



INCWADANA yokuphila ngokulumkileyo



Ukwenza uphuhliso olusisigxina lube yimpumelelo kumakhaya aseKapa

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Ipapashwe siSixeko saseKapa, 2009

Ulwazi oluthe vetshe lufumaneka kwiSebe loLawulo lweMithombo esiNgqongileyo

6th Floor

44 Wale Street

Cape Town

Tel/Umnxeba: (021) 487 2284

enviro@capetown.gov.za

www.capetown.gov.za/environment

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Le ncwadana ishicilelwe kwiphepha eliLuhlaza elineMicu emiThathu lakwa-SAPPI, isitoko samaphepha angeyongozi kokusingqongileyo enziwe ngemicu yommoba engacocwanga ngeklorin ngenjongo yokuxhasa ukulinywa kwamahlathi ngokuzinzileyo eMzantsi Afrika.



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Ukwenza uphuhliso olusisigxina lube yimpumelelo kumakhaya aseKapa

Olu papasho luqulunqwe lwahlelwa ziiNgcali zoLawulo
oluZinzileyo kokuSingqongileyo abe-Sustainable Energy Africa and
AMATHEMBA Environmental Management Consulting. Inkxaso-mali
nezimvo zifunyenwe kule mibutho ilandelayo:



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ESI SIXEKO SISEBENZELA WENA



Umbulelo

Le ncwadana, esekwe kwiNcwadi yesiKhokelo sokuPhathwa kokusiNgqongileyo kwiKhaya lokuLawulwa kokusiNgqongileyo i-AMATHEMBA iphuhliswe egameni lesiXeko saseKapa yi-AMATHEMBA kwakunye nequmrhu le-Eneji esisiGxina e-Afrika, ukanti imizobo noyilo lwenziwe ngabakwaDotted Line Design.

Incwadi le ngumzekelo ophathekayo wolawulo lwentsebenziswano, exhaswe ngezimali sisiXeko saseKapa, iSebe lePhondo lemiCimbi yokusiNgqongileyo nokuCetywa koPhuhliso kwakunye neSebe likaZwelonke lemiCimbi yezaManzi namaHlathi kwakunye nenkxaso evela kwinkqubo yeDANIDA yoLawulo lokusiNgqongileyo eziDolophini.

Ukuhlanganiswa kwencwadi enjengale kufune uphando, izigxeko-zincomo kwakunye neengcebiso ezisuka kumajelo amaninzi ohlukileyo. Sivuma ngomkhulu umbulelo inxaxheba enikwe ngabo bonke abathe banegalelo kwiinkcukacha eziqulathwe yile ncwadi.

IQumrhu loLawulo lokusiNgqongileyo i-AMATHEMBA: uBarry Wiesner, Tamara North, Stephen Davey

ICandelo leziCwangciso lesiXeko saseKapa: ISebe lokuLawula imiThombo yokusiNgqongileyo

IiNkonzo zoNcedo zesiXeko saseKapa: Amanzi, amaSebe eNkunkuma eQinileyo kwakunye neloMbane

Isebe lezokusiNgqongileyo neNzululwazi ngezemo-mhlaba, iYunivesithi yaseKapa: Kevin Winter

IQela leNtshukumo zoPhuhliso: Fikiswa Mahote

Abenzi-zazobe noyilo bakwaDotted Line Design: Doret Ferreira, Merylle Cornelson

IZiko loPhando nge-Eneji, iYunivesithi yaseKapa

I-Enviro Sense: Susanne Dittke

U-Eskom

I-Fairest Cape Association

Programme for Basic Energy and Conservation in Southern Africa

Umbutho wokhuselo ngokusetyenziswa kwamafutha i-LP Gas Safety Association

Umbutho wokusetyenziswa kweparafini ngokukhuselekileyo i-Paraffin Safety Association: Matt Nondwana

Umbutho wokukhathalelwa kohlaza iSteadfast Greening: Grace Stead

IQumrhu le-Eneji esisiGxina e-Afrika: Megan Anderson, Mark Borchers, Leila Mahomed, Audrey Dobbins

i-The Greenhouse Project: Dorah Lebelo



Ingabula-zigcawu ephuma kuSodolophu waseKapa

Foto: Sififumene ngoncedo lweSiXeko saseKapa



Ubungozi nomngcipheko weenguqu ezikwimozulu kokusingqongileyo nakuqoqosho buqondwa kakuhle lihlabathi lonke.

Kananjalo siye siqonda ukuba imithombo yendalo namafutha enziwe ngeefosili anqongophele.

Ukunqongophala kwamanzi esikubonileyo kwisiXeko saseKapa kusenze sonke sakuqonda ukuba le mithombo asinto esifanele kukuyijonga singayithatheli ngqalelo.

Ukucima kombane okwenzeke kaninzi luphawu lweengxaki zonqongophalo lwamafutha eefosili kwihlabathi jikelele.

Kule minyaka izayo ngokukhula kweemfuno kunye nokunqongophala kwamafutha ezithuthi, kuza kubiza kakhulu ukwenza umbane ngamafutha eefosili.

IKapa lidume kakhulu ngesikumkani seentyatyambo salo, kodwa nesi sikumkani sisengozini ngenxa yotshabalaliso olwenziwa luphuhliso oluqhubekayo kwakunye noxinzelelo kokusingqongileyo olwenziwa lungcoliseko lomoya kwakunye neenguqu kwimozulu.

IsiXeko saseKapa sisebenza nzima ukuzama ukwenza iinkonzo ezinikezwa uluntu zibe zezona zisisigxina nezigcinakalayo kangangoko.

Ukuze sikwazi ukufikelela nokuphumeza iinjongo esizibekele zona ngokunxulumene ne-eneji, amanzi, inkunkuma nolondolozo lweentlobo-ntlobo zeziphili, isiXeko saseKapa sifuna ukuncedwa ngabantu baso.

Incwadana yokuphila NGOKULUMKILEYO iqulethe uthotho lwamanqanaba asebenzisekayo anokuthi amakhaya ngamakhaya aseKapa awathabathe ze awasebenzisele ukwenza amakhaya akhuseleke, kongeke nemali lo gama bencedisa ekuphungeni ukuthwaxeka kokusingqongileyo nendalo yethu exabisekileyo.

La manyathelo aphantwe ngokugqibeleleyo ziingcungcu kwaye abonakalise ukuba angawenza umahluko. Amanyathelo la kugqatyazwe ngawo kulula ukuwaphumeza kwaye angenziwa ngokulula ukuba abe yinxalenye yobomi bemihla ngemihla.

Kananjalo incwadana yokuphila NGOKULUMKILEYO inika ingcaciso kwimibandela ephambili yamajelo okusingqongileyo esijongene nayo silihlabathi kwanalapha phakathi esiXekweni.

Le ncwadana isekwe kwiNcwadana engokusiNgqongileyo emakhaya yequmrhu i-AMATHEMBA engeNgcebiso zokuLawulwa kokusiNgqongileyo kwakunye neNcwadi yeze-Eneji enge-Eneji esisiGxina e-Afrika ebhalwe yaphuhlisa nguSarah Ward. AmaSebe esiXeko sethu aqinisekisile ukuba ingcaciso enikezwa yile ncwadana ichanekile yaye ayiphelelwanga lixesha, inika imboniselo eyiyo yokwenzeka esiXekweni. ISebe lePhondo leNtshona Kapa lemiCimbi yokusiNgqongileyo nokuCetywa koPhuhliso kwakunye neSebe likaZwe-lonke lemiCimbi yezaManzi namaHlathi, anike le ncwadi inxaso ngezimali, nto leyo ebonakalisa ulawulo lomfelandawonye xa kufuneka kuliwe neengxaki ezinobuzaza zokusingqongileyo esijongene nazo kule mihla.

Ndiqinisekile ukuba bonke abo bathe bathabatha inxaxheba ekudalweni nasekusungulweni kwale ncwadana engokusingqongileyo baya kuziqenya xa bebona indlela evuthwe ngayo. Imiselwe ukuba ibe yintlahla-ndlela yazo zonke izixeko zaseMzantsi Afrika ze ibe ngumzekelo osebenzisekayo kwihlabathi wokuphuhliseka ngokusingqongileyo kwesixeko. Thina, sisisiXeko saseKapa, sikhuthaza bonke abasebenzisi bayo ukuba bayonwabele ze bayisebenzise le ncwadi intle kangaka nephuphuma lulwazi

Helen Zille

USodolophu wesiXeko saseKapa



Ku-intanethi yiya ku-

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ufumane izinto ezintsha malunga nokusingqongileyo, neenguqulelo ezikwezinye iilwimi, neminye imithombo nezinto ezipapashiweyo ngokusingqongileyo



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INTSHAYELELO

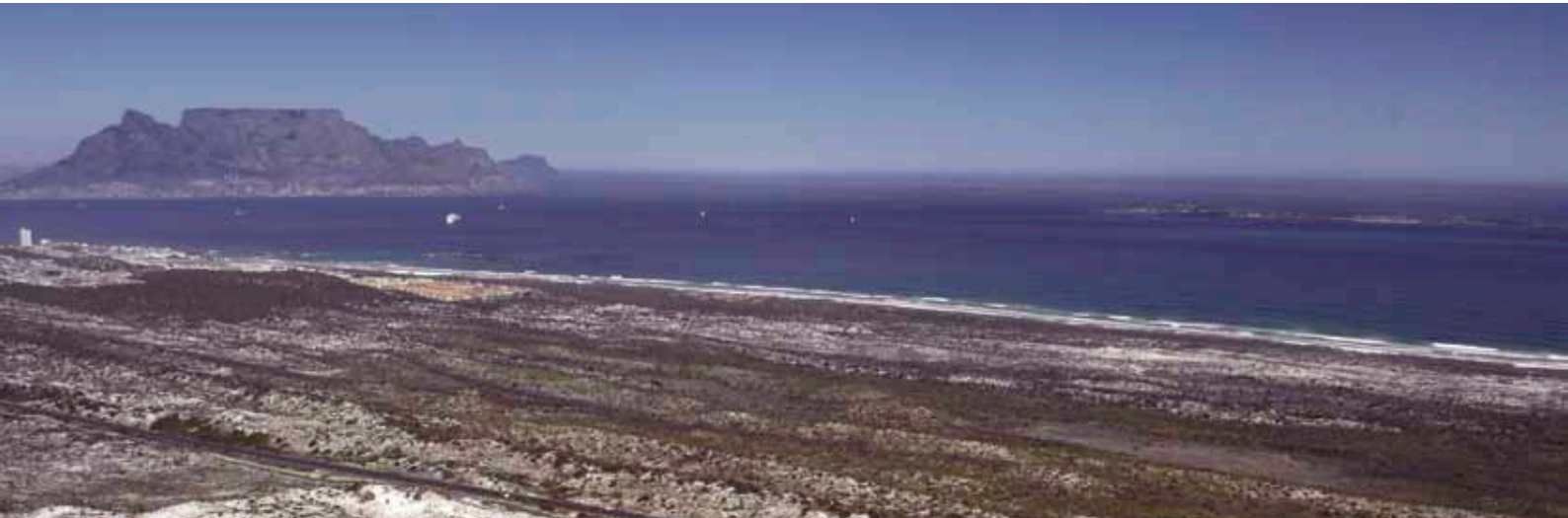
IKapa - Cape Town - Kaapstad – sisixeko esinguNozala (Mother City) wazo zonke izixeko zaseMzantsi Afrika. IKapa sesona sixeko sidala kweli lizwe, intloko-dolophu yowiso-mthetho yoMzantsi Afrika neziko elibalulekileyo lorhwebo nokhenketho. Emva kweeyurana nje ekhululwe eluvalelweni, uNelson Mandela wenza intetho yakhe yokuqala esidlangalaleni kwivaranda ephezulu yeHolo lesiXeko saseKapa – ememezela isiqalo sexesha elitsha ezimbalini zeli lizwe laseMzantsi Afrika. Kodwa ke, mhlawumbi iKapa laziwa kakhulu ngobuhle balo ngokwendalo – iNtab’ eTafile, unxwema leCape of Good Hope kwakunye neCape Flats, nalapho ubomi obubodwa bezityalo bukhoyo. IFeynbhosi, okanye ‘amatyholwana ashinyeneyo’ yimithana nezihluma ezibutyholwana ezingalahli magqabi ebusika nezisoloko ziluhlaza, eyaziwa jikelele ngophawu lwayo olulodwa lobukho kweprotiya phakathi kwayo. IFeynbhos ayikho enye indawo efumaneka kuyo ngaphandle kommandla ogudle unxweme lweKapa, iintaba ezikufuphi nonxweme kwakunye neenkechoyoyi zeentaba ezithile ezithe gqa-gqa phakathi ezweni. USinga-siqithi weKapa likhaya kuma-3-000 eentlobo-ntlobo zezityalo. I-190 lezi zityalo azifumaneki nakwenye indawo apha ehlabathini ngaphandle kwalapha.

IKapa laziwa kakhulu ngobuhle neentlobo-ntlobo zeziphili ezifumaneka kulo. Nakubeni kunjalo, lijongene nemiceli-mngeni yamajelo yokusingqongileyo enzima kakhulu. Uphuhliso lommandla kwakunye nongcoliseko lutshabalalisa amakhaya endalo, nto leyo ebeka emngciphekweni wentshabalalo izityalo ezininzi ezizodwa, amasele anqabileyo nezinambuzane ezihlala kula makhaya. Ukufudumala okukhulayo kwihlabathi okubangelwa kokukhutshwa ziinqwelo-mafutha nemveliso-mbane kuya kuba nefuthe elibi kakhulu kubo bonke ubomi kwisiXeko sethu. Amajelo amanzi aye enqongophala ngokukhawuleza kwaye neetiphu ziyagcwala.

Kananjalo iKapa linophawu olucacileyo lomahluko omkhulu phakathi kwezityebi namahlwempu. Abanye abemi beKapa basebenzisa amanzi, umbane, amafutha nepetroli eninzi kwaye bavelisa inkunkuma eninzi ngokunokude kodlule ummi waseMelika okumndilili, lo gama abanye basahlala kwimizi emininzi enempompo enye yamanzi, besebenzisa amafutha ayingozi anjengeparafini ukupheka.

“Oyena mceli-mngeni mkhulu esijongene naye kule nkulungwane intsha kukuthatha ingcingane ekhangeleka ifihlakele – uphuhliso olusisigxina nolugcinakalayo – siyenze ibe yinto eyimpumelelo yemihla ngemihla kubo bonke abantu beli limiweyo.”

Kofi Annan, USosiba-jikelele woMbutho weZizwe eziManyeneyo, Matshi 2001.



Ifoto: Siyifumene ngoncedo lweSixeko saseKapa

Singenza ntoni ngoku? Singanako ukuguqula izinto senze umahluko?

I-Eneji, amanzi, inkunkuma kwakunye neentlobo-ntlobo zeziphili kokusingqongileyo kwethu Ngalo lonke ixesha ulayita isibane sikagesi, uqhuba inqwelo-mafutha yakho, uvulela amanzi etephini okanye ulahla inkunkuma yakho, wenza isigqibo esichapazela okusingqongileyo. Amajelo endalo – amanzi, amalahle, i-oyile, umhlaba, impepho – aya kutsha okanye aphele ukuba siwasebenzisa ngesantya esingaphezulu kwexesha alifunayo ukuze azizalise kwakhona. Kukho imiqondiso emininzi eyalatha ukuba oku sele kuqalile ukwenzeka.

Ifuthe lokuthwaxeka kwendalo ngamakhaya likhulu kakhulu. Ukuze siqinisekise ukuba sinamajelo oneleyo aza kusithwala – aza kwanela wonke umntu kwimihla esiphila kuyo kwanemihla ezayo – kufuneka siwaphathe kakuhle amajelo ethu, sisebenzise oko sinako ngobuchule nangokufanelekileyo. Uninzi lwethu luyazi ukuba kufanelekile ukuba sikwenze oku, kodwa kumathuba amaninzi asiqinisekanga ngeyona-yona nto ekufanele siyenze nendlela ekufanele siyenze ngayo. Le ncwadana ijolise ekunikeni iinkcukacha malunga namanzi, inkunkuma, i-eneji neentlobo-ntlobo zeziphili kwakunye **nezinto eziphathekayo ubani anokuzenza ukuze kubekho inguqu** – ukukhusela okusingqongileyo, ukulondoloza imali nokwenza amakhaya ethu abe ziindawo ezikhuselekileyo zokuhlala.

Iindaba ezimnandi zezokuba singawenza umehluko. Ngekilowathi-ngeyure (kWh) nganye othintele ukuyisebenzisa, wonge ngaphezulu kwekilogram yeKharbon dayokhsayidi (CO₂) engeyivulelekile yaya kwi-atmosfera. IKharbon dayokhsayidi (CO₂) inkqenqqa phambili kwizinto ezinegalelo ekufudumaleni kwehlabathi; nkqubo leyo zithi iinzululwazi ikhokelele ekunyukeni komndilili weqondo lobushushu kwihlabathi ngaphezudlwana nje kwesiqingatha seqondo ngeSelsiyas kule minyaka ingama-30 idlulileyo kwaye lingaqhubeka nokwenyuka eli qondo lobushushu de libe phakathi kwe-1.4 – 5.8 °C ekuzeni kusithela kwale nkulungwane. Ukufakela isibane esibengezelayo esibumbeneyo esine-11 leewathi (CFL) endaweni yesibane esiqhakazelayo esinama-60 eewathi kungonga ama-570kWh kubomi beso sibumbeneyo sibengezelayo – nto leyo inokonga ngaphezulu kwekilogram ezingama-570 zekharbon dayokhsayidi.



Ukusindisa umhlaba nenzuzo yokwenza oko

Eyona nto imnandi ngokulondoloza amanzi nombane nokucutha inkunkuma kukuba oku kuya kongela wena nesiXeko saseKapa imali eninzi edingekayo! Amanyathelo acetyiswayo kule ncwadi ayafikeleleka kakhulu ngokwamaxabiso kwaye kulula nokuwenza. Xa ithetha into ethile yanexatyiswana eliphezulu, mhlawumbi ukufumana isifudumezi-manzi sesola, ingcaciso uyayinikwa engesithuba sexesha elinokuthathwa siso ukubuyekeza iindleko zokufakelwa kwaso xa ithelakiswa nombane onokuwusebenzisa kwangelo xesha linye.

Enye into ekufaneleke ukuba siyicinge kukuba xa uthenga isixhobo nombane, awuhlawuli nje eli xabiso ulibonayo - koko uyazibophelela ekuqhubekeni uhlawula iindleko zokusisebenzisa esi sixhobo ngalo lonke ixesha sisetyenziswa nguwe. Ezi ndleko zamanzi ne-eneji zikhula ngokukhawuleza. Xa uthenga isixhobo, khumbula ukuba ufumene lithuba elingcono lokutshintshela kwisixhobo esiyakuthi sisebenzise i-eneji namanzi ngendlela efanelekileyo. Kuqhelekile ukuba ezi sixhobo zingaxabiso kakhulu kuyaphi kunezixhobo ezingasebenziseki kakuhle, kwaye ziya kukongela imali ekuhambeni kweminyaka nanjengokuba ii-akhawunti zakho zamanzi ne-eneji ziya kuhla.

Indlela yokusebenzisa le ncwadana

Ingaba unqwenela ukuthenga isixhobo esitsha? Ukuguqula uhlaziye indlu yakho? Ingaba ufuna ukuphatha kakuhle uhlahlo-lwabiwo mali lwanyanga-zonke lwakho? Sonke singathanda ukuthatha izigqibo ezifanelekileyo ngokuphathelene nolawulo lwamakhaya ethu – ukwenza izigqibo ezingcono ngempilo yethu, ukhuseleko nezipaji zethu, kodwa singakushiya ngasemva okusingqongileyo. Le ncwadana inengcaciso esebenziseka kakuhle kakhulu nezilumkiso ezisebenzisekayo ezinokukunceda uthathe izigqibo ezifanelekileyo ukucutha ukusebenzisa kwakho amanzi ne-eneji nokucutha inkunkuma owukhuphayo. Kananjalo ikwanika ingcaciso ngendlela esinokugcina ngayo indalo yomelele kwaye izintlobo-ntlobo ezininzi kangangoko kwihlabathi lethu. Ezi zinto zinokwenziwa zingakongela imali kwaye zinokuphucula umgangatho wempilo nokhuseleko kwikhaya lakho. Kananjalo ziyakucutha ifuthe lethu elibi kokusingqongileyo.

Le ncwadana iqulethe ingcaciso eninzi kwaye sicebisa ukuba uzinike ithuba lokuyifunda – kunganzima kakhulu ukuzama ukwenza izinto ezininzi ngexesha elinye. Mhlawumbi kungangcono ukuba uzisikele ixesha lokwenza imisebenzi emitsha ngokweeveki.

Incwadana le yahlulwe yangamacandelo amane: Inkunkuma, I-Eneji, Amanzi neeNtlobo-ntlobo zeziphili. Icandelo ngalinye linamacandelwana amane:

- izinto ezicela umngeni eziphathelene nejelo elo;
- izinto ezenziwa sisiXeko saseKapa ukulawula ijelo elo;
- amanzi, i-eneji, inkunkuma neentlobo-ntlobo zeziphili ekhayeni lakho;
- kwakunye namanyathelo asebenzisekayo – yintoni emayenziwe nendlela yokwenza oko – aya kukunceda akongele imali, aphucule umgangatho wokhuseleko ekhayeni lakho, kuliwe nobuhlwempu, kuliwe noku guquka kwemozulu, kuphuculwe ubulunga bomoya ze kukhuselwe indalo yethu nokusingqongileyo.

Imisetyenzana nemifanekiso inikelwe ukuzamazamana nemiba ethile kwanokukhangela lula ulwazi. Imiba yempilo nokhuseleko nayo ishukuxiwe kwicandelo ngalinye kula mathathu. Uququzelelo nomsebenzi wasekuhlaleni ngundoqo wolawulo olulungileyo, amanyathelo aqalisiweyo ambalwa anomdla eKapa abandakanyiwe kwiingxelo zophando ezimfutshane.



Amakhaya aziintlobo ezahlukileyo ajongene nemiba eyahlukileyo yokusingqongileyo. Umzekelo, amakhaya anengeniso-mali eninzi anokufumanisa ukuba asebenzisa umbane omninzi ze afune iindlela anokuziphicotha zokucutha ukusebenzisa kwawo umbane. Ukanti ikhaya elingeniso ingephi lona linokufumanisa ukuba eyona ngxaki yalo inkulu yimpilo nokhuseleko ngenxa yokungakhuseleki kokusetyenziswa kweparafini. Sithemba ukuba le ncwada iya kusebenziseka kwaye ihambelane neemeko zamakhaya ethu onke eKapa, apho lithe icandelo elithile lakhangeleka lingahambelani nemeko yakho, lishiye udlulele kwicandelo elilandelayo – okanye ukhangele ukuba awungeqwalaseli imeko abajongene nazo abamelwane bakho kusini na.

limveliso ezisetyenziswayo ukuze kongeke amanzi ne-eneji ziyafumaneka eKapa kwiivenkile ezithengisa ngezinto zokwakha nakubathengisi bemibhobho nezinto zokutywina nokuhambisa amanzi okanye nakwiivenkile zezinto zombane. limveliso 'zohlaza' ezininzi ziyafumaneka kwiivenkile ezinkulu zengingqi ezithengisa ngezinto ngezinto. lindawo zethu ezithengisa ngezityalo zime ngembambo zizityalo eziziinkulelane kwaye ziyakuba nako ukukunika isikhokelo nengcebiso yokuba zeziphi na izityalo ezinokulungela ummandla wakho.

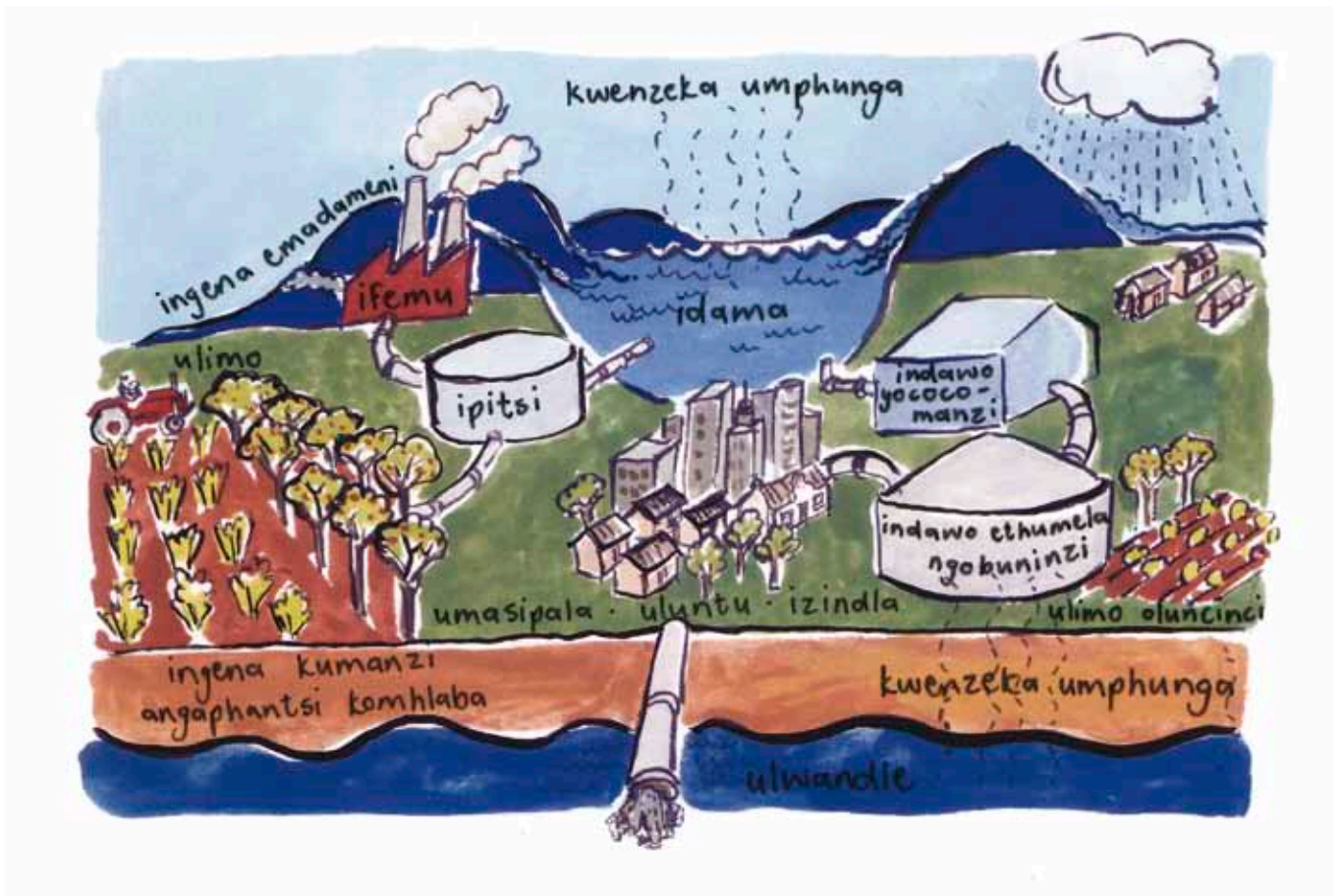
Eminye yemithombo yolwazi nezalathiso ichaziwe kule ncwadana, kodwa ke isalathiso esipheleleyo malunga nemithombo yolwazi ngokusingqongileyo esiXekweni ingafumaneka kwisaLathiso samaJelo angokusiNgqongileyo esiXeko, kwiSebe lesiXeko loLawulo lwamaJelo angokusiNgqongileyo, kumgangatho wesi-6, e-44 Wale Street, eKapa, inombolo yomnxeba ngu-(021) 487 2284, okanye i-imeyili: smartliving@capetown.gov.za okanye ku-www.capetown.gov.za/environment.

Nceda qaphela ukuba amaxabiso neentlawulo-zinkonzo ezicatshulweyo kwitekisi ngawelixa loshicilelo kuphela, aya kutshintsha ekuhambeni kwexesha.

AMANZI



Amanzi bubutyebi bendalo yaye zonke izinto eziphilayo ezixhomekeke kuwo. Nangona efumaneka simahla kwiindawo ezininzi zendalo, apho kuhlala khona abantu amanzi (anokuselwa) anqongophele. Amanzi afunwa ngabantu angaphezulu kunakhoyo kwaye kufuneka imali ebonakalayo ukuze kufumaneke amanzi kwindalo aye ezimpompeni ekwimeko efanelekileyo.



Umjikelo wamanzi

Amanzi ngoyena ndoqo ubalulekileyo wobomi bethu – abantu abanakuphila ngaphandle kwawo. Abalulekile kwezolimo nakwimizi-mveliso. Amanzi asetyenziselwa nokwenza umbane. Ukuze songe amanzi kufuneka singacingi nje kuphela ngamanzi esiwasebenzisa ngokwethu, ekuwaseleni nasekucoceni amakhaya ethu, koko kufuneka sazi indlela amanzi asetyenziswa ngayo ukwenza ukutya esikutyayo, iimveliso esizisebenzisayo nokwenza umbane wezibane nezitovu zethu. Ukusebenzisa amanzi ngobulumko kungawonga amanzi.

Ilungelo lethu lamanzi

UMthetho weNkonzo zaManzi (108 ka-1997) uthi bonke abasemagunyeni benkonzo yamanzi, abafana nesiXeko sakho, mabahambise amanzi afikelelekayo, afanelekileyo nangokuzinzileyo. Oku kuthetha ukuba abantu abosokolayo mabakwazi ukufikelela kumanzi abawafunayo, ngaxeshanye iNkonzo zaManzi mayibe nemali eyoneleyo yokujongana nokucoca nokuhambisa amanzi.

UMthetho umisela ubuncinane bamanzi ekufuneka ikhaya ngalinye linawo ukuze likwazi ukwanezisa iimfuno zalo ezisiseko ukuba ibe ngama-25 eelitha umntu ngosuku. Oku kubhekisele kwikhaya elinabantu abasibhozo, oku

kuthetha ikhilolitha ezintandathu ngenyanga kwikhaya ngalinye. La manzi kufuneka anikwe onke amakhaya eMzantsi Afrika simahla. Amanzi kukwafuneka aphume empompeni ngesantya seelitha ezili-10 ngomzuzu, ukuba ikhaya elo alinampompo, mayifakwe kumgama ongaphantsi kweemitha ezingama-200 ukusuka kwelo khaya. Abantu abasebenzisa amanzi abanakuhlala bengenamanzi iintsuku ezingaphezulu kwisixhenxe zilandelelana ngonyaka.

IiNkonzo zaManzi zesiXeko kufuneka ziqinisekise ukuba amanzi akho ngokwaneleyo ukulungiselela nezizukulwana ezizayo.

Imilinganiselo yamanzi

1 m³ = 1 kilolitha (kl) = 1 000 iilitha (l)

1 megalitha (ml) = 1000 kl = 1 000 000 iilitha

		Qwalasela oku:
 inkomo	Ama-50 000 ukuya kuma-100 000 eelitha	<ul style="list-style-type: none"> • Ukuvelisa imoto encinci kufuna ama-450 00 eelitha zamanzi
 intukhu	Ama-3 500 eelitha	<ul style="list-style-type: none"> • I-130 yeelitha iyafuneka xa kusenziwa ibhayisekile
 iimbetyi zecoya	I-1650 ukuya kuma-2 200 iilitha	<ul style="list-style-type: none"> • Malunga ne-19 leelitha liyafuneka xa kusenziwa ilitha enye yepetroli
 irayisi	i-1 900 iilitha	<ul style="list-style-type: none"> • Kuthatha iilitha ezi-3 ukuvelisa i-1 000 yeewatt ngeyure. Uku-ayina, okanye ukupheka ukutya kwi-oveni yombane kusebenzisa malunga neelitha ezintathu zamanzi kwisikhululo sombane
 iitapile	ama-500 iilitha	
 umbona	ama-450 ukuya kuma-630 iilitha	

(Environmental Monitoring Group, 2005)

Umbandela wobonelelo ngamanzi

Ukhulo loQoqosho kumacandelo ezoshishino nawezolimo ludala uxinzelelo kwizibonelelo zamanzi.

Uninzi lwamanzi asetyenziswa eKapa afunyanwa kumadama agcina amanzi avela kwiimvula zasebusika eziba khona eNtshona Koloni. La manzi kuye kubonelelwe ngawo abemi baseKapa, ingakumbi ngenyanga ezishushu nezinembalela. Awona madama iKapa efumana kuwo amanzi yi-Wemmershoek, Steenbras Lower, Voëvlei ne-Theewaterskloof.

Ukunyuka kweemfuno zokusebenzisa amanzi kunyanzelisa ukuba kongezelelwe imithombo yamanzi ukuqinisekisa ukuba iimfuno azedluli amanzi akhoyo. Kusetyenziswa iprojekthi yeBerg Water eya kugqitywa ngo-2008 ukunyusa amanzi athunyelwa eKapa. Ngenxa yokushokoxeka kwamanye amacebo, iSebe laManzi naMahlathi kunye neSixeko liza kuphonononga ezinye iindlela kwixa elizayo ezifana nokusetyenziswa kwamanzi emithombo kunye nokukhupha ityuwa kumanzi aselwandle.

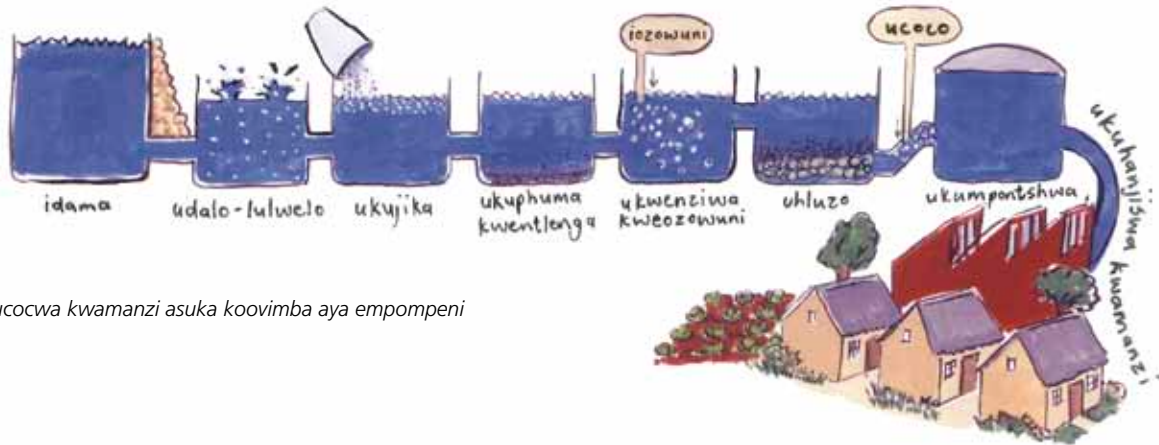
Kambe ke kuyabiza kakhulu ukusebenzisa ezi ndlela yaye kungathatha iminyaka ukuplana nokumisela oku. Ukuba wonke ubani angalondoloza amanzi yaye awasebenzise ngendlela efanelekileyo, izidingo zamanzi zingacutheka, khe kucithe nesidingo sokuba kuziwe nezinye iindlela zokongeza imithombo yamanzi. Imithetho kamasipala yamvanje iphunyezwelelwe ukuba iququzelele oku kutshintshwa kwendlela yokusetyenziswa kwamanzi.

Ukusuka edamini ukuya empompeni: inkonzo yethu yonikezelo ngamanzi

ISebe lezaManzi namaHlathi neSixeko saseKapa zingabanini beenkqubo zobonelelo-ngamanzi asetyenziswa siSixeko. La manzi ahamba ngemibhobho aye koovimba besiXeko aye kucocwa siwenze abe nokuseleka siwatshintshe ngokuwahluzwa athunyelwe kwiindawo ezihlala abantu. Ukuwacoca kwenziwa ngokwemiGangatho yeSizwe yoMzantsi Afrika yokuSela aManzi. Le migangatho iyahambelana naleyo yoMbutho wezeMpilo weHlabathi.

Ukucocwa kwamanzi

Kwiplanti yokucoca amanzi amanzi aye angeniswe kwitsheyimba yokuwenza ukuba azole ukuhlisa uxinzelelo nokuze ahambe kakuhle ngemibhobho. Emva koko aye afakwe ikalika yokuwacoca nokuwahlenga-hlengisa. Aye agalelwe kwenye itsheyimba enkulu ukuqinisekisa ukuba iikhemikhali zihlangene ngendlela eyiyo. Aphuma apho aye ematankini ukuze ezo khemikhali zikulo manzi zizinze ze emva koko zihle zibe yintlenge. Amanzi angaphezulu agalelwa ikhlorini phambi kokuba adlulele kwindawo asefwa kuyo. Amanzi asefiweyo athunyelwa kwelinye itanki aphinde agalelwe ilayimu ukuqinisekisa ukuba ayabhalansa, kongezwe nekhlabon-dayoksayidi ukuqinisekisa ukuba loo manzi akenzi ukuba izinto agcinwe kuzo zibe nerusi okanye azichachambise. Kugalelwa ikhlorini yokugqibela ukuqinisekisa ukuba loo manzi akanazifo emva koko aphume kwiplanti aye koovimba besiXeko ayekugcinwa phambi kokuba athunyelwe ezindlwini, kumashishini nakwezolimo.



Ukucocwa kwamanzi asuka koovimba aya empompeni

Iimpawu zamanzi anokusetyenziswa emva kokucocwa (imiyinge ka-2006)

pH	8.5-9.2
umbala	ngaphantsi ko-5
i-oksijini etsalwe kwipemanganethi	0.8 inxalenye kwisigidi
ubu-alkali (njenge-CaCO ₃)	28-32 inxalenye kwisigidi
imichiza yeklorin (njenge-Cl)	25 inxalenye kwisigidi
i-alumuniyam (njenge-Al)	0.2 inxalenye kwisigidi
i-ayon (njenge-Fe)	0.04 inxalenye kwisigidi
Ukuqina kukonke (njenge-CaCO ₃)	57 iinxalenye kwisigidi
Imichiza yeeflorine	ngaphantsi ko-0.1 inxalenye kwisigidi

Ithathwe: KwisiXeko saseKapa, uCoco lwaManzi kwiZiko lokuHluzo aManzi laseKloof Nek

Amanzi amdaka aphuma ezindlwini nakumashishini asuswa kwiipropati ngenkqubo yogutyulo. La manzi ahamba ngemibhobho aye koovimba besiXeko aye kucocwa, ahluzwe ukuze kususwe izinto ezinganobungozi ebantwini nakokusingqongileyo. Emva kokuba ecociwe, amanzi amdaka aye akhutshelwe emilanjeni ahambe ayokuphelela elwandle.

IsiXeko asenzi nzuzo ngokubonelela uluntu ngamanzi nasekuwacoceni. Imali ezibizwayo zeenkondo zamanzi nelindle zabiwa ngeendlela yokuba zancedise ekucocweni nasekusetyenzweni kwamanzi neziko lokuhluzo amanzi amdaka. Imali yeenkondo kufuneka ikwazi nokuncedisa nasekwakheni iziseko zokuphuhlisa amanzi ukumelana nendlela afunwa ngayo amanzi kunye nokongeza ezinye izibonelelo zamanzi nenkqubo zokujongana namanzi amdaka. nokuncedisa nasekwakheni iziseko zokuphuhlisa zamanzi ukumelana nendlela afunwa ngayo amanzi.



Ifoto: Mark Lewis

AMANZI KWISIXEKO SETHU

NgokoMgaqo-siseko wethu, oomasipala banoxanduva lokuqinisekisa ukuba abantu abahlala kubo bayawafumana amanzi. Njengabanikezeli-zinkonzo zamanzi kukwafuneka ukuba baqinisekise ukuba inkonzo yamanzi abanikezela ngayo iyafikeleleka, iyenoqoqosho ikwazinzile. Imiqathango yenkonzo yamanzi ibekiwe kuMthetho wooMasipala waManzi, ofumaneka lula kwiwebhsayithi yeSixeko (www.capetown.gov.za/water/) ukuba ngaba ufuna ukuyifunda.

Ukufumaneka kwamanzi asisiseko neenkonzo zococeko

Amanzi anokuselwa

Ukususela oko kwasekwa iCandelo leeNkonzo zaManzi kwiiNdawo ezinaMatyotyombe kwiSebe lokuSasazwa kwaManzi leSixeko, ukusilela konikezelo zinkonzo kuphantse kwapheliswa eKapa. Namhlanje ama- 99% ayo yonke imizi kwiSixeko saseKapa afumana amanzi aselwayo kwisithuba seemitha ezingama 200 ukusuka kwizindlu zabo, njengoko kuchazwe njengelungelo elingundoqo labantu kuMgaqo-siseko wethu. Oku kwande nge 6% ukususela ngo- 2001, nto leyo kufikelelwe kuyo ngokufakelwa kweempompo ezimi emhlabeni. Isixeko sinethemba lokukuphelisa tu ukusilela, kodwa ngenxa yokufuduka kwabantu, ukonakaliswa kweempompo nezinye iingxaki zolungiselelo, oko kuthetha ukuba ukufezekiswa kwenjongo ye 100% kusengowona mcelimngeni.

Ucoceko

Ukusetyenziswa kwemigqomo ukuthutha ilindle kwathi kwapheliswa kuzo zonke izindlu ezisemthethweni eKapa ekupheleni kukaJuni 2005. I-94.8% yazo izindlu eKapa ngoku inamanzi aphuma kwimibhobho yamanzi.

Imvelaphi: (Isiphethshana sokuSebenza kweeNkonzo zaManzi (Meyi 2006) uLawulo lokuSetyenziswa kwaManzi, iSixeko saseKapa.

Ubonelelo ngamanzi oluzinzileyo

ISixeko sikwanoxanduva lokuqinisekisa ukuba kuya kubakho amanzi awaneleyo kubo bonke abahlali nendalo jikelele ngoku nakwixesha elizayo. ULawulo lokuSetyenziswa kwaManzi kwiSixeko lunescwangcwiswo esimanqaku alishumi ukuqinisekisa ukubandakanyeka koluntu neBhunga ekunciphiseni ukusetyenziswa kwamanzi

1. **Ukunciphisa ilahleko kuthungelwano nakurhwebo** ngokugcinwa nokulungiswa rhoqo kwemibhobho yokusasaza amanzi nokubekwa esweni nokuqingqwa okufanelekileyo kokusetyenziswa kwamanzi kwizakhiwo zorhwebo.
2. **Ukunciphisa ukuvuza kwamanzi kwizindlu zeentsapho ezingeniso iphantsi** ngothethathethwano, imfundo, amajelo eendaba neenkqubo zokubhaqwa nokulungiswa kokuvuza kwamanzi ezijoliswe kwiintsapho ezisezilokishini apho iziseko izezikumgangatho ophantsi yaye bezingakhathalelwanga ngaphambili.
3. **Ukunciphisa ukusetyenziswa kwamanzi liBhunga** ngamabala okuphumla eSixeko anobulumko bamanzi nezixhobo zokonga amanzi ezifakelwe kuzo zonke izakhiwo zebhunga.
4. **Ukuqinisekisa ukulingana kwemirhumo** ngenkqubo yemirhumo nokubizwa kwemali eqinisekisa ukuba amanzi ayafikeleleka kumntu wonke, ezinzileyo ngokweendleko nekhuthaza ukusetyenziswa ngokufanelekileyo kwamanzi.
5. **Ukulawula ukumoshwa kwamanzi nokuqinisekisa ukuba lonke uphuhliso olutsha lunobulumko bamanzi**, ngemithetho yoomasipala.
6. **linkqubo zokufakelwa kwakhona nokuXhasa ngezakhono ezibonelelwa ngamajelo osasazo nezibonisa izixhobo nobuchule bokonga amanzi** nezihlahla indlela yeNkqubo yokuTyinwa kwemibhobho yamanzi nasemva kokuba iFakelwe.
7. **Unxibelelwano, imfundiso nokubizwa kwemali okucacileyo** ukuguqula ukuziphatha ngendlela eyonga amanzi yexesha elide, ngamajelo eendaba, imisitho eyodwa, amaqonga nezikolo.
8. **Ukunyusa iindlela ezizezinye zobugcisa namaphulo okonga amanzi** ngohlaziyo lwamanzi, amaphulo okumbiwa kwamanzi nokusetyenziswa kwamanzi amdaka.
9. **Ukongiwa kwamanzi eCCT** kwixesha elide ngokuxhasa iNkqubo iWorking for Water, amaphulo ococo lwemilambo nolawulo nokubekwa esweni kokufunxwa kwamanzi emhlabeni.
10. **Ukudala imeko evumelana nolondolozo olululo lwamanzi lwexesha elide nolawulo lokusetyenziswa kwamanzi** ngokuqinisekisa ukuba le yeyona ndlela yenkonzo yonikezelo ngamanzi nokubeka phambili umiliseliso lwayo.

UMthetho kaMasipala weSixeko unyanzelisa ulawulo lokusetyenziswa kwamanzi

NgoSeptemba 2006 kwemiselwa imithetho kamasipala yamanzi emibini kwiSixeko saseKapa – uMthetho kaMasipala waManzi naManzi aMdaka noMthetho kaMasipala woLwelo oluvela kwimizi yorhwebo (iGazeti yePhondo 6378). Iikopi ezipheleleyo zoku zingafunyanwa kwiwebhsayithi yeSixeko (phantsi kweeNkonzo zaManzi). UMthetho kaMasipala waManzi uquka i-10% yemiqathango esisigxina yamanzi. Eli linyathelo elitsha elincumisayo kakhulu elinjongo zalo ikukuphela ukusetyenziswa kwamanzi ngendlela engeyiyo. Eminye imiqathango ebalulekileyo echaphazela iintsapho, efunyanwa kwiShedyuli 2 yoMthetho kaMasipala waManzi ibandakanya ukuba:

- Akukho mntu uya kunckenkeshela isitiya (phofu naziphi na iindawo ezinengca) esebenzisa amanzi aselwayo (ahlaziyiweyo, okusela), phakathi kwezi yure 10:00 no 16:00.
- Akukho mntu uya kugalela ngombhobho amanzi okusela kwindawo elukhuni okanye enomgangatho owenziwe ngezitena ngaphandle kokufumana kuqala imvume kuMlawuli waManzi
- Kufuneka kubandakanywe izixhobo zokonga amanzi ezifana neentloko zeeshawara ezinkcenkeza kancinci nezo zifakelwa kwiimpompo, nezixhobo ezizizo zokugungxula izindlu zangasese kuzo zonke izakhiwo ezitsha nezo ziphuhliswayo kwiSixeko.
- Makungabikho mgqomo wamanzi wendlu yangasese ungaphezulu kwe- 9.5 yeelitha ngobukhulu.
- Azivumelekanga izixhobo ezizalisa ngokwazo zisebenzisa ivelufa edadayo etsala amanzi kumthombo wamanzi aselwayo ukuzalisa amadama okuqubha namadanyana ezitiya.

- Abo basebenzisa amanzi kakhulu, abasebenzisa ngaphezu kwama 3 650 kl amanzi ngonyaka (njengamashishini, ngaphandle kweeflethi okanye amaholo ahlala uluntu) kufuneka balungele ukuphicothwa qho ngonyaka.

Ubonelelo ngamanzi olufikelelekayo nolunoqoqosho

Ukususela ngo- 2001 eKapa kuye kwasetyenziswa inkqubo yokubizwa kwentlawulo yamanzi ehamba ngokwezigaba. Isigaba 1 ngamanzi akho owafumana simahla yaye ezi litha ziyi 1 - 6kl zokuqala kubonelelwa ngazo simahla kubo bonke abasebenzisi bamanzi. Isigaba 2 ukuya kwi 4 ahlala efikeleleka kakhulu, aze aye enyuka kancinci. Ngomhla woku 1 kuJulayi 2005, imirhumo yamanzi yenyuswa kakhulu ngama 90% kwisigaba 5 (41 – 50kl) nange 190% kwisigaba 6 (ngaphezu kwama 50kl) ngenyanga. Isixeko sizama ukubonelela ngamanzi ngendlela enobulungisa ngakumbi – amanzi obonelelwa ngawo simahla ukuhlangabezana neemfuno zakho zemihla ngemihla, okanye ngexabiso eliphantsi kakhulu; amanzi eemfuno ezingaphaya kweemfuno zakho zemihla ngemihla aya enyuka ngeendleko.

Ityala lakho lamanzi

Isixeko sifunda isixhobo sakho sokulinganisa amanzi phantse rhoqo ngeentsuku ezingama 30. Uhlawuliswa ngokwenkqubo yemirhumo enyuka ngokwezigaba ekhankanywe ngentla.

Qaphela ukuba uyawafumana amanzi akho asimahla. Noxa abahlali befumana i6kl yamanzi simahla ngenyanga nganye, ayisoloko ibonakaliswa kanye njenge 6kl kwityala lakho, kodwa iba isisixa esiphakathi kwesi 5 nesi 6kl. Kungokuba isixhobo sakho sokulinganisa amanzi asifundwa ngamini inye nyanga zonke.

Ukuba akukwazi ukuhlawula ityala lakho lamanzi uya kuhlawuliswa inzala kwimali osayitalayo. Ukungahlawuli kungakhokelela ekucuthweni kwamanzi kuwe. Oku kuthetha ukuba kufakelwa iqhoshana lokuqingqa amanzi kwimpompo ukuze amanzi aphume kancinci kangangokuba usapho lube nokufumana kuphela amanzi ayi 6kl yasimahla ngenyanga. Iintsapho kufuneka zenze isicwangciso sentlawulo yamanzi neSixeko. Ukuba kukhe kwanyikinyelwa isixhobo sokulinganisa amanzi, iSixeko sinelungelo lokuwavala tu angaphumi amanzi.




Ukufumana ingxelo ethe vetshe ngeendleko zamanzi, ukufakelwa, ukufakelwa kwezixhobo zokulinganisa, uvavanyo lwezixhobo zokulinganisa nobonelelo ngenkonzo, ndwendwela iwebhsayithi yeSixeko kwa www.capetown.gov.za. Ikhonkco elikhawulezayo i 'Online Services' libonelela ngengxelo ephangaleleyo ngemirhumo yakwiindawo ezihlala abantu nezinye iinkonzo ezichaphazelekayo phantsi kwee 'Nkonzo zaManzi'.

Iakhawunti yaManzi

Amanzi asetyenziswe kwiintsuku eziyi-36

amanzi asetyenziswa ngosuku

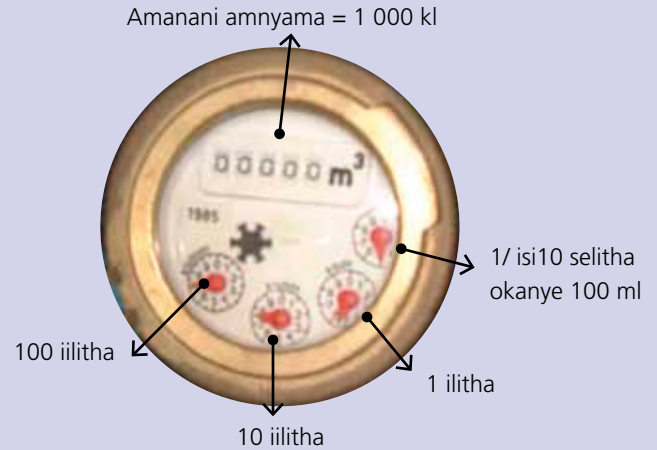
Account Details as at 26/01/2007		A/C No 206314351	Page 2 of 2	 >>>> 915552063143518			
WATER	(Period 19/12/2006 to 23/01/2007 - 36 Days) (Actual Reading)			R	C	R	C
AT AVOLON,38 TIVERTON ROAD PLUMSTEAD / ERF 71970 Meter No: KUL250 / Consumption 28.000 KL / Daily Average 0.778 KL							
* Consumption charge (Dom) (1) 7.1010 KL Free (2) 7.1020 KL @ R 2.5600 (3) 9.4680 KL @ R 5.4600 (4) 4.3290 KL @ R 8.0800							
				104.86			104.86
RE	iSigaba 1	6.3120 kl simahla – ngaphezu kwe 6 kl njengoko kufundwe isixhobo isithuba seentsuku ezingama 32-					
	iSigaba 2	6.3130 kl @ R2.46 = R2.46 x 6.313		48.70			
	iSigaba 3	4.375 kl @R6.52= R6.52 x 4.375		11.38	2.00-		
							58.08
SEWERAGE	(Period 19/12/2006 to 23/01/2007 - 36 Days) (Actual Reading)						
AT AVOLON,38 TIVERTON ROAD PLUMSTEAD / ERF 71970 * Disposal Charge (1) 4.9710 KL Free (2) 4.9710 KL @ R 1.6800							
				47.95			
Umrhumo ngokunyuka kwezigaba				33.00			
							80.95
Ad	ISIGABA 1	0 kl – 6 kl: Amanzi akho asimahla. Ezi kl zokuqala zi 6 uzifumana nge- R0.00/kl.					34.14
	ISIGABA 2	7 kl – 12 kl: ii-kl ezilandelayo ezi 5 uzifumana nge- R2.46/kl.					
	ISIGABA 3	13 kl – 20 kl: ii-kl ezilandelayo ezisi 7 uzifumana nge R6.52/kl.					
	ISIGABA 4	21 kl – 40 kl: ii-kl ezilandelayo ezili 19 uzifumana nge- R11.04/kl.					
	ISIGABA 5	41 kl – 50 kl: ii-kl ezilandelayo ezili 9 uzifumana nge- R25.00/kl.					
	ISIGABA 6	ngaphezu kwama 50 kl: i-kl nganye ifumaneka nge- R50.00.					
ACCOUNT TOTAL DUE						R	278.03
ME				NGS	NEW READINGS	UNITS USED	
WA				(Actual)	1904.000KL(Actual)	28.000KL	
RAT				Value R 182000.00	Total R 285000.00		
AN							
Des				Tariff		Rates Assessed	
Site				0.0124200		1279.26	
Buil				0.0124200		2260.44	
Val				0.0124200		621.00-	
Rat						2918.70	

Funda ukufunda isixhobo sakho sokulinganisa amanzi

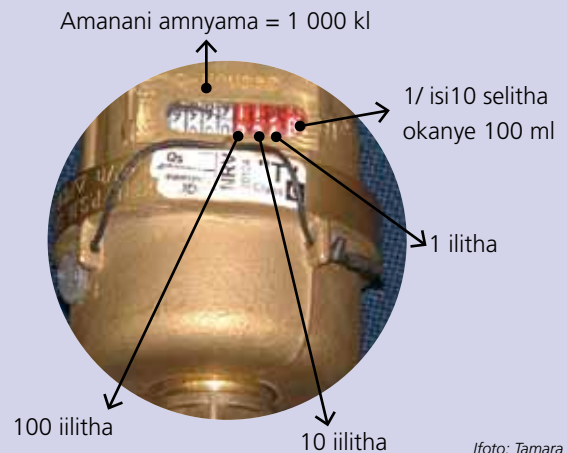
Yazi apho sikhoyo isixhobo sakho sokulinganisa amanzi. Sidla ngokufumaneka kwibhokisi yemitha ngaphandle kwesakhiwo sakho. Kwizindlu zakudala, sidla ngokufumaneka apho umbhobho omkhulu ohamba amanzi ungena kumhlaba wakho. Qiniseka ukuba uyasifumana yaye uyakwazi ukusifunda.



Esibala ngokomthamo



Esizisebenzelayo



Ifoto: Tamara North

EKapa kukho iindidi ezimbini ezibalulekileyo zezixhobo zokulinganisa amanzi: esibala ngokomthamo nesithelekelelayo. La manani amnyama kwezi zibali zombini achaza ubungakanani bamanzi asetyenzisiweyo. Kuye kuthathwe la manani xa kubhalwa ityala onalo lamanzi. Kulo matshini uthethelekelelayo, amaqhezu eekhilolitha abhalwe kwezi wotshana zinechokoza elibomvu ukanti kwesi sibala ngokomthamo kujongwa phaya kula ndawo inamanani abomvu. La maqhezu abomvu akajongelwa manani okubala ityala, kuwo kujongwa ukuba akukho manzi avuzayo na nezinye iingxaki ezinokuba zikho.

Ilebhu yoQinisekiso lweeMitha yeSixeko imana ivavanya iimitha zamanzi ukuqinisekisa ukuba zirejistarisha ngokwemiqathango yeSABS.



Umhlali waseKapa, uNkskz Zenzele, uhlala nabanye abasixhenxe endlwini yosapho lwakhe. Baphila ngemali engaphantsi kwe-R1 000 ngenyanga. Noxa indlu kaNkskz Zenzele inempompo yamanzi nendlu yangasese enye kuphela, ityala lakhe leenkonzoz zamanzi linyuke laya kutsho malunga nama- R17 050 ngoJanuwari kulo nyaka uphelileyo, ngeendleko zeenkonzoz ezifikelela kuma- R450 (55kl) ngenyanga. UNkskz Zenzele lolunye lweentsapho ezisoloko zisebenzisa amanzi ngendlela ephezulu ngokungaqhelekanga ukuze zibe namatyala amanzi ezingenako ukukwazi ukuwahlawula. Kwenzeka njani oku?

Umgqomo wamanzi wendlu yangasese kaNkskz Zenzele unothanda yaye neqhoshana eliwubambayo ligugile – oko kusoloko kubangwa yimpahla yokwakha engekho mgangathweni. Noxa kunokubiza kuphela iirandi ezimbalwa ukubuyisela iqhoshana eligugileyo, kunye ne- R100 yomgqomo wamanzi endlu yangasese, lo msebenzi kufuneka wenziwe ngumntu onobuchule bokusebenza ngemibhobho yamanzi okanye umntu onamava okwenza umsebenzi wezandla. UNkskz Zenzele akanako ukuhlawula umntu onjalo yaye bambalwa abahlali abanezixhobo okanye amava afunekayo ukwenza lo msebenzi. UNkskz Zenzele akakwazi ukufunda ityala lakhe yaye ubengazi ukuba iKapa sisixeko esinengxaki yokunqongophala kwamanzi.

IPhulo loKuvuza kwaManzi – ivelatanci loluntu eliququzelelwe liQonga loMnatha woBulungisa kokuSingqongileyo leNtshona Koloni – lanceda uNkskz Zenzele ukulungisa indlu yakhe yangasese. Ukusebenzisa kwakhe amanzi ngenyanga kwehla kwaya kutsho kwi- 13kl ngendleko ye- R20 ngenyanga. iPhulo loKuvuza kwaManzi livelatanci lophuhliso loluntu oluzinzileyo elisebenzela ukuqinisekisa ukuba abantu abafana noNkskz bafumana isibonelelo samanzi esiqhubekayo, esisiso, esifikelekayo nesizinzileyo. Iphulo eli sele liqeqeshe ulutsha lwasekuhlaleni kwizakhono zabaqalayo zokusebenza ngemibhobho yamanzi.

Uphando lweziza oluneenkukacha lubonakalise ukuba kumaxa amaninzi amaqondo aphezulu okusetyenziswa kwamanzi ebebangelwa kukuvuza kwimibhobho yamanzi yasemakhaya, ngokukodwa imigqomo yamanzi yezindlu zangasese ezingaphakathi kwimida yeziza. Malunga noNkskz Zenzele, abahlali abakwazi ukuhlawula amatyala asoloko enyuka yaye abanayo nemali yokuhlawulela ukulungiswa kokuvuza kwemibhobho yamanzi. Kukwanqongophele ulwazi lokulungisa, okanye ukuqonda ukuba amanzi bubutyebi obubalulekileyo obunqabileyo.

Ukuhlangabezana noku kungentla, kunikwe imvume eyodwa yeBhunga (iSigqibo seMayco: MC 63/11/05) ukuba linkonzo zaManzi zenze umsebenzi wokulungisa ukuvuza kwamanzi kube kanye kumakhaya angathathi ntweni. Ngaphezu koko, onke amatyala abangelwe kukuvuza kwemibhobho yamanzi kuloo makhaya alathiweyo aya kucinywa kuphela xa kuthe kwafumaniseka ukuba ukusetyenziswa kwamanzi kuhlala kukumaqondo alindelekileyo kwimijikelo emithandathu yokufundwa kwesixhobo sokulinganisa amanzi emva kokulungisa yaye libe lihlawulwe lonke ityala elikhoyo lamanzi.

Le nkqubo isetyenziswa ndawo yonke siSixeko saseKapa esilungise ngaphaya kwe-11 000 yezindlu ezivuzayo saze satyala malunga nezigidi ezi-R4 ukususela ngo-2006 kule projekthi. Uhlalutyo lweenkcukacha-manani zokusetyenziswa kwamanzi kwinkqubo yezezimali yeSAP lwabonisa ukuba ngaphezulu kwama- 45 000 amakhaya angathathi ntweni asebenzisa ngaphezu kwama- 30kl amanzi ngenyanga. Amakhaya angathathi ntweni alathwe njengalawo anezindlu ezibiza i- R199 000 nangaphantsi. La makhaya angama-45 000 xa edibene asebenzisa ngokwesiqhelo i-1000 000 kl ngenyanga – ngaphezu kwe-.5% yamanzi asetyenziswa siSixeko ngosuku.

Kulindeleke ukuba kwakugqitywa ukulungiswa kokuvuza kwamanzi, ukusetyenziswa kwamanzi okuqhelekileyo kuya kuba ngaphantsi kwe- 15kl kwikhaya ngalinye ngenyanga. Oku kuya kukhokelela kwisiphumo sokonga malunga nama-360 000kl amanzi ngenyanga – ngaphezu kwe- 1.5% yamanzi asetyenziswa siSixeko ngosuku.

Iinjongo zeSixeko zokusetyenziswa kwamanzi

ISixeko sineenjongo zokunciphisa ukusetyenziswa kwamanzi namanzi amoshakalayo ngama- 30% ngo- 2020.



Ifoto: Tamara North

AMANZI KWIKHAYA LAKHO

ISixeko senza konke esinako ukunciphisa ngamandla ukusetyenziswa kwamanzi ekufuneka kufikelelwe kuko ukuqinisekisa ukuba wonke umntu uyawafumana amanzi okusela, ngoku nakwixesha elizayo. Ukunciphisa okuyimpumelelo kwe- 10 – 20% kusoloko kufikelelwa kuko ngamaxesha emiqathango emiselwe imbalela. Umcelimngeni ngoku kukugcinwa kwale meko ixesha elide. ISixeko asinakukwenza oku ngaphandle koncedo nenxaso yabemi baso xa bebonke. Siziintsapho sisebenzisa kangangama- 60% amanzi eSixeko xa ewonke. Oku kuthetha ukuba amanyathelo esiwathathayo ukusebenzisa amanzi ngendlela eyiyo aya kwenza **umahluko omkhulu** kwiSixeko sethu. Iindaba ezimnandi kukuba oku kungenziwa ngendlela engachaphazeli lonwabo lwethu, ixesha nenxamleko kuthi.

Yenza uphicotho oluncinci lokusetyenziswa kwamanzi kwikhaya lakho

Angakanani amanzi asetyenziswa likhaya lakho? Niwasebenzisa phi awona manzi maninzi kwikhaya lakho? Ingaba kukho izinto ebeninokonga kuzo amanzi? Yandisa ulwazi lwakho nokuqonda ngokusetyenziswa kwamanzi kwikhaya lakho ngalo msebenzi ungezantsi apha.

Umsebenzi	Umdlili weelitha zamanzi asetyenziswayo ngomsebenzi	Inani lamaxesha owenziwa ngawo umsebenzi ngosuku ngalunye	Ewonke amanzi asetyenziswa ngumntu ngosuku ngalunye (iilitha)	Inani labantu kwikhaya	Ewonke amanzi asetyenziswa likhaya ngosuku
Umzekelo: Ukuhlamba izandla nobuso	1.5 iilitha	ka-3 ngosuku	1.5 iilitha x 3 amaxesha ngosuku = 4.5	4 abantu	4.5 iilitha x 4 abantu = 18
Ukuhlamba izandla nobuso	1-3				
Ibhafu	80 - 150				
5-imizuzu ishawara	80				
Ukucoca amazinyo (usebenzisa itephu – kungcono usebensise ipayinti)	4				
Ukugungxula indlu yangasese	6-21				
Ukusela (ikomityi)	0.25				
Ukuhlamba izitya (ngesandla)	18 isitya esincinci 36 isitya esikhulu				
Umashini wokuhlamba izitya	17-45				
Umashini wokuhlamba iimpahla (umthwalo omnye we- 3 kg)	80				
Ukuhlamba izandla (umthwalo webhafu enye)	40				
Impompo evuzayo/ ethontsizayo (ithontsi eli-1 /ngomzuzwana ngosuku ngalunye)	30-60				
Isitya sokutya (nge-m ² ngosuku)	4				
Ukupheka (isidlo sabantu aba- 5)	3				
Ukusebenzisa umbhobho wesitya iyure	600				

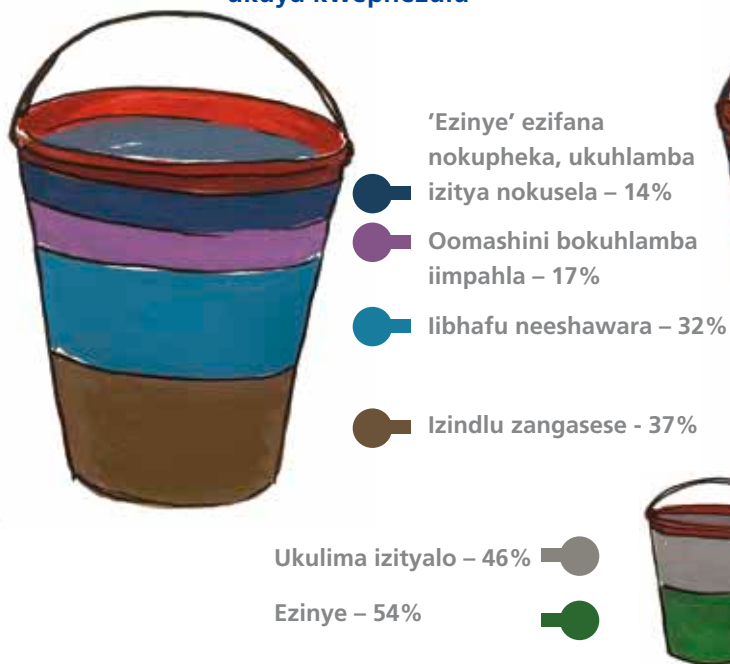
Bala ukuba ukusebenzisa kwenu amanzi xa kuchakiwe kuba njani na. Oku kuya kwenza ukuba ubone ezo zinto niwasebenzisa kakhulu kuzo amanzi yaye kuya kuninceda ukuba nizikhethela ukuba ningaziphucula phi na iindlela zokusetyenziswa kwamanzi kwikhaya lakho. Kumaxa amaninzi, kangange-40% ukuya kwi-60% yamanzi asekhaya asetyenziselwa izinto ezingabalulekanga, njengokuncenkeshelwa kwezitya nokuzaliswa kwamadama okuqubha.

Ukuze ufumane uphicotho olululo lwamanzi, yenza umdlalo wokuzonwabisa nongadlalwa mntu mnye woMcelimngeni woPhicotho lwaseKhaya ofumaneka kwa- www.capetown.gov.za. Jonga phantsi kwe 'Isixeko Sakho' nee'Nkonzo zaManzi'

Umzekelo wokusetyenziswa kwamanzi likhaya

Uphando lwakutshanje lokusetyenziswa kwamanzi kumakhaya aseKapa obelusenziwa ngaBancedisi bezoBunjinieli bakwa CE lwalathe le mizekelo ilandelayo yeendlela zokusetyenziswa kwamanzi. Kwenziwe olu phando kwi-Intanethi lwaza lwasasazwa nakwindawo enezindlu zeRDP. La maqela mabini aphennduleyo ahluhlwa-hlulwa banzi apha njenganengeniso 'ephakathi ukuya kwephezulu' (Abaphendule kwi-Intanethi) namakhaya anengeniso 'ephansti' (uphando kumakhaya eRDP).

Umzekelo wamakhaya anengeniso ephakathi ukuya kwephezulu



Umzekelo wamakhaya anengeniso ephantsi



(Isihloko: Amanzi – Asetyenziswa njani ekhaya, HE Jacobs, LC Geustyn no BF Loubser, Abancedisi kwezoBunjinieli).

Le mifanekiso isibonisa ukuba kumakhaya anengeniso ephantsi indlu yangasese yeyona ndawo imandla ekusetyenzisweni kwamanzi. Ukuqinisekisa ukuba indlu yangasese ayivuzi kubalulekile ekongeni amanzi – ngokufanayo kumakhaya anengeniso ephantsi nanephezulu. Kumakhaya anengeniso ephezulu, izitya yezona ndawo imandla ekunokongiwa ngayo amanzi. Iingcebiso ezibalulekileyo namanyathelo anokuthi athathwe ayafumaneka kwicandelo elilandelayo.



Ifoto: Tamara North

AMANYATHELO ANOKUTHATHWA

Zininzi iindlela zokusebenzisa amanzi amancinci kwikhaya lakho. Iimbono namanyathelo anokuthi athathwe anikwe apha akayi konga manzi kuphela, kodwa aya kukongela nemali. Akanzimanga yaye akayi kuwuguqula umgangatho wobomi bakho.

Ukusebenza ngamanzi

Inyathelo lokuqala elibalulekileyo kukufumanisa apho likhoyo iqhoshha elisisiciko sombhobho omkhulu wamanzi akho ukuze ukwazi ukuwavala amanzi akho xa kukho imfuneko. Thatha esi siciko njengempompo enkulu yendlu yakho. Xa usivala, amanzi esuka kwimibhobho emikhulu aya kuvaleka ukuze amanzi ayeke ukumpompoza engena endlwini yakho.

Xa uvala isiciko sokuvala ungeva ingxolo embhakrazayo okanye engayagqabhuka kwimibhobho yakho yamanzi. Ibizwa ngokuthi yi 'hamile yamanzi' yaye ibangelwa yinguqu yesiquphe kukuququqela kokumpompoza kwamanzi yaye noxinzelelo lwamanzi luyenyuka, nto leyo ibangela ukungcangcazela kwemibhobho yamanzi. Ekuhambeni kwexesha, oku kungakhulula izibophi ezibambe imibhobho yamanzi kwandise amathuba okuvuza, ngoko ke ukuvalwa kwesiciko sombhobho omkhulu wamanzi kufuneka kwenziwe kuphela xa ngenene kuyimfuneko (njengaxa kulungiswa ukuvuza).

Ukuthontsiza nokumoshakala kwamanzi

Impompo ethontsizayo ingamosha phakathi kwama - **30 ukuya kuma- 60 eelitha zamanzi mihla le**. Ukuba ityala lakho lamanzi likhangeleka lixhome kakhulu – lixhome ngaphezu koko ubunokukulindela kuphicotho lwakho lwamanzi – khangela ukuba akukho zindawo zivuzayo na endlwini yakho. Iimpompo, iintloko zeeshawara nemibhobho ehamba amanzi ashushu kungenzeka ukuba iyathontsiza. Isibhaxu esiluhlaza ngokungaqhelekanga kwisitiya sakho singachaza ukuba kukho ukuvuza komnye wemibhobho yakho ephantsi komhlaba. Oku kungaba ngunobangela omkhulu welahleko yamanzi. Ulwazi ngokufumana nokulungisa ukuvuza kwamanzi kwikhaya lakho lunikiwe kwisiqendu ngasinye ngezantsi apha. Ukuncipha ngama- 95% ngokulungiswa kokuvuza kwamanzi!

NgokoMthetho kaMasipala weSixeko waManzi omtsha akukho mthethweni ukuvumela imibhobho okanye amaqhoshana emibhobho yamanzi ukuba avuze (uMthetho kaMasipala waManzi, Sahl. 3, iSiqendu 42 (1)).



Sathi sakuqala ukubeka esweni ukusebenzisa kwaso amanzi isikolo seMfundo ePhakamileyo saseRocklands kwiiCape Flats, safumanisa ukuba isikolo sisebenzisa amanzi ngethuba zivaliwe izikolo. Oko kwakuthetha ukuba kukho ukuvuza kwimibhobho yaso. Iindawo ezivuzayo zafunyanwa, zalungiswa. Oku kwehlisa ukusebenzisa kwaso amanzi ngama- 95%! Ityala lesikolo lamanzi lehla ukusuka kuma- R2 000 ukuya ngaphantsi kwama- R200 ngexesha leenyanga ezintathu!

(Environmental Monitoring Group, 2005)

Kufuneka ntoni xa ulungisa ukuvuza kwamanzi?

- itangi enemihlathi enwetywayo
- ivayisi griphu
- 200 mm isipanera esivulekayo
- isijiji-zikhonkwane esintloko isibaca, kunye
- nolwazana oluthile nokuzithemba ngezakhono zakho zokuzenzela (DIY)!

Qaphela: Phambi kokulungisa ukuvuza kwamanzi, vala isiciko sombhobho omkhulu wamanzi ozisa amanzi endlwini yakho. Sidla ngokuba kufutshane nesixhobo sakho sokulinganisa amanzi. Emva kokulungisa ukuvuza kwamanzi, phinda usivule isiciko.

Ukukhangela ukuvuza kwamanzi phantsi komhlaba

Yiba soloko ujonge iindawo eziluhlaza ngokungaqhelekanga esitiyeni. Oku kusoloko kungumqondiso wombhobho wamanzi ovuzayo phantsi komhlaba. Apho imitha yamanzi ingaphantsi komhlaba kummandla kamasipala, umasipala uya kuwulungisa umbhobho ogqabhukileyo ukuya kuma ngokuphela kwalo propati. Ukuba imitha ikwipropati, umasipala uya kukulungisa ukuvuza kwamanzi kwimibhobho esasaza amanzi ukuya kuma kwindawo engena kuyo kwindlu yakho. Umnini makaqinisekise ukuba kulula ukufika kwezi mitha ngalo lonke ixesha njengoko oko kuchaziwe kumthetho kamasipala. Imibhobho engeyoyamitha ilungiswe ngumnini-ndlu.

Uvavanyo olulula lokukhangela ukuvuza kwamanzi phantsi omhlaba

1. Cela onke amalungu osapho akhe eme kancinci ukusebenzisa amanzi lo gama usenza olu vavanyo. Linda imizuzu engama – 30 emva kokuba kuyekiwe ukusetyenziswa kwamanzi phambi kokuba uqalise olu vavanyo. Qaphela ukuba kufuneka kungasetyenziswa manzi ngayo yonke iyure ethathwa kukwenza olu vavanyo.
2. Fumana isixhobo sakho sokulinganisa amanzi njengoko kuchaziwe phantsi kwesihloko esithi “Funda ukufunda imitha yakho yamanzi (p80).
3. Bhala phantsi oko kufundeka kwisixhobo sokulinganisa.
4. Jonga isixhobo sakho sokulinganisa amanzi ukubona ukuba ngaba amanzi ayahamba na kuso. Ukuba unesixhobo sokulinganisa amanzi esithelekelelayo uya kukwazi ukubona ukuba ivilana elibunkwenkwezi liyajikeleza na. Ukuba ivilana liyajikeleza, usenokuba unendawo evuzayo kwimibhobho yakho yamanzi.
5. Ukuba isixhobo sakho seso sibala ngokomthamo, amanani abomvu akwikona engasekunene yesibali sakho (arejistarisha isi-1/10 seelitha) akuva ngokukhawuleza ukuphuma kwamanzi yaye angakubonisa xa kukho ukuvuza okuthile ngokuthi akhawuleze aye kwini elilandelayo. Abanye ooMasipala bayazitshixa izixhobo ezitsha zokulinganisa amanzi – ungabacela ukuba bakunike isitshixo saso. Kambe ke, kufuneka iqatshelwe into yokuba ezinye iimodeli zeemitha ezibala ngokomthamo zinamanani ama-3 endaweni yama-4 aboniswe emfanekisweni. Kwiimeko ezinjalo, ela nani libomvu lingasekunene lirejistarisha ngelitha nganye enyukayo yaye alikhawulezi ukuva amanzi adlulayo njengaleya inamanani amane erejistarisha isi-1/10 seelitha.
6. Ukuqinisekisa ukuba kukho ukuvuza kwamanzi, bhala phantsi oko ukufunde kwisixhobo sakho sokulinganisa amanzi kwiyure emva koko ubukufunde kuqala. Kubalulekile ukuba kube akukho mntu ukhe wasebenzisa amanzi endlwini ngeli thuba, okanye uvavanyo luya kuba lolungamkelekanga.
7. Thabatha oko ukufunde kuqala koko ukufunde okwesibini. Oku kuya kukuxelela ukuba angakanani na amanzi avuzayo ngeyure nganye.

Ukuba ufumana ukuvuza kwamanzi phantsi komhlaba

Biza umntu osebenza ngemibhobho yamanzi ukuba alungise oko kuvuza, cela ukuba ufakelwe imibhobho emelana nokudliwa ngumhlwa (umzekelo, ene- polyethylene ephezulu). Qaphela ukuba imibhobho ehambisa amanzi asuka kumbhobho omkhulu kamasipala kufuneka ingavalelwa okanye ifakwe phantsi kwemigangatho eyikonkriti njengoko kuchaziwe kwimithetho kamasipala.

Khumbula, iSixeko siya kulungisa nakuphi na ukuvuza kwamanzi okungaphandle komhlaba wakho, kwicala lebhunga lesixhobo sokulinganisa amanzi, ngaphandle kwentlawulo.

Izindlu zangasese

Umyinge wamanzi asetyenziswa yindlu yakho yangasese ungehliswa lula ngokulungiswa kakuhle nangeendlela ezilula zokongiwa kwamanzi. Imigqomo emidala yamanzi endlu yangasese ithwala phakathi kweelitha ezili- 9 nezili- 12 zamanzi. Imigqomo yangoku yamanzi endlu yangasese ithwala malunga neelitha ezi- 6 zamanzi. Ukuguqula indlu yakho yangasese ibe yileyo igungxula kaninzi (egungxula ingayeki xa umqheba usacinezalwe) okanye leyo igungxula kabini (egungxula ixesha elide negungxula ixesha elifutshane) kungakhokelela **kukongiwa kwamanzi okufikelela kuma- 20%** kwityala lakho lamanzi. Unako nokunciphisa umthamo womgqomo wamanzi wendlu yakho yangasese ngokufaka ibhotile okanye ingxowa eza kuthatha indawo yamanzi apha emgqomeni wamanzi wakho.

NgokoMthetho kaMasipala weSixeko waManzi omtsha umgqomo wamanzi endlu yangasese (ithoyilethi) kufuneka ungabi ngaphezu kwe-9,5 leelitha zamanzi ubukhulu (uMthetho kaMasipala waManzi iShedyuli 2 uLawulo loKusetyenziswa kwaManzi).



Ifoto: Tamara North

Egungxula kabini: Ukufakela indlela yokusebenza kwamanzi endlu yangasese ngogungxula kabini, kufuneka kufakelwe umgqomo wamanzi endlu yangasese omtsha. Oku kubiza kwisithuba se- R1 500 xa iyonke loo nto. Ezi zixhobo zigungxula kabini zifuna ukusoloko zihoyiwe kakhulu kunezo zigungxula kaninzi.

Esigungxula kaninzi (ugungxulo olunqamkayo): Le yindlela elula ekwenza ukwazi ukulawula ubungakani bamanzi ogungxula ngawo. Wakube uwuyekile umqheba womgqomo wamanzi endlu yangasese, uya kuyeka nayo ukugungxula. Oku kuy akungela ngaphezu kwama- 50% amanzi okugungxula. Indlu yangasese ekhoyo ingafakelwa ngokutsha indlela yokugungxula kaninzi. Uqikelelo lweendleko: R60 – R450.

Ibhotile yeplastiki okanye i'hippo bag': Ukufaka ibhotile yeplastiki okanye i'hippo bag' kumgqomo wamanzi endlu yakho yangasese kuya kunciphisa umyinge wamanzi ekugungxulwa ngawo abize kancinci okanye angabizi nto kwaphela. I'hippo bag' ibiza malunga ne- R17.

Isingxobo, okanye ingxowa, kungcono ukuba ibekwe phantsi kwebhola leyo.

Ukuba usebenzisa ibhotile yeplastiki ukucutha umyinge wamanzi asebenzayo, kuya kufuneka wenze umgqobho kwicala ngalinye lebhottle, apha kanye emagxeni, ukuze amanzi agcinwe ebhotileni (le ithathe indawo yamanzi) angabi madala. Ibhotile kufuneka yenziwe ibe nzima ukuze ingalabalabi.

Ukuvuza kwamanzi kwizindlu zangasese

Indlu yangasese evuzayo **ingamosha ukuya kuma- 100 000 eelitha zamanzi ngonyaka omnye.** Oku kuvuza kunyusa ukusebenzisa kwakho amanzi kukutyhalele kwisigaba esingentla sentlawulo yamanzi, okanye inqanaba, yaye kungaba yindleko enkulu kakhulu.

Ukuvavanya ukuvuza kwamanzi kwizindlu zangasese

Nazi iindlela ezintathu ezilula zokukunceda ukufumanisa ukuba ngaba indlu yakho yangasese ayivuzi na. Kufuneka ulinde imizuzu engama- 20 ukwenza ezi mvavanyo ukuba ubusandula kugungxula indlu yakho yangasese.

1. Mamela amanzi ankcenkceza engena kwimbiza yendlu yangasese.
2. Cinezela intwana yephepha langasese kumva wembiza ngaphakathi eludongeni lwayo. Ukuba liba manzi, ngokuqinisekileyo kukho ukuvuza.
3. Galela amathontsi ali- 15 olwelo lokufaka umbala ekutyeni kumgqomo wamanzi wendlu yangasese (a). Ukuba, emva kwemizuzu eli- 15, amanzi akwimbiza yendlu yangasese abe nombala, kukho ukuvuza (b).



(a)



(b)

Ifoto: Tamara North

Ukufumana ukuvuza

Susa isiciko somgqomo wamanzi endlu yangasese ujonge ukuba emi ndawoni na amanzi ngaphakathi.

- Ukuba amanzi akwinqanaba elinye nombhojana wevalufa yokugungxula, ngoko ke inqanaba lamanzi libekwe laba phezulu kakhulu okanye ivelufa yokukhupha amanzi iyavuzwa.
- Ukuba amanzi angena kumbhojana wevalufa, ivelufa yamanzi ibekwe phezulu kakhulu okanye ivelufa yamanzi iyavuzwa.
- Ukuba inqanaba lamanzi lingaphantsi kwayo yomibini imibhojana yamanzi, ivelufa yokugungxula iyavuzwa.

Ukubeka amanzi kumanqanaba afanelekileyo

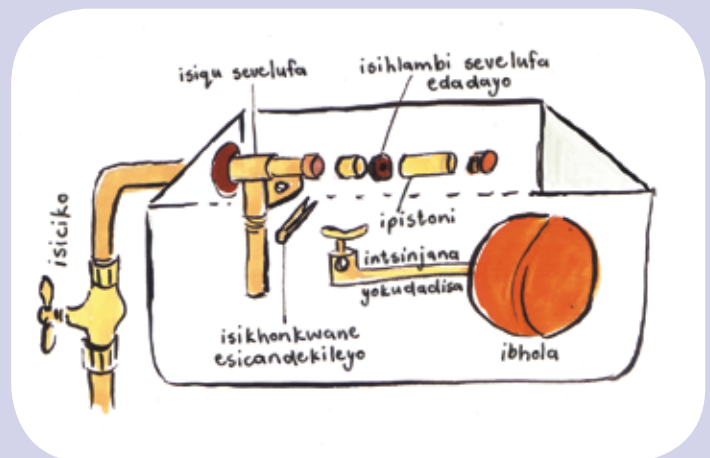
Imibhojana engaphakathi kwindlu yangasese ithintela ukuphuphuma xa lithe inqanaba lamanzi kumgqomo wamanzi ashushu okanye kowamanzi endlu yangasese labekwa phezulu kakhulu. Amanzi ayakwazi ukungena kumbhojana onqanda ukuphuphuma wendlu yangasese, okanye umbhojana wevalufa yokugungxula onqanda ukuphuphuma, aphume endlwini.

Ukuba amanzi ayaphuma kwimibhojana yakho yokunqanda ukuphuphuma, oko kuthetha ukuba inqanaba lamanzi akho libekwe phezulu kakhulu. Oku kungalungiswa ngokuthotywa kwevelufa yamanzi ngokugoba ingalo yayo kancinci iye phantsi (bamaa ingalo ngesinye isandla, lo gama uyigobayo ngesinye isandla – oku kuya kunqanda ukuba kungabikho nto yaphukayo). Ukuba ivelufa ifakwe ngesilungelelanisi sohlobo lwesikhonkwane, jija isikhonkwane ukuthoba umbhojana kancinci.

Inqanaba lamanzi kufuneka linyuke lifike kwinqanaba elingezantsi kwevelufa yamanzi yaye ivelufa edadayo kufuneka ivale. Ukuba akwenzeki oku, yaye inqanaba lamanzi lisenyuka ube umgqomo wamanzi endlu yangasese uqalisa ukuphuphuma kwakhona, kufuneka kufakwe elinye iqhoshana lombhojana odadayo.

Ukufakela iqhoshana levelufa edadayo

- Vula isiciko sombhobho omkhulu wamanzi – oku kuya kuvala amanzi angangeni kwindlu yakho.
- Khupha isikhonkwane esicandekileyo nengalo edadayo.
- Jija ukhulule isiciko.
- Susa ibhola usebenzisa uxinzelelo lwamanzi ukuyityhala iphume (vula isiciko sombhobho omkhulu wamanzi kancinci).
- Jija ukhulule ibhola ukuze ukhulule iqhoshana elibanjwe ngaphakathi kuyo.
- Fakela iqhoshana elitsha. Phinda udibanise iindawo obuzikhuphile (Isigaba 4 ukuya kwiSigaba 3 ukuya kwiSigaba 2 ukuya kwiSigaba 1).
- Vula isiciko sombhobho omkhulu wamanzi ngokucutha ujonge ukuba ivelufa edadayo iyavala na xa amanzi efika kwinqanaba lokuzala komgqomo wamanzi endlu yangasese.



Imigqomo yamanzi ashushu

Njengemigqomo yamanzi endlu yangasese, imigqomo yamanzi ashushu inombhujana othintela ukuphuphuma kwamanzi. Kuqhelekile ukuba amanzi athontsize kulo mbhujana (okanye idreyini) uxonyezelelwe kwivelufa eyandisiweyo yokunceda. Xa amanzi ashushu esanda, kukhutshwa amancinci kuwo ngalo mbhujana. Ukuthontsiza kumelwe ukuba kuyeke bakuba ubushushu bamanzi bumi ndawonye. Oku kuthontsiza kuqhelekileyo kungaqhuba iyure yonke nangaphezulu. Kungaphuma ukuya kwiilitha ezi- 2 zamanzi kulo mbhujana wokuthintela ukuphuphuma ngosuku ngalunye. La manzi angaqokelelwa aphinde asetyenziswe kwizityalo zakho zesitiya!

Ukuba kukho ukuthontsiza okuqhubekayo okanye ukuhamba kwamanzi kumbhujana othintela ukuphuphuma okanye ivelufa eyandisiweyo yokunceda uze umyinge wamanzi aqokelelweyo apha ube ngaphezu kweelitha ezi- 2 ngemini, kukho ukuvuza kwamanzi. Ngenxa yobumbaxa yaye mhlawumbi nobunzima bokulungisa imigqomo yamanzi ashushu evuzayo, okona kungcono kukuba ubize umntu oqeqeshelwe ukusebenza ngemibhobho yamanzi ukuba akulungiselele le ngxaki.

Iimpompo

Kungafakelwa **amaqhoshana angenisa umoya** kwiimpompo zasebhafini nezasekhitshini, kuncitshiswe ukuphuma kwesiqhelo kwamanzi empompeni ukusuka kuma- 20 okanye 30 eelitha ngomzuzu, amaninzi kuwo emoshakala, ukuya kwisi- 6 ukuya kwi- 10 leelitha. Ezi zixhobo zokuthomalalisa ukuphuma kwamanzi zisebenza ngokugqithisela amanzi kwiglasana ebethelwa apha kwimingxuma yeempompo. Amanzi aqingqwa ngomngxuma obukhulu buyi- 5mm ukuze kongezwe amaqamza ukwenza ukuba amanzi ahambe ngokuzola okungatshiziyo. Ukuphuma kwamanzi kwimpompo yakho kungancitshiswa ngama- 50% ukuyato 75%, lo gama uxinzelelo lwamanzi lumi ndawonye.

Amaqoshana angenisa umoya empompeni ajijeka lula. Noxa kunjalo, asizizo zonke iimpompo ezinokufakelwa ezi zixhobo njengoko kusenokwenzeka ukuba azinamsonto.

Umsonto ombaxa ungena kuzo zombini iimpompo ezilungiselelwe imisonto yesiqhelo ngokwesini sobukhomokazi naleyo yesobudoda. Noxa iimpompo ezininzi namhlanje zinemisonto yesiqhelo, impompo ezindala zingafuna amaqoshana okungenisa umsonto ukuze kufakelwe lula iimveliso zokonga amanzi. Ziyafumaneka. Jonga ukuba lungakanani na uxinzelelo lwamanzi (kPa) olufunekayo ukuze ezi mveliso zisebenze ngokufanelekileyo. Ngokomthetho kamasipala omtsha, ukuphuma kwamanzi kuyo nayiphi na itephu yesinki yokuhlamba izandla akunakuba ngaphezulu kweelitha ezintandathu ngomzuzu (Shedyuli 2 yoMthetho kaMasipala waManzi, uLawulo lweMfuno eMandla yaManzi).

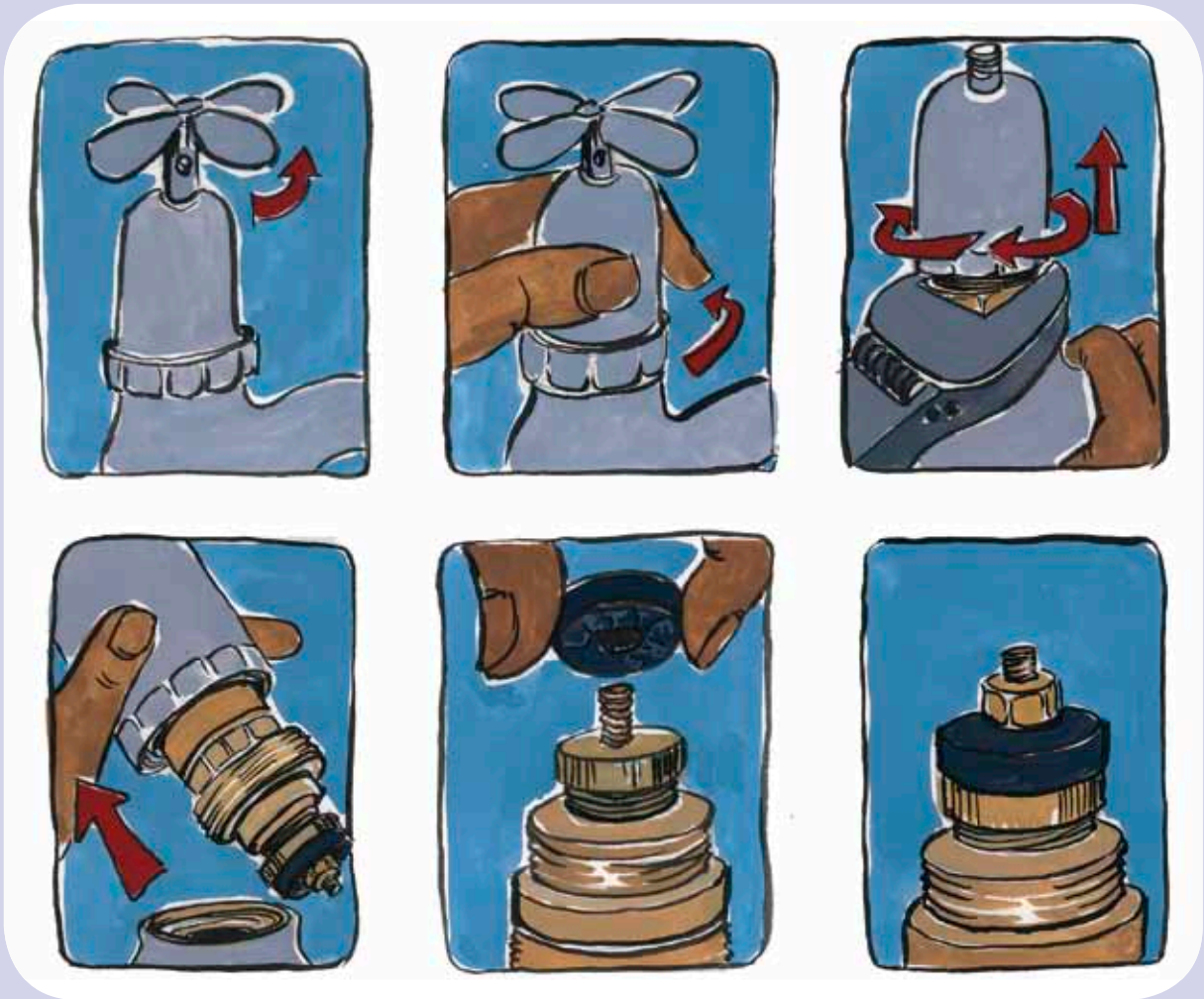
NgokoMthetho weSixeko waManzi wooMasipala ubuninzi bomyinge wamanzi aphuma kuyo nayiphi na impompo efakelwe kwisityana sokuhlamba izandla mawungabi ngaphezu kweelitha ezi- 6 ngomzuzu (uMthetho waManzi wooMasipala iShedyuli 2 uLawulo lokuSetyenziswa kwaManzi).

Iqhoshana elingenisa umoya empompeni libiza malunga nama- R35.

Ukulungisa impompo evuzayo NGEZIGABA EZILULA ezisixhenxe!

Impompo ethontsizayo idla ngokuxela ukuba kufuneka ufakele iqhoshana elitsha. Ukwenza oku:

1. Vala isiciko sombhobho omkhulu wamanzi (umbhobho omkhulu ongenisa amanzi endlwini yakho) uvule impompo ngokupheleleyo.
2. Jija ukhulule isiciko. Xa ukhulula impompo, yisongele ngelaphu ukuze ingakrweleki.
3. Jija ukhulule intsimbi esisangqa edibanise ezinye.
4. Jija ukhulule imortyisi ebambe iqhoshana ukuze ukhuphe iqhoshana.
5. Fakela iqhoshana elitsha uze ubuyisele imortyisi. Qinisekisa ukuba unobukhulu obulungele impompo.
6. Phinda ubuyisele intsimbi esisangqa edibanise ezinye uze ujije ubuyisele isiciko.
7. Vala impompo, vula umbhobho ohambisa amanzi ngokucotha ujonge iindawo ezivuzayo kwakhona. Musa ukuyiqinisa kakhulu impompo njengoko iqhoshana elitsha lithambile yaye linokonakala.



Oomashini bokuhlamba izitya neempahla

Ukukhetha ngobulumko xa uthenga izinto zasekhaya ezintsha kungaba nefuthe elikhulu ekusetyenzisweni kwamanzi akho (nombane ngokunjalo). Khangela iimveliso ezonga amanzi nombane.

Oomashini bokuhlamba izitya basebenzisa malunga nama- 40 ukuya kuma- 75 eelitha zamanzi ngokuhlamba, kodwa **oomashini abagqibelele ngakumbi bangasebenzisa kancinci kangange- 13 leelitha**. Aba bangasebenzisa nombane ongaphantsi njengoko emancinci amanzi ekufuneka efudunyeziwe. Oomashini abaneempahla ezihlanjwa msinya (izitya ezingangcolanga kakhulu) okanye iimpahla ezimbalwa baya kunciphisa ukusetyenziswa kwamanzi ngama- 37% nokusetyenziswa kombane ngama- 29%.

Oomashini bokuhlamba iimpahla ngokwesiqhelo basebenzisa ama- 150 eelitha

Ukuhlamba

Oomashini bokuhlamba iimpahla abagqibelele ngakumbi basebenzisa amanzi amalunga nama- 30% ngaphantsi nama- 40% ukuya kuma- 50% umbane ngaphantsi. Khangela oomashini abasebenzisa phakathi kwama- 37 ukuya 45 eelitha zamanzi ngokuhlamba. Kwakhona, amanzi ashushu amancinci athetha ukuba kusetyenziswa umbane omncinci.

Qaphela, ukuba oomashini abonga amanzi baya kufuna isepha ejiye kakhulu okanye eninzi yaye ngaphandle kokuba kungasetyenziswa sepha zimbi, azikulungelanga ukusetyenziswa kwindlela yokusetyenziswa kwamanzi amdaka.



lingcebiso jikelele

- Oomashini abafakwa iimpahla ngaphambili umthetho wabo bagqibelele ngaphezu kwabo bayifakwa ngaphezulu (bonga amanzi nombane).
- Nawuphi na umjikelo wokuhlamba kusetyenziswa iqondo lobushushu elibekwe ngaphezu kwama- 60 umosha umbane omninzi kakhulu.
- Ukuhlamba okukhawulezayo nokuhlamba iimpahla ezimbalwa kokubini kunceda ekongeni amanzi xa kuhlanjwa iimpahla ezimbalwa.
- Xa usebenzisa umatshini weempahla nowezitya mawugcwalwe ngumthwalo weempahla okanye wezitya.

Izitya

Apho izindlu zinezitya, ezi zitya zidla ngokusebenzisa kangangama- 30 ukuya kuma- 50% awo onke amanzi asetyenziswa kwikhaya elo. La ngamanzi anyangiweyo, aselwayo (kudla imali ukuwahlambulula) yaye kufuneka sicinge ngobulumko xa sifuna ukuwasebenzisa ezityeni. Singagqibelele ngakumbi ngokuncenkceshela ngamaxsha apholileyo emini, kusetyenziswa ukuncenkceshela okuthontsizayo, ukusebenzisa izichumiso zendalo nokufaka isitroyi kwizitya zethu. Ezinye izityalo ezilungele ukutyalwa eKapa (ebezisoloko zikho) azifuni kuncenkceshelwa nakancinci, ngaphandle kwaxa zisakhula.

NgokoMthetho weSixeko omtsha wooMasipala waManzi izitya azinakuncenkceshelwa ngamanzi okusela, phakathi kweeyure 10:00 no 16:00. xa kusetyenziswa umbhobho wokuncenkceshela ukuncenkcesheka isitya ufakwe kwimpompo yamanzi aselwayo, kuya kufakelwa isixhobo sokulawula amanzi, kungafakwa nokuba sisitshizi ekupheleni kombhobho. (uMthetho waManzi wooMasipala iShedyuli 2 uLawulo lokuSetyenziswa kwaManzi).



Ifoto: Tamara North

Izityalo zemveli ezimibala-bala nezonga amanzi kwizitya zethu

Incam yeKapa ineendidi ezininzi zezityalo (2 256) kuneZiqithi zaseBritane xa zizonke (1 492). Ezi zityalo zemveli ziye zalungela ukumelana nobume bezulu nohlobo lomhlaba weli kwiminyaka engamawaka yaye inkoliso inamaqgabi amancinci, angwevu, anencindi okanye anoboya ukumelana nobushushu nokoma kwehlobo. Izityalo zemveli zezona zilungele izitya zethu yaye zifuna ukukhathalelwa nokunkcencshelwa kancinci, xa zithe zakufuna oko. Isitya esele sikhulile esonga amanzi singandisa ixabiso lendlu yakho. Okukhona usenza isitya sakho songe amanzi kwasekuqaleni, kokukhona kuya kuba lula yaye kungabinandleko ukusigcina sisihle. Wakuthatha isigqibo sokwenza isitya sakho songe amanzi, thetha ngeendlela ezahlukeneyo zoko nendawo ekhulisa ithengise izityalo kwindawo ohlala kuyo, okanye jonga kwiphamfletshi yeSixeko enesihloko esithi "Creating a water efficient garden".

Ukuba kufuneka ube nengca yokuphumla, faka ingca yemveli emelana neembalela endaweni yengca iKikuyu, efana neBuffalo grass (*Stenotaphrum secundatum*) ne Fyn (Fine) kweek . Ezi ntlobo zifuna isiqingatha somyinge wamanzi yaye kulula ukuzikhathalela. Ingca yokuphumla eseKirstenbosch Gardens (kusetyenziswa iintlobo zengca yemveli) inkcencshelwa kuphela kanye ngeveki ebusuku iinyanga ezintathu zonyaka (ehlotyeni). Kungenjalo, le ngca ixhomekeke emvuleni ukuze iphile, yaye iqhuba kakuhle.



Ifoto: Tamara North

Amadama okuqubha

Kuthatha ama- 32.5 billion eelitha zamanzi ukuzalisa amadama okuqubha aqikelelwa kuma- 650 00 eMzantsi Afrika. INTshona Koloni inamalunga nama- 91 000 ala madama okuqubha.

Xa imozulu ishushu kakhulu, amanqanaba amanzi amadama ngokwendalo ehla malunga ne- 0.5cm ukuya kwi- 1 cm ngosuku. Izigqumo zamadama zinciphisa ukuphuma komphunga ukuya kutsho kuma- 90%, zonge amanzi obuza kuwasebenzisa ukunyusa amanqanaba amanzi edama lakho. Iplastiki ekwenziwe ngayo izigqumo zamadama okuqubha lbiza malunga nama- R40 ukuya kuma- R50 ngesikwere semitha. Izixhobo zobunewu-newu ezizisongayo nezinye izincedisizingabiza ngaphezu kwama- R2 000. Qho ukuba usongeza amanzi kwidama lakho, nebhili yakho iza kunyuka.

Amadama okuqubha avuzayo angakhokelela kwilahleko engeyomfuneko yamanzi. Khangela iintanda ngaphakathi kwidama lokuqubha okanye indawo enengca eluhlaza ngokungaqhelekanga. Ngcono nangakumbi, bhala phantsi ukuba kufuneka ulizalise rhoqo kanganani na idama

lakho lokuqubha (oku kuya kuthi gqolo kakhulu ehlotyeni). Ukuba inqanaba lamanzi edama lakho lokuqubha lihla ngaphezu kwe- 5cm ukuya kwi- 6cm ngeveki, ngokuqinisekileyo unendawo evuzayo.

NgokoMthetho weSixeko waManzi wooMasipala omtsha izixhobo ezizisebenzelayo zokuzalisa ezisebenzisa ivelufa edadayo etsala amanzi kumthombo wamanzi aselwayo ukuzalisa idama lokuqubha azivumelekanga (uMthetho waManzi wooMasipala iShedyuli 2 uLawulo lokuSetyenziswa kwaManzi).

Amanzi atsalwa phantsi komhlaba nakwimithombo

Umthombo udla ngokufakwa impompo elapha emhlabeni ekwazi ukutsala amanzi angaphantsi komhlaba isebenzisa umbhobho ofunxayo kwi-8-10 leemitha ngaphantsi emhlabeni. Umngxuma ekutsalwa kuwo amanzi ongenzulwanga umalunga nama- 30 eemitha, lo gama imingxuma enzulu inokuba nzulu kangange- 100 leemitha. Ukumba umngxuma wokutsala amanzi kubiza imali eninzi kakhulu yaye kufuneka kuphandwe ngokupheleleyo phambi kokuba kwenziwe. Amanzi avela phantsi komhlaba asenokungakulungeli ukunkcenkceshelwa kwezityalo.

Amanzi aphantsi komhlaba adlala indima ebalulekileyo kokusingqongileyo. Ngamathuba eembalela, amanzi aphantsi komhlaba avuselela imilambo xa amanzi ayo esezantsi. Ngamaxesha eemvula, iba ngamanzi emilambo ehlayo aye ezantsi emhlabeni; imilambo namanzi emiyo emhlabeni avuselela lawo aphantsi komhlaba. Ukuqinisekisa ukuba amanzi avela phantsi komhlaba akangcolanga okanye akasetyenziswa ngokugqithileyo, umyinge wamanzi atsalwa phantsi komhlaba kufuneka ubekwe esweni . yiyo uMasipala efuna ukuba onke amakhaya anemingxuma yokutsala amanzi phantsi komhlaba abhaliswe kuMasipala.

Amatanki amanzi emvula

Noxa kungekho mthethweni nje ukuxomezelela itanki lamanzi emvula kumbhobho wamanzi aselwayo, kungaba yingcinga entle ukuzifakela itanki lakho lamanzi emvula ukwenzela amanzi okuhlamba iimpahla, ukucoca, ukunkcenkceshela nedama lokuqubha. Kungafakelwa nesixhobo sokusebenzisa amanzi emvula aye kumatanki amanzi asethoyilethi yaye oku kungacutha ukusetyenziswa kwamanzi xa kuflashwa.

Ukusetyenziswa kwamatanki amanzi emvula kwimimandla efumana imvula ehlotyeni kunganenzuzo enkulu kunezo ndawo ezifumana iimvula ebusika. Kodwa ke, itanki elineelitha ezingama-5000 elisetyenziselwa ukufasha ethoyilethi ebusika kungonga i-15% yamanzi qho ngonyaka. Oku kunokwenzeka xa amanzi ehla phezulu ephahleni ayi-80 m² ngexesha lokuna kweemvula.

Amatanki amanzi emvula athatha imithamo eyahlukeneyo yamanzi: 200 yeelitha, 500 yeelitha, 1 000 leelitha, 1 500 leelitha, 2 500 eelitha, 5 000 eelitha nama 10 000 eelitha.

Ngenxa yendlela amakhulu ngayo, kufuneka indawo enkulu yokuwafakela. Ukonga indawo, khetha itanki elimi ngqo ingelilo elilele ngecala. Ukubeka itanki emthunzini kuya kunceda ekugcineni amanzi ephole kangangoko. Qaphela ukuba elenziwe ngemathiriyeli engangenisi kukhanya lingenza ukuba amanzi abe nobulembu xa libekwe kwindawo enelanga. Itanki elibukhulu buziilitha ezili-1 000 likhangeleka ilelona longayo – nelithandwayo, libiza kwisithuba sama- R890 ngetanki lesiqhelo leplastiki eliluhlaza okwesibhakabhaka. Itanki elincinci eliziilitha ezingama- 250 libiza malunga nama- R530.

Ukulunga nokungalungi kwamanzi amdaka

Amanzi esithi amdaka ngamanzi asetyenziswe endlwini ekuhlambeni, ekuhlambeni iimpahla nasekucoceni. Kukho indlela yokuthatha la amanzi amdaka aguqulelwe kumanzi okunkcenkceshela izitya. Bubalulekile ubukhulu nendlela emi ngayo imibhobho ejika amanzi esuka kumashini wokuhlamba iimpahla. Kufuneka izihluzi, iivelufa kunye novimba (wokugcina). Amanzi okuhlamba iimpahla anesepha enefosfeythi anesondlo yaye angakhuthaza ukukhula kwezityalo. Noxa kunjalo, ulwelo oluninzi lokuhlamba izitya lunezinto azingazilungelanga izitya zethu. Amanzi amdaka avela ekhitshini makangasetyenziswa ekunkcenkcesheleni izitya.



Amanzi amdaka akasoloko ekhuselekile ukuba angasetyenziswa. Kufuneka wazi ukuba ungabeka esweni ngokhuseleko izinto ezingena emanzini ulawule le ndlela ngokukuko. Ngenxa yezizathu zempilo, musa ukusebenzisa amanzi amdaka ukunkcenkchela imifuno yakho, amayeza okanye iziqhamo oneenjongo zokuzitya. Xa usebenzisa amanzi amdaka kwisitiya sakho, kubalulekile ukuba amathontsi amanzi abe makhulu yaye amanzi aphumele ezantsi ukuze anganabeli kwezinye iindawo amanzi amdaka. La manzi makangatshizwa kwingca yakho ngeentsuku ezinomoya. Kungcono ukuwasebenzisa kwakhona la manzi kusetyenziswa indlela etofayo ewagalela kanye kwiingcambu zezityalo amanzi. Indlela yokutofa amanzi engcono ngakumbi yileyo isebenzisa imibhobho ephantsi komhlaba. Sukugalela amanzi amdaka kwizinto eziwathumela kwiidreyini ezisesitalatweni ngoba oko kungangcolisa izixokelelwano zemibhobho yamanzi ezithumela amanzi kwimilambo nemithombo yethu.

Ezi ndlela ziyabiza kodwa ziyafumaneka eKapa. Ukufaka imibhobho yamanzi amdaka kumbaxa. Yenza uphando olunzulu ngale nkqubo yaye uqinisekise ukuba usebenzisa inkampani edumileyo.

IINDLELA ZONXIBELELWANO NEMITHOMBO YOLWAZI

Imibuzo ngeTyala laManzi kwiSixeko saseKapa: 0860 103 089

Iziko lobuGcisa laManzi leeNkonzo zoCoceko leSixeko saseKapa : 0860 103 054

I-imeyile: WaterTOC@capetown.gov.za; I-Intanethi: www.capetown.gov.za

I-Ofisi yeNgingqi yeSebe leMicimbi yezaManzi naMahlathi, 17 Strand Street, Bellville: (021) 950 7100; I-Intanethi: www.dwaf.gov.za

Iqumrhu lokuBekwa eSweni koKusingqongileyo (EMG) Umnxeba: (021) 448 2881.

Imigangatho yokudizayinwa nokwakhiwa kwemingxuma yokutsala amanzi.: Jonga iSANS 10299 (2003) "Development and maintenance of groundwater resources".

Ne-Borehole Association of South Africa www.bwa.co.za.

Uvimba weCandelo lokuFakela: A- Z wokuSebenza ngoBuchule ngeMibhobho yaManzi kwiZakhiwo zoRhwebo nezaMakhaya, CSIR, 2003.

Zenza ntoni ezinye izixeko eMzantsi Afrika naphesheya ukonga amanzi?

www.randwater.co.za

www.umgeni.co.za

www.savewater.co.za ngeendlela zalapha zokonga amanzi

www.thameswateruk.co.uk

www.sydneywater.com.au

www.webfoundry.co.za ngoMcelimngeni woPhicotho lwaseKhaya

www.ewisa.co.za

Ukufunda le ncwadi kuza kukunceda ukuba

- Wonge imali ngokuthi ulawule ikhaya lakho ngendlela eyiyo.
- Uphucule ukhuseleko ekhaya.
- Ukuqonda imiba ebalulekileyo yokusingqongileyo esijongene nayo xa sisonke.
- Ukuqonda imirhumo yeSixeko.
- Ukwazi ukuba mawuye phi xa ufuna uncedo okanye iingcebiso ngeenkono zeSixeko.
- Ukuzama obunye ubuchwepheshe obufana nezishushubezi zamanzi ezisebenza ngelanga.
- Ukutyebisa ulwazi lwakho nokonwabela amathala endalo akwimimandla yethu.
- Ufunde ukulungisa into evuzayo, ukutshintsha iglowubhu yesibane, ukufakela isilingi, ukujika inkunkuma yakho ibe ngumgquba kunye nezinye izinto ezincinci eziya kukunceda ukuba uphile ngokukhuselekileyo, ulondolozel okusingqongileyo kunye nemali yakho.

