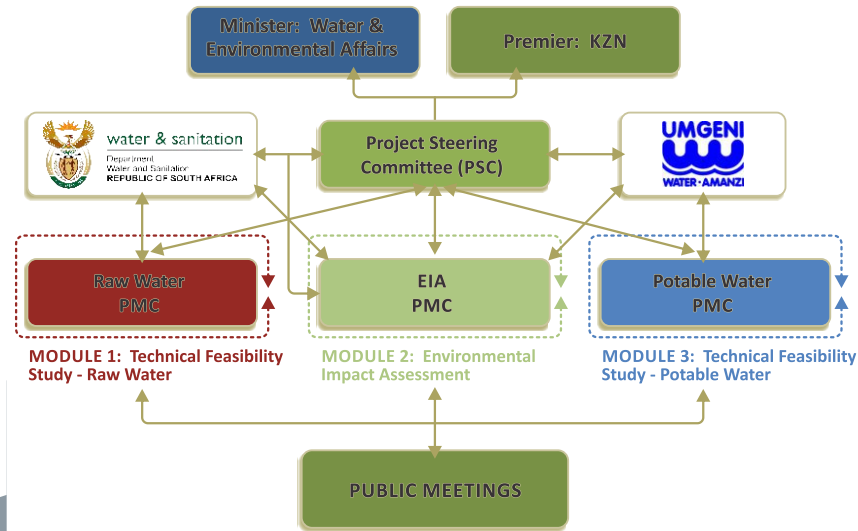
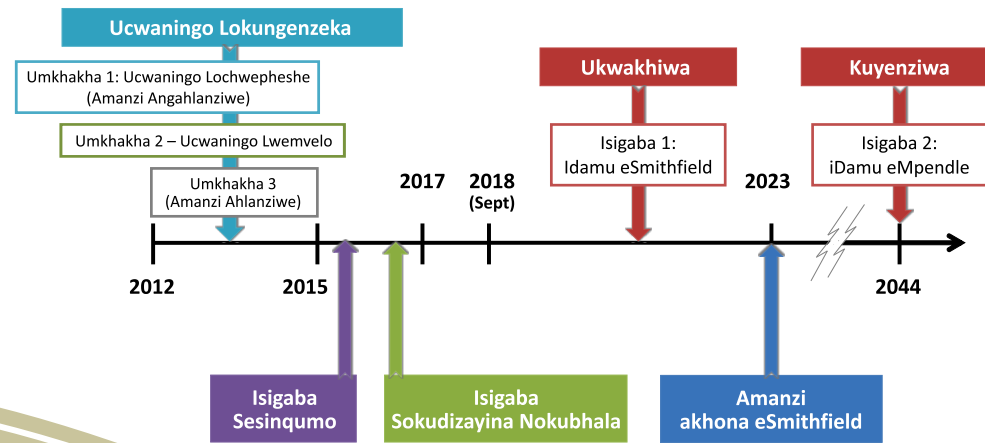


Ukwengamela

Ngenxa yokuthi leprojecti ihlose ukuhambisa amanzi iwayise emgudwini waseMgeni, okuyindawo ephethwe uMgeni Water kunabasebenzisi bamanzi abaphuma kuMasipala waseThekwini, loluCwango ludinga ukuthi izinhlaka zontathu zikaHulumeni zibambe iqhaza kuhlenganisa nabahlomuli abaqavile abasohlakeni lwamanzi. Ngakho-ke umgudu wokubambiqhaza komphakathi uzolandelwa ube yingxenye yoCwango Lokungenzeka Emvelweni (Umkhakha 2).



Uhlelo Lweprojecti



Imininingwane Ykuxhumana



UMNYANGO WEZAMANZI NOKUTHUTHWA KWENDLE

OHOLA ITHIMBA:
Kobus Bester
Tel: 012 336 8071
E-mail: besterk@dwa.gov.za



UMGENI WATER

OHOLA ITHIMBA:
Gavin Subramanian
Tel: 033 341 1271
E-mail: gavin.subramanian@umgeni.co.za



Aecom SA (Pty) Ltd

UMKHAKHA 1: Ucwaningo Lochwepheshe: Amanzi Angahlanziwe

OHOLA ITHIMBA:
Hermien Pieterse
Tel: 012 421 3500
E-mail: hermien.pieterse@aecom.com



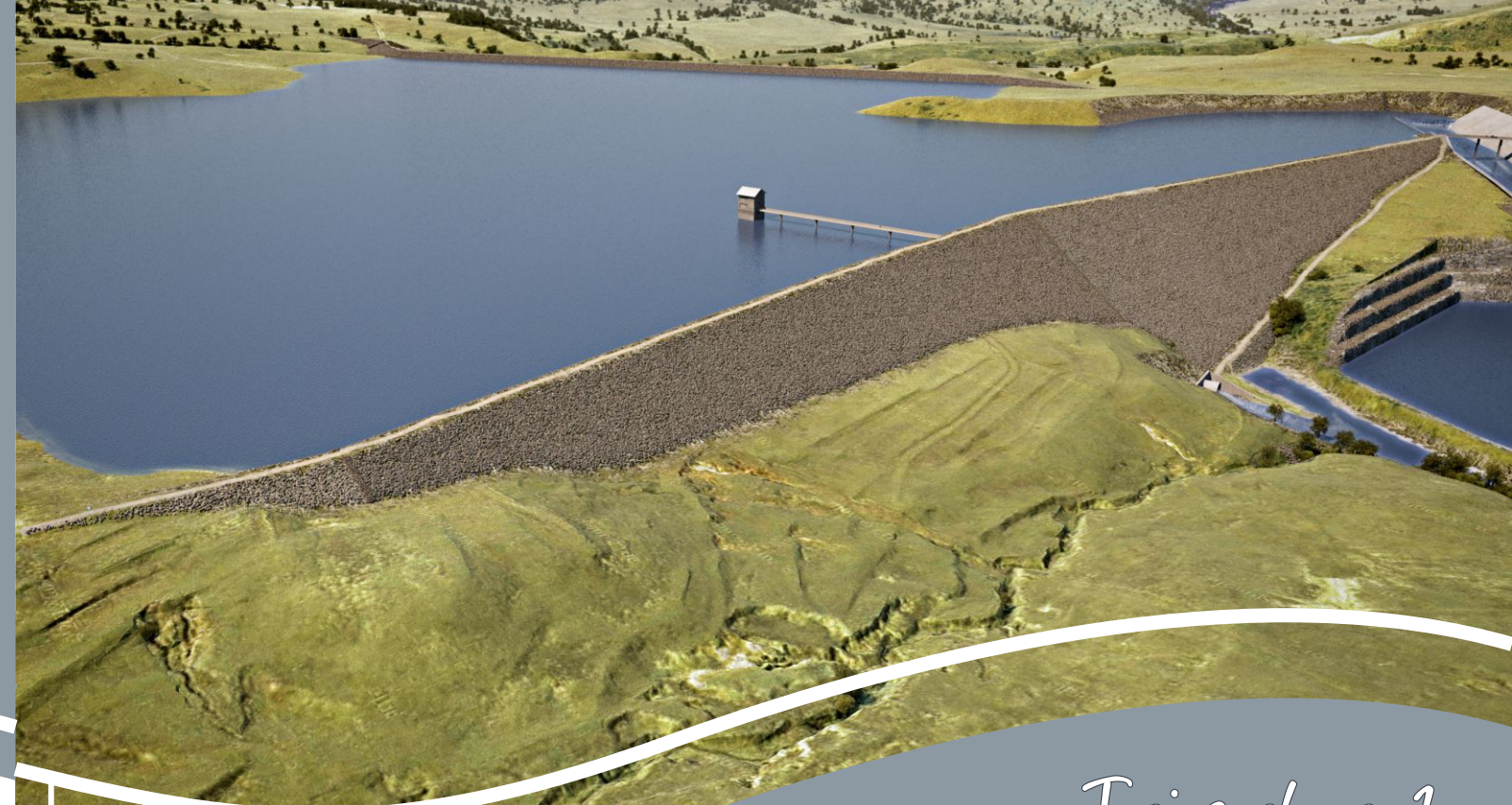
UMKHAKHA 2: Ucwaningo Lokungenzeka Emvelweni

OHOLA ITHIMBA:
Donavan Henning
Tel: 011 781 1730
E-mail: donavanh@nemai.co.za



UMKHAKHA 3: Ucwaningo Lochwepheshe: Amanzi Ahlanziwe

OHOLA ITHIMBA:
Ian Watson
E-mail: iwatson@knightpiesold.com
Amal Doorgapershad
Tel: 031 276 4660
E-mail: adoorgapershad@knightpiesold.com



Isigaba 1 I-Projecti Yamanzi eMkhomazi

Umfula uMkhomazi ungumfula wesithathu omkhulu KwaZulu-Natali uma kukalwa ngomthamo wamanzi ongenela emfuleni. Amanzi angena eMkhomazi ageleza esuka emvuleni kanye nasezindaweni zokuphathwa kwamanzi. Umfula uMkhomazi awukakathukiswa.



UMnyango Wezamanzi Nokuthuthwa Kwendle ucubungula izindlela zokubhekana nezidingo zamanzi esikhathini eside esizayo ukuze kwaneliseke abasebenzisi bamanzi ezindaweni eziseThekwini naseMgungundlovu, KwaZulu-Natali. Inani labasebenzisi bamanzi lilinganiselwa ezigidini eziyisithupha (6 million). Kuze kube yimanje, uCwango Lokungenzeka oluqondene neProjecti Yamanzi eMkhomazi (uMWP) luyaqhubeka. Inhloso yaloluCwango ukubheka izindlela ezingasetshenziswa ukumelana nezidingo zamanzi endaweni kaMasipala waseThekwini esikhathini esizayo.

Leprojecti ehlongozwayo yamanzi eMkhomazi ihlanganisa ukuhanjiswa kwamanzi esuka eMfuleni uMkhomazi eya ohlelweni lwamanzi olukhona lwaseMgeni. Loluhlelo lokuhambisa amanzi lubonakala luyindlela engcono nesekelele enganikezela ngamanzi anele ukuze uMgeni ufeze izidingo zawo zamanzi esikhathini eside nesizayo. Leprojecti iqondene nendawo yokuphathwa kwamanzi ethinta uMkhomazi, uMlaza kanye nomfula uMgeni.

Ngokuthuthukisa umfula uMkhomazi nokusebenzisa izizinda ezikhona ukuhambisa amanzi, umbono woMnyango Wezamanzi wokuba khona komthombo wamanzi othembekele, osheshayo nosekelele kubhekana nezidingo zendawo yomnotho KwaZulu-Natali uyofezeka.

Isigaba Sokuqagula	<ul style="list-style-type: none"> > Ukuqagula izidingo > Ukuqagula nokukhetha izindlela zokwenza
Isigaba Esandulela Ucwaningo	<ul style="list-style-type: none"> > Ukucwaninga izindlela ezingasetshenziswa > Ukuqagula izindlela ezingcono ezizocwaningiswisa
Isigaba Socwaningo	<ul style="list-style-type: none"> > Ucwaningo olunzulu nokubheka izindlela ezingcono ezingasetshenziswa > Ukuletha izincwadi zeprojecti
Isigaba Sokwesekela Isinqumo	<ul style="list-style-type: none"> > Ukugunyazwa ngokwemvelo > Ukubhekelela izidingo zemvelo > Ukubambiqhaza Komphakathi > Izimali nokuma kwezinhlaka > Izindlela zokonga isikhathi nezizinda > Isinqumo sokwenza iprojecti
Isigaba Sokudizayina Nokubhala	<ul style="list-style-type: none"> > Ukuqinisekisa ukuma kwezinhlaka > Ukutholakala kwezimali > Imigomo yokuqasha osonkontileka > Ukudizayina konjiniyela nezincwadi zokwakha
Isigaba Sokwakha Nokwenza	<ul style="list-style-type: none"> > Ezohwebo nokuqasha osonkontileka > Ukuhlaliswa kabusha kwabantu nokunxephezela > Ukwakha > Ukunikizela ingqalasizinda ezinhlakeni ezifanele nokuqalisa ukusebenzisa idamu

Uma kubhekwa, iNingizimu Afrika iyizwe elomisile kakhulu, uMnyango Wezamanzi uthatha izinyathelo ezinqala ukuqinisekisa ukuthi izizinda zamanzini ezikhona ziyakwazi ukwesekela umnotho othuthukayo

Uma ngabe leprojecti yaseMkhomazi yakhiwa ngokugcwele (Izigaba 1 no 2), iyoba yiprojecti enkulu kakhulu eNingizimu Afrika, ibe sezingeni elikhulu elingaqhathaniswa neLesotho Highlands Water Project uma kubhekwa umthamo wamanzi kanye nobude nobukhulu bemihubhe ehambisa amanzi.



Amanzi Atholakala Ohlelweni loMgeni

Uhlelo loMgeni lwamanzi luyinsika noma umthombo onikezela ngamanzi kubantu abalinganiselwa ku 6 million kanye nezimbongi ezitholakala esifundeni saseMgungundlovu, uMasipala waseThekwini nowaseMsunduzi. Lezindawo ziyizinda ezibalulekile zomnotho waKwaZulu-Natali.

Uhlelo loMgeni lunalamadamu alandelayo, Midmar, Albert Falls, Nagle neNanda. Kuphinde kube khona uhlelo lokuhanjiswa kwamanzi esuka eMooi River aze afike edamini iSpring Grove.

Lohlelo lwaseMgeni lulodwa nje angeke lukwazi ukunikezela ngamanzi azokwanelisa zonke izidingo ezizoba khona esikhathini esizayo. Loluhlelo lunomthamo ongu 334 million m³/ngonyaka (kwakalwa eNanda Dam) ngesiqinisekiso esingu 99% sokunikezela amanzi ngonyaka.

Isigaba 2 soMooi Mgeni Transfer Scheme (okungukwakhiwa kweSpring Grove Dam) kungenye yezindlela ezenziwe ukwengeza izizinda zamanzi okwesikhashana. Lendlela izokwandisa amanzi azotholakala ohlelweni loMgeni ngo 60 million m³/ngonyaka. Yize kukhona lomthamo owengeziwe, angeke amanzi anelise izidingo zaseThekwini naseMgungundlovu esikhathini esizayo.

Isigaba esandulela ucwaningo esenziwa uMnyango Wezamanzi eminyakeni eyedlule, sakhombisa ukuthi iprojecti yoMkhomazi yokuhambisa amanzi esuka eMfuleni uMkhomazi eya ohlelweni loMgeni, kuzoba yilonahlelo olungakwazi ukwanelisa izidingo eziqaguliwe.

Ukwandiswa kwezizinda zamanzi ukuze kumelwane nezidingo zamanzi esikhathini esizayo

Izinhlelo ezahlukehane ezingu-8 zaqagulwa ocwaningweni olwenziwa olwedlule. Kulolucwaningo kwaphumelela izinhlelo zeSmithfield neMpendle. Lezinhlelo zanelisa izidingo zokuthi zicubungulwe futhi kanzulu.

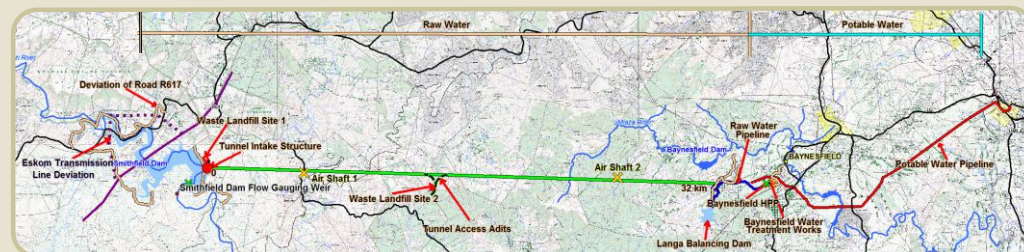
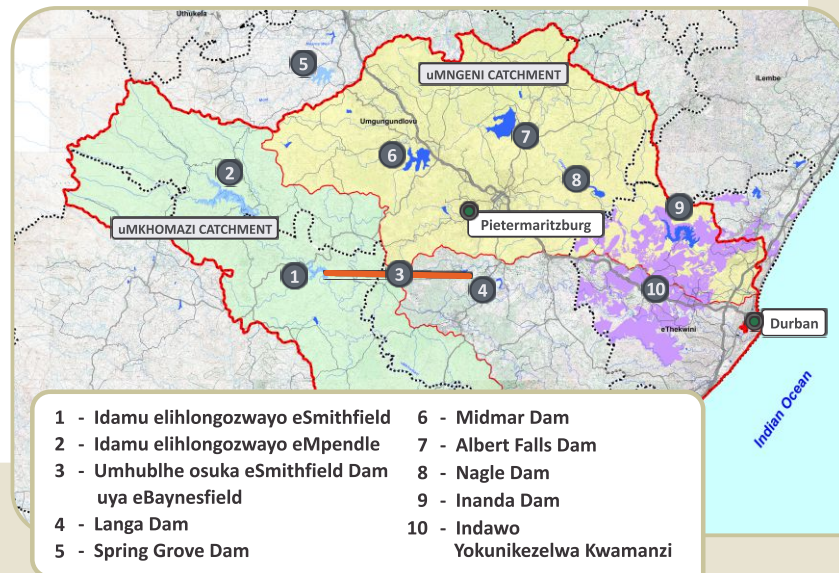
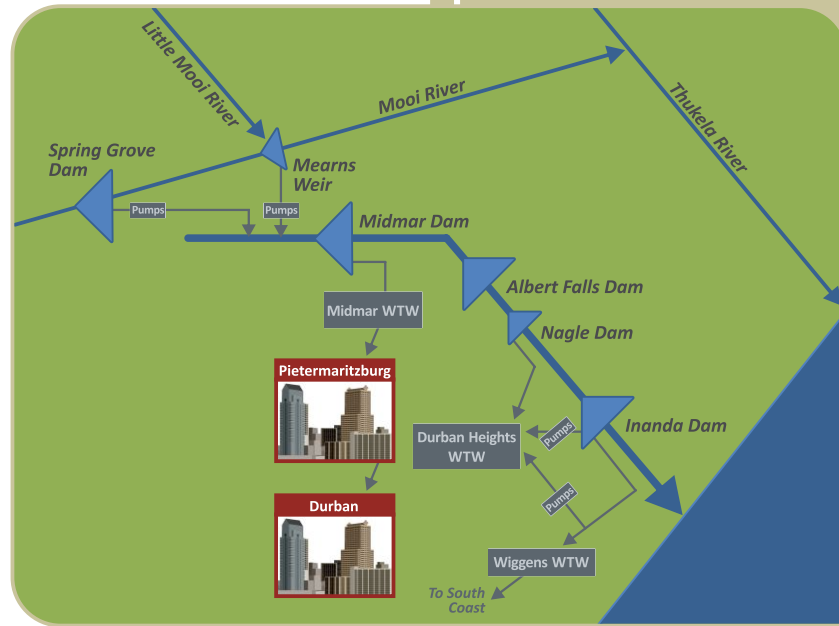
Isigaba esandulela ucwaningo, esaphothulwa ngo 1999, sancoma ukuthi idamu laseSmithfield lidlulele esigabeni esilandelayo socwaningo 'Isigaba Esinzulu Socwaningo' ngenxa yokuthi ingqalasizinda edingekayo yokuhambisa amanzi izoncika ohlelweni olukhona loMgeni. Lokhu kuchaza ukuthi kuzonciphisa ubungozi bokungakwazi ukunikezela ngamanzi ezindaweni zaseThekwini naseMgungundlovu. Lokhu kwaphinde kwaveza ukuthi uma lendlela isetshenziswa izokwesekela uhlelo loMgeni.

Isidingo seDamu eSmithfield

Izinkomba zokuqala ziveza ukuthi isigaba sokuqala seProjecti yaseMkhomazi sizoba nalokhu:

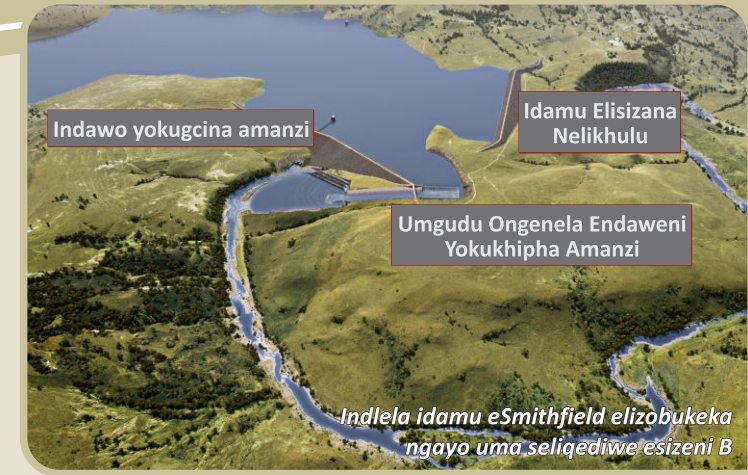
- > Idamu eSmithfield eMfuleni uMkhomazi, elikwazi ukugcina umthamo wamanzi ongu 251 million m³ (31% okuyinilamanzi ngonyaka)
- > Ingqalasizinda yokuhambisa amanzi (ehlenganisa umgudu omude ohamba ngaphansi komhlaba ongu-32 km nepayipi) kanye nedamu lokugcina amanzi okwesikhashana eliseMfuleni eMbangweni
- > Indawo Yokuhlana Amanzi endaweni yomfula uMlaza
- > Ipayipi lamanzi ahlanziwe elehlelayo elisuka esizindeni sokugcina amanzi ngezansi koUmlaas Road liya ohlelweni loMgeni Water lokusabalalisa amanzi.
- > Uma ipayipi selisuka endaweni yokugcina amanzi eMlaas Road, amanzi azosabalaliswa ngokusebenzisa ipayipi elehlelayo nengqalasizinda evela ikhona ukuze afike eThekwini namaphethelo.
- > Idamu laseSmithfield liqagulwe njengedamu elizoba nomthamo wamanzi olinganiselwa ku220 million m³/ngonyaka ngesiqinisekiso esiwu 99%.

Isigaba sesibili seprojecti yoMkhomazi siyokwenziwa uma ngabe sekunesidingo. Lesisigaba sizoba nokwakhiwa kwedamu lesibili endaweni yaseMpendle. Ledamu lizobe lisendaweni ephezulu nomfula uMkhomazi. Lelidamu laseMpendle liyokwehlisela amanzi bese egelezela edamini laseSmithfield.



Idamu elihlongozwayo eSmithfield

Ucwaningo olwenziwe lukhombisa ukuthi ukuma kwedamu eSmithfield kuzoma kanje. Ubude bedamu u81 m. Inhlobo yedamu izoba egcwaliswa ngamatshe. Ubude bedamu elisizana nelikhulu u 26 m. Umhubhe wamanzi uzoba u 3.5 m ububanzi. Idamu lokugcina amanzi okwesikhashana ngesikhathi kuhlolwa futhi kulungiswa umhubhe wamanzi oya endaweni yaseMfuleni uMlaza. Yonke lengqalasizinda izoba yingxenywe yedamu.

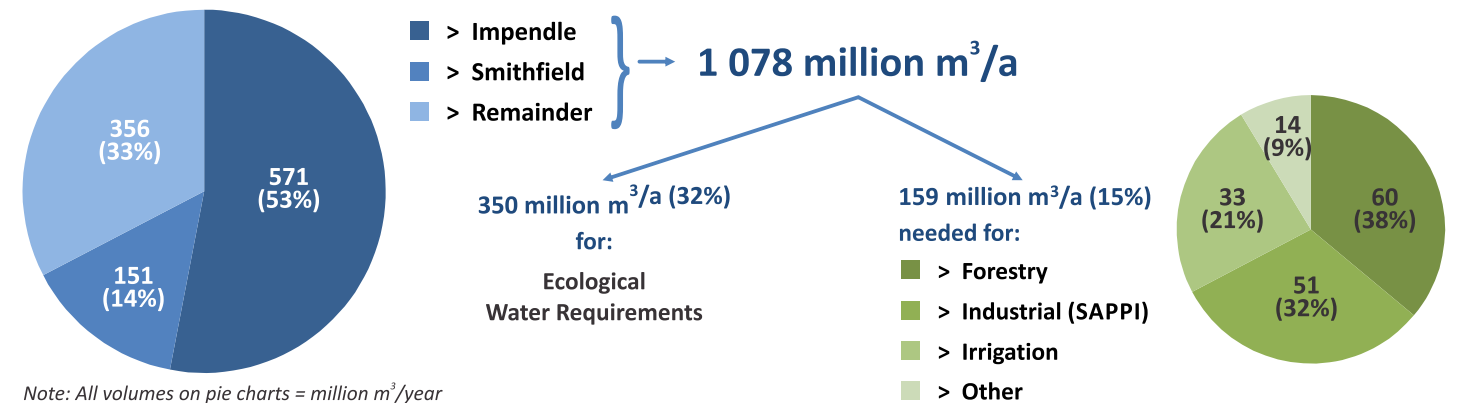


Ukusetshenziswa nokuba khona kwamanzi endaweni yaseMkhomazi

Imibiko yokuqala ikhombisa ukuthi indawo yokuphathwa kwamanzi eMkhomazi ikhiqiza amanzi angu 1 078 million m³ ngonyaka. U-67% walamanzi atholakala ezindaweni eziphezulu neziza zamadamu eMpendle naseSmithfield.

Indawo yokuphathwa kwamanzi eMkhomazi ayinayo intuthuko enkulu, u15% kuphela wamanzi agelezayo asetshenziswayo. Lamanzi asetshenziselwa ezolimo kanye nabemboni u SAPP-ISAICCOR, oseduzane nomlomo womfula uMkhomazi edolobheni Umkomaas.

Omunye u32% wamanzi ubekelwe ukuba usetshenziswe imvelo ephila emanzini ukuqinisekisa ukuthi umfula namaphethelo ugcinke ezingeni elamukelekile noma ngabe iprojecti yoMkhomazi seyiphelile.



Note: All volumes on pie charts = million m³/year

Indlela Yokwenza Ucwaningo

Ukusiza ukuthi kube nenqubekela phambi ngokushesha, ucwaningo luye lwahlukaniswa lwaba imikhakha emithathu. Eminye imisebenzi ezokwenziwa kuleprojecti izothinta nezinye izindawo ezisondelene nendawo yamanzi (izindawo ezisemfuleni Umgeni kanye noMlaza).

Umkhakha 1

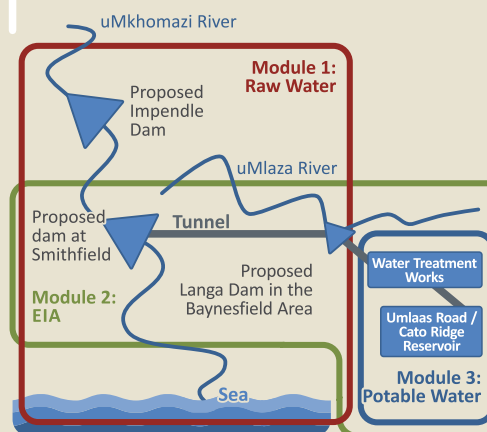
Ucwaningo Lochwepheshe: Amanzi Angahlanziwe

- > Ukucubungula ukuba khona kwedamu eSmithfield (iSigaba 1) esigabeni socwaningo olunzulu.
- > Ukucwaninga ukuba khona kwamanzi edamini Impendle (Isigaba 2) njengesizinda esizosetshenziswa ukuze sikhuphele amanzi eSmithfield. Ukucubungula indlela lezizinhlelo ezizokwenziwa ngayo.
- > Ukuthuthukisa umgudu wokuhambisa amanzi phakathi kwedamu iSmithfield kanye nendawo yokuhlana amanzi eseBaynesfield.
- > Ukucubungula nokucwaninga izizinda zamanzi zaseMkhomazi, nasezindaweni ezisezansi noMkhomazi.
- > Ukubheka idamu lokugcina amanzi okwesikhashana.
- > Ukucubungula imithelela ezoba khona empilweni nasemnothweni.

Umkhakha 2

Ucwaningo Lokungenzeka Emvelweni

Ucwaningo Lokungenzeka Emvelweni ngokulandela uMthetho Wokuphathwa Kwemvelo luzokwenziwa kuhlanganisa noHlelo Lokubambiqhaza Komphakathi



Umkhakha 3

Ucwaningo Lochwepheshe: Amanzi Ahlanziwe

- > Ukucubungula iziza nobungako bezizinda zokuhlana nokugcina amanzi.
- > Ukuthola ulwazi maqondana nobukhulu bemigudu yamapayipi phakathi kweBaynesfield noMlaas Road.
- > Ukuhlenganisa ingqalasizinda yonke kanye nezikhathi ezodingeka ngaso ngokubheka ukukhula kwezidingo zokunikezela amanzi kubasebenzisi bamanzi.
- > Ukwenza ucwaningo lokumbiwa ngaphansi komhlaba esizeni sendawo yokuhlazwa kwamanzi nasezindaweni ezigudla umgudu wipayipi lamanzi.
- > Ukwenza ucwaningo lonjiniyela esizeni esihlongozwayo sokuhlana amanzi nasezindaweni ezigudla umgudu wipayipi lamanzi. (Kuhlanganisa nokuthola ulwazi lobunikazi bomhlaba)