening Report (DWAF, 2008), prepared as part of the MCWAP Pre-feasibility Study;
  - Minutes of the focus group meetings held on 24 April 209 in Thabazimbi and Lephalale;
  - Minutes of public meetings and individual meetings;
  - Minutes of meetings held as part of broader Public Involvement Process (DWA-driven), including Project Steering Committee, Agricultural Forum and Working Groups;
  - Database of MCWAP Phase 1 I&APs; and
  - MCWAP Phase 1 Comments and Response Report.
- Undertake additional consultation with affected individuals and communities, as deemed necessary.
- Assess the significance of social impacts associated with MCWAP Phase 1.

NOMINATED SPECIALIST

Name:	Michele Vrdoljak
Qualifications:	• Masters of the Art (Psychology) • PhD
No. of years experience:	7
Affiliation (if applicable):	N/A

2.3 Methodology to Assess the Identified Impacts

All impacts will be analysed with regard to their nature, extent, magnitude, duration, probability and significance. The following definitions apply:

Nature (/Status)

The project could have a positive, negative or neutral impact on the environment.

Extent

- Local - extend to the site and its immediate surroundings.
- Regional - impact on the region but within the province.
- National - impact on an interprovincial scale.
- International - impact outside of South Africa.

Magnitude

Degree to which impact may cause irreplaceable loss of resources.

- Low - natural and social functions and processes are not affected or minimally affected.
- Medium - affected environment is notably altered; natural and social functions and processes continue albeit in a modified way.
- High - natural or social functions or processes could be substantially affected or altered to the extent that they could temporarily or permanently cease.

Duration

- Short term - 0-5 years.
- Medium term - 5-11 years.
- Long term - impact ceases after the operational life cycle of the activity either because of natural processes or by human intervention.
- Permanent - mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.

Probability

- Almost certain - the event is expected to occur in most circumstances.
- Likely - the event will probably occur in most circumstances.
- Moderate - the event should occur at some time.
- Unlikely - the event could occur at some time.
- Rare/Remote - the event may occur only in exceptional circumstances.

Significance

Provides an overall impression of an impact's importance, and the degree to which it can be mitigated. The range for significance ratings is as follows-

0 – Impact will not affect the environment. No mitigation necessary.

1 – No impact after mitigation.

2 – Residual impact after mitigation.

3 – Impact cannot be mitigated.

The impacts assessment will incorporate the findings of the various specialist studies.

2.4 Assessment of Alternatives

The following alternatives to the pipeline alignment will be investigated further during the EIA process:

a) Rising main (from Mokolo Dam to Wolwenfontein balancing dams) -
   - Option 1 – along access road to Mokolo Dam; and
   - Option 2 – alternative route along Farms Wolvenfontein 645LQ and Witbank 647LQ, as suggested by landowner.

b) Gravity Main (between the Farms Hanglip 508LQ to Kringgatspruit 318LQ) -
   - Option 1 – follows alignment of new Steenbokpan tar road that runs north of Medupi Power Station, but south of coalfield; and
   - Option 2 – follows railway line to the south of Medupi Power Station and farm boundaries.

c) No go option.

The various alternatives will be evaluated during the EIA phase through a detailed comparative analysis, which will include a technical and environmental appraisal of the advantages and disadvantages associated with each route. The assessment will include *inter alia* the following considerations:

- Issues raised by I&APs;
- Findings from the specialist studies;
- Technical feasibility; and

- Financial implications.

The intention of the analysis is to identify the feasible alternative with the least impact to the environment that will still achieve the objectives of MCWAP Phase 1.

2.5 Public Participation – EIA Phase

2.5.1 Updating of I&AP Database

The I&APs database will be updated as and when necessary (e.g. alteration of route) during the execution of the EIA.

2.5.2 Notification – Approval of Scoping Report

Advertisements will be placed in the following newspapers as notification that the Scoping Report has been approved by DEA:

- Regional newspapers –
  - Die Beeld (Afrikaans); and
  - The Star (English).
- Local newspaper –
  - Kwevoel (Afrikaans); and
  - Mogol Pos (Afrikaans).

In addition, all I&APs will be notified of the approval of the Scoping Report and commencement of the EIA phase via fax, email or registered mail.

2.5.3 Appraisal of Alternatives Suggested by I&APs

Deviations from the proposed pipeline alignment and location of associated infrastructure due to recommendations and issues raised by I&APs, will be considered in detail from a technical and environmental perspective during the EIA phase.

At the time when the draft Scoping Report was prepared, the only alternatives suggested by I&APs was the deviation from the pipeline route recommended by Mr. G. Viljoen (Farm Wolvenfontein 645 LQ).

2.5.4 Public Meeting

A public meeting will be held during the EIA phase. All parties on the I&APs database will be invited (via email, fax or post) to attend and advertisements will be placed in local and regional newspapers (same as listed in **Section 11.2.2**) as notification of the public meetings. The aims of the meetings will be as follows:

- To present the project details (i.e. scheme components);
- To present the findings of the specialist studies;
- To address key issues raised during the Scoping Phase;
- To elaborate on the potential environmental impacts (qualitative and quantitative), and the proposed mitigation of these impacts;
- To present the findings of the comparative analysis on the alternatives;
- To explain the EIA process; and
- To allow for queries and concerns to be raised, and for the project team to respond.

Opportunity will be provided after the public meeting for I&APs to view the project information (including maps, posters, aerial photographic fly-over, presentation) and to interact more closely with the project team and specialists.

A comments and response report will be compiled and included in the EIA Report, which will record the date that issues were raised, a summary of each issue, and the response of the team to address the issue.

2.5.5 Review of Draft EIA Report

40 days will be granted for review of the EIA Report. The draft EIA Report will be lodged for public review at the following venues:

Table 19: Locations for review of draft EIA Report

Copy No.	Location	Telephone Number
1	Lephalale Local Municipal office	014 763 2193
2	Lephalale Public Library	014 762 1453
3	Lephalale Dept of Agriculture	014 763 2137
4	Agri Lephalale Office	014 763 1888
5	Lephalale District Agricultural Union	014 763 3263
6	Mokolo Irrigation Board	014 763 3095
7	Steenbokpan Winkel	014 766 0167
8	Transvaal Agricultural Union (TAU)	072 549 8579
9	Crocodile River West Irrigation Board	014 785 0610
10	Makoppa Irrigation Board	083 469 3777
11	Pretoria Central Library	012 358 8954

The draft EIA Report will also be placed on the DWA website (http://www.dwaf.gov.za/projects.asp).

All parties on the I&APs database will be notified via email, fax or post of the opportunity to review the draft EIA Report at the abovementioned locations, the review period and the process for submitting comments on the report. The public will also be notified of the aforementioned via advertisements in local and regional newspapers.

All comments received from I&APs and the responses thereto will be included in the final EIA Report for submission to DEA.

2.5.6 Notification of DEA Decision

All I&APs will be notified via email, fax or post within 10 days after having received written notice from DEA on the final decision for MCWAP Phase 1. Advertisements will also be placed in local and regional newspapers regarding the Department's decision. These notifications will include the appeal procedure to the decision and key reasons for the decision. A copy of the decision would be provided to I&APs on request.

2.5.7 Broader Public Involvement Process

As part of the broader Public Involvement Process, the following will still be undertaken during the EIA phase:

- Technical working groups with Irrigation Boards;
- Agricultural Forum meetings;
- PSC meetings;
- One-on-one meetings with directly affected landowners; and
- Distribution of a newsletter.

2.6 EIA Report

The EIA Report will be compiled to satisfy the minimum requirements stipulated in section 32 of Government Notice No. R. 385 of 21 April 2006. The following critical components of the EIA Report are highlighted:

- A detailed description of the activities related to the execution of MCWAP Phase 1.
- A detailed description of the extant environmental conditions and the manner in which the relevant environmental features will be affected by the proposed project.
- An account of public participation undertaken as part of the EIA phase.
- A detailed comparative assessment of the alternatives, including their advantages and disadvantages to the receiving environment.
- A summary of significant findings of the specialist studies. Full versions of the specialist studies will be contained as appendices in the EIA Report.
- A detailed assessment of each pertinent environmental impact, where the analysis will consider the nature, extent, magnitude, duration, probability and significance of the impacts (refer to methodology contained in **Section 10** of the Scoping Report), as well as cumulative effects. Suitable mitigation measures will also be identified and generated to address these impacts.
- An Environmental Management Plan (EMP), which contains *inter alia* the following:
  - Suitable mitigation measures to address environmental impacts during the planning, pre-construction, construction, operation and decommissioning phases of MCWAP Phase 1;
  - Roles and responsibilities, as well as timeframes (where applicable), for the implementation of the mitigation measures; and

  - Systems for monitoring and reporting compliance to the EMP.
- An environmental impact statement, summarising the conclusions from the EIA.

2.7 Authority Consultation

The EIA will only commence once DEA has accepted the Scoping Report and the Plan of Study for the EIA. If relevant, the necessary revisions will be made to the aforementioned documents if requested by this Department.

An authorities meeting will be scheduled with the following parties to present the draft EIA Report:

- DEA;
- DEDET;
- DMR;
- DWA;
- Department of Agriculture;
- Waterberg District Municipality; and
- Lephalale Local Municipality.

The final EIA Report will be submitted to DEA. Any requested amendments will be discussed with the Department to ensure that their queries are adequately and timeously attended to.

For the remainder of the Scoping process and EIA the interaction with DEA will be as follows:

- Submission of final Scoping Report;
- Meeting with designated Environmental Officer to explain project and arranging a site visit;
- Addressing comments and facilitating decision-making regarding the Scoping Report;
- Arranging an authorities meeting during EIA stage;
- Submission of EIA Report;

- Addressing comments and facilitating decision-making regarding the EIA Report; and
- Obtaining a decision.

All authorities will also remain involved through their participation on the MCWAP PSC.

2.8 EIA Timeframes

The table below presents to proposed timeframes for the EIA process, which takes cognisance of DEA's proposed SID timeframes. *Note that these dates are subject to change*.

Table 20: EIA Timeframes

EIA Milestone	Proposed Timeframe
Public Review of draft Scoping Report	02/11/09 – 11/12/09
Public Meeting to present draft Scoping Report	11 – 12/11/09
Submission of final Scoping Report to DEA	17/12/09
Review of Scoping Report by DEA	18/12/09 – 14/01/10
Notification of Scoping Report decision and commencement of EIA	18/01/10
EIA Public Participation	18/01/10 – 23/04/10
Public Review of draft EIA Report	03/03/10 – 23/04/10
Submit final EIA Report to DEA	10/05/10
DEA Review & Decision	11/05/10 – 27/07/10
Notify I&APs of Decision	28/07/10

Note: *Dates reflected coincide with timeframes communicated in Scoping Report, and may change during the course of the EIA process*

3 REFERENCES

Barbour, T. 2007. *Guideline for involving social assessment specialists in EIA processes.* Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Brownlie, S. 2005. *Guideline for involving biodiversity specialists in EIA processes: Edition 1.* CSIR Report No ENV-S-C 2005 053 C. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Department of Water Affairs and Forestry. 2005. *A practical field procedure for identification and delineation of wetlands and riparian areas* (edition 1). DWAF, Pretoria.

Department: Water Affairs and Forestry. 2008. Mokolo Crocodile (West) Water Augmentation Project (MCWAP) Feasibility Study. *Environmental and Social Screening Report*. Prepared by Africon in association with Kwezi V3 Engineers, Vela VKE and specialists. DWAF, Pretoria.

Keatimilwe, K. and Ashton, P.J. 2005. *Guideline for the review of specialist input in EIA processes: Edition 1*. CSIR Report No ENV-S-C 2005 053 B. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Münster, F. 2005. *Guideline for determining the scope of specialist involvement in EIA processes: Edition 1*. CSIR Report No ENV-S-C 2005 053 A. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Oberholzer, B. 2005. *Guideline for involving visual & aesthetic specialists in EIA processes: Edition 1.* CSIR Report No ENV-S-C 2005 053 F. Republic of South Africa,

Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

Winter, S. & Baumann, N. 2005. *Guideline for involving heritage specialists in EIA processes: Edition 1.* CSIR Report No ENV-S-C 2005 053 E. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.