



ZAKARIYA NAKHOODA, B.Sc.H

Consultant (Hydrologist), Environment & Energy



Years with the firm

2 yrs. 10 months

Years of experience

2 yrs. 10 months

Areas of expertise

Flood Hydrology

Wetland Delineation and Functional Assessments

Water Use Licence Applications

Integrated Water and Waste Management Plans (IWWMP's)

Environmental Management Programmes

Public Participation and Consultation

CAREER SUMMARY

Zakariya Nakhooda is a hydrologist with nearly 3 years' experience in environmental consulting. His key areas of interest include hydrological modelling, flood risk, stormwater management planning, wetland habitat assessments, water quality assessments and water use licensing applications. He has been involved in a number of projects where he has used his hydrological background to undertake environmental risk assessments and provide practical project outcomes and actions.

EDUCATION

Master of Science, Hydrology	current
Bachelor of Science, Honours (Hydrology), University of KwaZulu-Natal, KwaZulu-Natal, South Africa	2013
Bachelor of Science (Hydrology and Geography / Environmental Science), University of KwaZulu-Natal, KwaZulu-Natal, South Africa	2012

ADDITIONAL TRAINING

Water Resource Analysis Course, SAICE Water Engineering Division	2016
IAIA: Seminar by Department of Water & Sanitation, IAIA SA	2016
Defensive Driving & Traffic Psychology course, Toyota	2016
Field SHE Representative training, Safety Risk Management (SRM)	2016
Snake Awareness training, African Snakebite Institute	2016

PROFESSIONAL EXPERIENCE

Groundwater / Surface Water Monitoring

- Trade Effluent and Stormwater Sampling, Durban, KwaZulu-Natal, South Africa (2016/2017/2018): Consultant. Monthly sampling of trade effluent and stormwater at the RoRo and Maydon Wharf facilities to determine compliance against relevant guidelines. Client: Transnet Port Terminals.
- Groundwater, Effluent and Stormwater Sampling, Richards Bay, KwaZulu-Natal, South Africa (2016/2017): Consultant. Sampling of effluent, stormwater and groundwater to determine compliance against relevant guidelines. Client: Transnet Port Terminals.
- Ingula Power Storage Scheme, Ladysmith, Kwa-Zulu-Natal, South Africa (2016): Consultant. Sampling of surface water, effluent and groundwater to determine compliance against relevant guidelines stipulated in the Water Use License. Client: Eskom Holdings SOC Limited.
- Surface water and Stormwater Sampling, King Shaka International Airport, Durban, KwaZulu-Natal, South Africa (2016): Consultant. Monthly sampling of trade effluent and stormwater at the King Shaka International Airport to determine compliance against relevant guidelines. Client: Airports Company South Africa.

Hydrological Assessments

- Bell Equipment Richards Bay (2018). Consultant. Development of a conceptual Stormwater Management Plan in line with the Department of Water Affairs GN704 requirements and Best Practice Guidelines. This included an appraisal of existing infrastructure and numerical modelling to determine the required

infrastructure sizing of channels, pipes, sediment traps and reservoirs. Client: Bell Equipment.

- South 32 Bayside Stormwater Management Plan, Richards Bay, KwaZulu-Natal, South Africa (2016): Consultant. Development of a conceptual Stormwater Management Plan in line with the Department of Water Affairs GN704 requirements and Best Practice Guidelines. This included numerical modelling to determine the required infrastructure sizing of channels, pipes, sediment traps and reservoirs. Client: South 32.
- Eskom Ingula IWWMP (2016): Consultant. Review of current IWWMP in line with requirements set out by the Department of Water and Sanitation. Client: Eskom.

Freshwater Habitat Assessments (Selection)

- Eskom Mooihoek Substation Freshwater Habitat Impact Assessment (2018): Consultant. Delineation, Classification and functional assessment of freshwater habitats in support of a Water Use License Application to the Department of Water And Sanitation. Client: Eskom
- Richards Bay Minerals Freshwater Habitat Impact Assessment (2018): Consultant. Undertake a freshwater habitat assessment and reporting as required by the client to satisfy conditions outlined in the water use license. Client: Richards Bay Minerals.
- South 32 Hillside Freshwater Habitat Impact Assessment (2017): Consultant. Delineation, Classification and functional assessment of freshwater habitats in support of a Water Use License Application to the Department of Water And Sanitation. Client: South 32
- Mondi Richards Bay Freshwater Habitat Impact Assessment (2017): Consultant. Undertake a freshwater habitat assessment and reporting as support for a Water Use License application to the Department of Water Affairs. Client: Mondi

Authorisations/Licencing

- Silicon Technologies IWWMP, Ballengeich KwaZulu-Natal, South Africa (2017/2018): Consultant. Development of an Integrated Water and Waste Management Plan (IWWMP), as support for a Water Use License application to the Department of Water and Sanitation. Client: Silicon Technologies.
- NPC South Coast Stone Crushers IWWMP, Uvongo, KwaZulu-Natal, South Africa (2017). Development of an Integrated Water and Waste Management Plan (IWWMP), as support for a Water Use License application to the Department of Water and Sanitation. Client: NPC
- Engen Refinery IWWMP, Wentworth, KwaZulu-Natal, South Africa (2016/2017): Consultant. Development of an Integrated Water and Waste Management Plan (IWWMP), as support for a Water Use License application to the Department of Water and Sanitation. Client: Engen Petroleum.

Modelling Capabilities

- HEC-RAS modelling.
- SCS modelling
- HydroCube modelling.
- Arc GIS mapping and database management capabilities.

Public Participation/Consultation

- Experience in facilitating and conducting public participation meetings with stakeholders from a wide range of sectors including agriculture, industry and impoverished communities.



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- Engen Refinery, Durban. Public Participation Report (2017): Consultant. Carried out Public Participation as outlined in the regulations set out by the Department of Water and Sanitation. Client: Engen Petroleum.

Presentations

- Nakhooda, Zakariya. The Establishment, Operation and Evolution of Catchment Management Agencies in South Africa: A baseline for assessment. WISA, Durban, KZN, 15th – 18th May, 2016.
- Nakhooda, Zakariya. The Establishment, Operation and Evolution of Catchment Management Agencies in South Africa: Literature review. SANCIAHS, Cape Town, WC, 1st-3rd September, 2014.