

## **The Quality of drinking water in the Langeberg Municipality**

The Langeberg Municipality aim to protect public health by ensuring safe drinking water for all.

The Langeberg area has five water purification plants for drinking water and five wastewater purification plants for sewage processing. It is important that the treated water complies with the strict South African National Standards (SANS). Analysis reports are done on a monthly basis at these purification plants, by an external service provider, the SANS accredited A.L. Abbot and Associates. These lab results indicate the quality of drinking water specific to each of the five towns of the Langeberg Municipality and specify whether the chemical, physical and biological characteristics of water are in respect to the suitability for its intended purpose.

These updated monthly Lab results can be found on the Langeberg Municipality website at [www.langeberg.gov.za](http://www.langeberg.gov.za) where members of the public can access it.

The latest report compiled in October 2013 of the Langeberg Municipality breaks down the five towns' treated water results and indicate the water results to be safe according to the SANS 241 standards as indicated in the below SANS certificate of analysis report:

| <b>ANALYSES</b>                     | <b>ASHTON<br/>Sample<br/>no.:<br/>17530<br/>Date<br/>Sample:<br/>09/10/201<br/>3<br/>Date<br/>Analysed<br/>:<br/>09/10/201<br/>3</b> | <b>BONNIEV<br/>ALE<br/>Sample<br/>no.:<br/>17520<br/>Date<br/>Sample:<br/>09/10/201<br/>3<br/>Date<br/>Analysed<br/>:09/10/20<br/>13</b> | <b>McGREG<br/>OR<br/>Sample<br/>no.:<br/>17499<br/>Date<br/>Sample:0<br/>9,13,18/1<br/>0/2013<br/>Date<br/>Analysed<br/>:<br/>09,13,18/<br/>10/2013</b> | <b>MONTAG<br/>U<br/>Sample<br/>no.:<br/>17524<br/>Date<br/>Sample:<br/>09/10/201<br/>3<br/>Date<br/>Analysed<br/>:09/10/20<br/>13</b> | <b>ROBERT<br/>SON<br/>Sample<br/>no.:<br/>17494<br/>Date<br/>Sample:<br/>09,13,18/<br/>10/2013<br/>Date<br/>Analysed<br/>:<br/>09,13,18/<br/>10/2013:</b> | <b>SANS<br/>241-1<br/>2011</b> |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| pHs (at 25°C)                       | 8.90                                                                                                                                 | 8.90                                                                                                                                     | 9.40                                                                                                                                                    | 9.00                                                                                                                                  | 9.10                                                                                                                                                      |                                |
| pH (at 25°C)                        | 7.00                                                                                                                                 | 7.13                                                                                                                                     | 6.82                                                                                                                                                    | 6.64                                                                                                                                  | 6.81                                                                                                                                                      |                                |
| Conductivity<br>(mS/m) (at<br>25°C) | 20.9                                                                                                                                 | 27.9                                                                                                                                     | 11.2                                                                                                                                                    | 22.6                                                                                                                                  | 12.3                                                                                                                                                      |                                |
| Turbidity (NTU)                     | 2.9                                                                                                                                  | 1.5                                                                                                                                      | 0.63                                                                                                                                                    | 2.1                                                                                                                                   | 1.5                                                                                                                                                       |                                |
| Langelier<br>Saturation             | -1.9                                                                                                                                 | -1.7                                                                                                                                     | -2.6                                                                                                                                                    | -2.3                                                                                                                                  | -2.4                                                                                                                                                      | N/A                            |

|                                                  |       |       |       |       |       |                                 |
|--------------------------------------------------|-------|-------|-------|-------|-------|---------------------------------|
| Index (at 25°C)                                  |       |       |       |       |       |                                 |
| Ryznar Index                                     | 10.8  | 10.7  | 12.0  | 11.4  | 11.4  | N/A                             |
| Colour (mg/l as Pt)                              | 2     | 3     | 2     | 5     | <1    |                                 |
| CaCO <sub>3</sub> Precipitation Potential (mg/l) | -22.6 | -18.8 | -29.6 | -43.7 | -30.2 | N/A                             |
| Total Alkalinity (mg/l as CaCO <sub>3</sub> )    | 47.4  | 52.4  | 40.6  | 43.1  | 41.2  | N/A                             |
| Total Hardness (mg/l as CaCO <sub>3</sub> )      | 32.7  | 37.4  | 10.9  | 31.7  | 19.4  | N/A                             |
| Calcium (mg/l as Ca)                             | 7.0   | 7.7   | 2.6   | 7.1   | 4.5   | N/A                             |
| Magnesium (mg/l as Mg)                           | 3.7   | 4.4   | 1.1   | 3.4   | 2.0   | N/A                             |
| Aluminium (ug/l as Al)                           | 111   | 249   | 45    | 476   | 50    |                                 |
| Iron (ug/l as Fe)                                | 19    | 34    | <10   | 30    | 26    |                                 |
| Free Chlorine (mg/l)                             | 0.59  | 1.3   | 0.08  | 1.9   | 0.49  |                                 |
| E.coli (count per 100ml)                         | <1    | <1    | <1    | <1    | <1    | Not Detected<br>Acute Health -1 |
| Total Coliform Bacteria (count per 100ml)        | 1     | <1    | <1    | <1    | <1    |                                 |
| Calcium Hardness (mg/l as CaCO <sub>3</sub> )    | 17.5  | 19.3  | 6.4   | 17.8  | 11.3  | N/A                             |
| Magnesium Hardness (mg/l as CaCO <sub>3</sub> )  | 15.2  | 18.0  | 4.6   | 13.9  | 8.1   | N/A                             |
|                                                  |       |       |       |       |       |                                 |

To further ensure sustainable water quality, Langeberg Municipality has appointed GLS Consulting to provide the Municipality with an extensive specialist service related to the optimal analysis, planning and management of water distribution and sewer reticulation systems.

Strong emphasis is placed on the importance of a scientifically developed master plan to ensure that all communities can be provided with services that meet acceptable standards. Comprehensive water and sewer master plans are also absolutely crucial in ensuring that the available capital funds are optimally utilised.

The master plans also provide the Langeberg Municipality with data in related areas of engineering such as pipeline replacement prioritization based on risk analysis and evaluation of component criticality, utilization and performance for the purposes of quality management.

### **Umgangatho wamanzi okusela kuMasipala waseLangeberg**

UMasipala waseLangeberg unenjongo zokukhusela impilo yoluntu ngokuqinisekisa ukhuseleko lwamanzi okusela abantu bonke .

Ingingqi yaseLangeberg inamaziko amahlanu okucoca amanzi aselwayo kunye namanye amahlanu okucoca awelindle. Kubalulekile ukuba oku kucocwa kwamanzi kwenziwe ngokwemigqaliselo enqinqwe ngabakwaSouth National Standards (SANS). Iingxelo zokuhlolwa kwamanzi zenziwa rhoqo ngenyanga kulo maziko okucocwa kwamanzi, lusenziwa leqela langaphandle elinikezela ngalo nkonzo, lakwa- A.L. Abbot and Associates neliphunyeziweyo lakwa-SANS. Ezi ziphumo zophando zibonakalisa umgangatho wamanzi okusela ngokwedolophu nganye kwezo zintlanu zikuMasipala waseLangeberg kwaye zichaza kananjalo ngeempawu ezibonakalayo zamachiza, zenkangeleko yamanzi, kunye nezokulungelelana nempilo yoluntu, ukuba ngaba zezifanelekileyo kumanzi okusela.

Ezi ziphumo zihlaziywa nyanga zonke ziyafumaneka kwiwebhusayithi yakwaMasipala engu- [www.langeberg.gov.za](http://www.langeberg.gov.za) nalapho uluntu lungazifumanela khona.

Iingxelo yamva-nje equlunqwe nguMasipala waseLangeberg ngo-Oktobha 2013 icazulula iziphumo zokucocwa kwamanzi kwidolophu zontlanu, ikwaphawula neziphumo zokukhuseleka kwamanzi ngokwamanqanaba ka-SANS 241 nanjengoko kubonakalisiwe kwesi sigcangca sengxelo yokuhlolwa singezantsi neyenziwe ngabakwa-SANS:

| <b>ANALYSES</b> | <b>ASHTON<br/>Sample<br/>no.:<br/>17530<br/>Date<br/>Sample:<br/>09/10/201<br/>3<br/>Date<br/>Analysed<br/>:<br/>09/10/201</b> | <b>BONNIEV<br/>ALE<br/>Sample<br/>no.:<br/>17520<br/>Date<br/>Sample:<br/>09/10/201<br/>3<br/>Date<br/>Analysed<br/>:<br/>09/10/20</b> | <b>McGREG<br/>OR<br/>Sample<br/>no.:<br/>17499<br/>Date<br/>Sample:0<br/>9,13,18/1<br/>0/2013<br/>Date<br/>Analysed<br/>:<br/>:</b> | <b>MONTAG<br/>U<br/>Sample<br/>no.:<br/>17524<br/>Date<br/>Sample:<br/>09/10/201<br/>3<br/>Date<br/>Analysed<br/>:<br/>09/10/20</b> | <b>ROBERT<br/>SON<br/>Sample<br/>no.:<br/>17494<br/>Date<br/>Sample:<br/>09,13,18/<br/>10/2013<br/>Date<br/>Analysed<br/>:<br/>:</b> | <b>SANS<br/>241-1<br/>2011</b> |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
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|                                                  | <b>3</b> | <b>13</b> | <b>09,13,18/<br/>10/2013</b> | <b>13</b> | <b>09,13,18/<br/>10/2013:</b> |                                 |
|--------------------------------------------------|----------|-----------|------------------------------|-----------|-------------------------------|---------------------------------|
| pHs (at 25°C)                                    | 8.90     | 8.90      | 9.40                         | 9.00      | 9.10                          |                                 |
| pH (at 25°C)                                     | 7.00     | 7.13      | 6.82                         | 6.64      | 6.81                          |                                 |
| Conductivity (mS/m) (at 25°C)                    | 20.9     | 27.9      | 11.2                         | 22.6      | 12.3                          |                                 |
| Turbidity (NTU)                                  | 2.9      | 1.5       | 0.63                         | 2.1       | 1.5                           |                                 |
| Langelier Saturation Index (at 25°C)             | -1.9     | -1.7      | -2.6                         | -2.3      | -2.4                          | N/A                             |
| Ryznar Index                                     | 10.8     | 10.7      | 12.0                         | 11.4      | 11.4                          | N/A                             |
| Colour (mg/l as Pt)                              | 2        | 3         | 2                            | 5         | <1                            |                                 |
| CaCO <sub>3</sub> Precipitation Potential (mg/l) | -22.6    | -18.8     | -29.6                        | -43.7     | -30.2                         | N/A                             |
| Total Alkalinity (mg/l as CaCO <sub>3</sub> )    | 47.4     | 52.4      | 40.6                         | 43.1      | 41.2                          | N/A                             |
| Total Hardness (mg/l as CaCO <sub>3</sub> )      | 32.7     | 37.4      | 10.9                         | 31.7      | 19.4                          | N/A                             |
| Calcium (mg/l as Ca)                             | 7.0      | 7.7       | 2.6                          | 7.1       | 4.5                           | N/A                             |
| Magnesium (mg/l as Mg)                           | 3.7      | 4.4       | 1.1                          | 3.4       | 2.0                           | N/A                             |
| Aluminium (ug/l as Al)                           | 111      | 249       | 45                           | 476       | 50                            |                                 |
| Iron (ug/l as Fe)                                | 19       | 34        | <10                          | 30        | 26                            |                                 |
| Free Chlorine (mg/l)                             | 0.59     | 1.3       | 0.08                         | 1.9       | 0.49                          |                                 |
| E.coli (count per 100ml)                         | <1       | <1        | <1                           | <1        | <1                            | Not Detected<br>Acute Health -1 |
| Total Coliform Bacteria (count per 100ml)        | 1        | <1        | <1                           | <1        | <1                            |                                 |
| Calcium Hardness (mg/l as CaCO <sub>3</sub> )    | 17.5     | 19.3      | 6.4                          | 17.8      | 11.3                          | N/A                             |
| Magnesium Hardness (mg/l as CaCO <sub>3</sub> )  | 15.2     | 18.0      | 4.6                          | 13.9      | 8.1                           | N/A                             |
|                                                  |          |           |                              |           |                               |                                 |

Ukuqinisekisa amanzi asengangathweni ozinzileyo, uMasipala waseLangeberg uchonge u-GLS Consulting ukubaancedisane noMasipala babonelele ngenkonzo ebalaseleyo

ngokumalunga nokuhlolwa, ukugcwangciswa kunye nokulawulwa kweenkqubo zokunikezalwa ngamanzi nogutyulo lwelindle.

Kwenziwa ugxigxiniso ngokubaluleka kokuphuhliswa kwesigcwangciso esingundoqo senzukulwazi ukuze kuqinisekise ukuba lonke uluntu luyabonelelwa ngeenkonzo ezikwizinga elamkelekileyo. Izigcwangciso ezingundoqo neziqukeneyo zamanzi nogutyulo lwelindle zibaluleke kakhulu nanjengokuba ziqinisekisa ukuba imali yokuthengwa kwezinto zakwamasipala ezihlala ixesha elide, isetyenziswa ngokugqibeleleyo.

Esi sigcwangciso singundoqo sikwabonelela uMasipala waseLangeberg ngeenkcukacha eziphathelele nezobunjini, ezifana nokutshintshwa kwemibhobho ngokokuqulathwe kwingxelo yokuhlolwa kunye nokuvavanywa kwemo yongcipheko yona ejonga ukubaluleka, ukusetyenziswa kunye nokusebenza kwayo ngenjengo zokuba nolawula olusemgangathweni.

### **Die gehalte van drinkwater in die Langeberg-streek**

Die Langeberg Munisipaliteit streef daarna om openbare gesondheid te beskerm deur gesonde drinkwater vir almal te verseker.

Die Langeberg-area het vyf watersuiweringsaanlegte vir drinkwater en vyf afvalwater-suiweringsaanlegte waar riool behandel word.

Dit is belangrik dat die behandelde water voldoen aan die streng Suid-Afrikaanse Nasionale Standaard (SANS).

Ontledingsverslae word op 'n maandelikse basis by hierdie suiweringsaanlegte gedoen, deur 'n eksterne diensverskaffer, die SANS-geakkrediteerde A.L. Abbot and Associates.

Hierdie laboratoriumuitslae dui die gehalte aan van die water van drinkgehalte spesifiek vir elk van die vyf dorpe van die Langeberg Munisipaliteit, en spesifiseer wat die chemiese, fisiese en biologiese kenmerke van die water is met betrekking tot die geskiktheid om vir drink-doeleindes aangewend te word.

Hierdie opgedateerde maandelikse laboratoriumuitslae kan by die Langeberg Munisipaliteit se webwerf gevind word by [www.langeberg.gov.za](http://www.langeberg.gov.za) waar lede van die publiek toegang daartoe kan kry.

Die mees onlangse verslag, saamgestel in Oktober 2013, gee 'n uiteensetting van die vyf dorpe se behandelde water en dui aan dat die water veilig is volgens die SANS 241-standaard, soos in die tabel op die vorige bladsy:

| <b>ANALYSES</b>                                  | <b>ASHTON<br/>Sample<br/>no.:<br/>17530<br/>Date<br/>Sample:<br/>09/10/2013<br/>Date<br/>Analysed<br/>:<br/>09/10/2013</b> | <b>BONNIEV<br/>ALE<br/>Sample<br/>no.:<br/>17520<br/>Date<br/>Sample:<br/>09/10/2013<br/>Date<br/>Analysed<br/>:<br/>09/10/2013</b> | <b>McGREG<br/>OR<br/>Sample<br/>no.:<br/>17499<br/>Date<br/>Sample:<br/>09/13/18/10/2013<br/>Date<br/>Analysed<br/>:<br/>09/13/18/10/2013</b> | <b>MONTAG<br/>U<br/>Sample<br/>no.:<br/>17524<br/>Date<br/>Sample:<br/>09/10/2013<br/>Date<br/>Analysed<br/>:<br/>09/10/2013</b> | <b>ROBERT<br/>SON<br/>Sample<br/>no.:<br/>17494<br/>Date<br/>Sample:<br/>09/13/18/10/2013<br/>Date<br/>Analysed<br/>:<br/>09/13/18/10/2013</b> | <b>SANS<br/>241-1<br/>2011</b> |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| pHs (at 25°C)                                    | 8.90                                                                                                                       | 8.90                                                                                                                                | 9.40                                                                                                                                          | 9.00                                                                                                                             | 9.10                                                                                                                                           |                                |
| pH (at 25°C)                                     | 7.00                                                                                                                       | 7.13                                                                                                                                | 6.82                                                                                                                                          | 6.64                                                                                                                             | 6.81                                                                                                                                           |                                |
| Conductivity (mS/m) (at 25°C)                    | 20.9                                                                                                                       | 27.9                                                                                                                                | 11.2                                                                                                                                          | 22.6                                                                                                                             | 12.3                                                                                                                                           |                                |
| Turbidity (NTU)                                  | 2.9                                                                                                                        | 1.5                                                                                                                                 | 0.63                                                                                                                                          | 2.1                                                                                                                              | 1.5                                                                                                                                            |                                |
| Langelier Saturation Index (at 25°C)             | -1.9                                                                                                                       | -1.7                                                                                                                                | -2.6                                                                                                                                          | -2.3                                                                                                                             | -2.4                                                                                                                                           | N/A                            |
| Ryznar Index                                     | 10.8                                                                                                                       | 10.7                                                                                                                                | 12.0                                                                                                                                          | 11.4                                                                                                                             | 11.4                                                                                                                                           | N/A                            |
| Colour (mg/l as Pt)                              | 2                                                                                                                          | 3                                                                                                                                   | 2                                                                                                                                             | 5                                                                                                                                | <1                                                                                                                                             |                                |
| CaCO <sub>3</sub> Precipitation Potential (mg/l) | -22.6                                                                                                                      | -18.8                                                                                                                               | -29.6                                                                                                                                         | -43.7                                                                                                                            | -30.2                                                                                                                                          | N/A                            |
| Total Alkalinity (mg/l as CaCO <sub>3</sub> )    | 47.4                                                                                                                       | 52.4                                                                                                                                | 40.6                                                                                                                                          | 43.1                                                                                                                             | 41.2                                                                                                                                           | N/A                            |
| Total Hardness (mg/l as CaCO <sub>3</sub> )      | 32.7                                                                                                                       | 37.4                                                                                                                                | 10.9                                                                                                                                          | 31.7                                                                                                                             | 19.4                                                                                                                                           | N/A                            |
| Calcium (mg/l as Ca)                             | 7.0                                                                                                                        | 7.7                                                                                                                                 | 2.6                                                                                                                                           | 7.1                                                                                                                              | 4.5                                                                                                                                            | N/A                            |
| Magnesium (mg/l as Mg)                           | 3.7                                                                                                                        | 4.4                                                                                                                                 | 1.1                                                                                                                                           | 3.4                                                                                                                              | 2.0                                                                                                                                            | N/A                            |
| Aluminium (µg/l as Al)                           | 111                                                                                                                        | 249                                                                                                                                 | 45                                                                                                                                            | 476                                                                                                                              | 50                                                                                                                                             |                                |
| Iron (µg/l as Fe)                                | 19                                                                                                                         | 34                                                                                                                                  | <10                                                                                                                                           | 30                                                                                                                               | 26                                                                                                                                             |                                |
| Free Chlorine                                    | 0.59                                                                                                                       | 1.3                                                                                                                                 | 0.08                                                                                                                                          | 1.9                                                                                                                              | 0.49                                                                                                                                           |                                |

|                                                 |      |      |     |      |      |                                 |
|-------------------------------------------------|------|------|-----|------|------|---------------------------------|
| (mg/l)                                          |      |      |     |      |      |                                 |
| E.coli (count per 100ml)                        | <1   | <1   | <1  | <1   | <1   | Not Detected<br>Acute Health -1 |
| Total Coliform Bacteria (count per 100ml)       | 1    | <1   | <1  | <1   | <1   |                                 |
| Calcium Hardness (mg/l as CaCO <sub>3</sub> )   | 17.5 | 19.3 | 6.4 | 17.8 | 11.3 | N/A                             |
| Magnesium Hardness (mg/l as CaCO <sub>3</sub> ) | 15.2 | 18.0 | 4.6 | 13.9 | 8.1  | N/A                             |
|                                                 |      |      |     |      |      |                                 |

Om verder volhoubare watergehalte te verseker, het die Langeberg Munisipaliteit GLS Consulting aangestel om die munisipaliteit by te staan met 'n uitgebreide spesialisdiens wat verband hou met die optimale ontleding, beplanning en bestuur van die waterverspreidings- en rioolnetwerke.

Sterk klem word geplaas op die belangrikheid van 'n wetenskaplik ontwikkelde meesterplan om seker te maak dat alle gemeenskappe dienste ontvang van aanvaarbare standaarde. Deeglike water- en rioolmeesterplanne is ook absoluut noodsaaklik om te verseker dat die beskikbare kapitaalfondse optimaal gebruik word.

Die meesterplanne voorsien ook die Langeberg Munisipaliteit van data in verwante ingenieurs-areas, soos die prioritisering van pyplynvervangings, gebaseer op risiko-analise en die evaluering van hoe noodsaaklik elke komponent is, hoe goed dit benut word en hoe dit presteer.

Dit is ter wille van goeie bestuur.