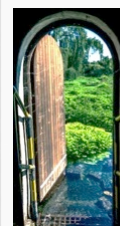




URBAN HYDROLOGY: WATER IN THE CITY OF TSHWANE
High Performance Centre, University of Pretoria
23 – 24 January 2014

ECOLOGY OF THE MORELETASPRUIT

ADELENE MARAIS
NATURE CONSERVATION : CITY OF TSHWANE



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Biodiversity for Life



SAIWS



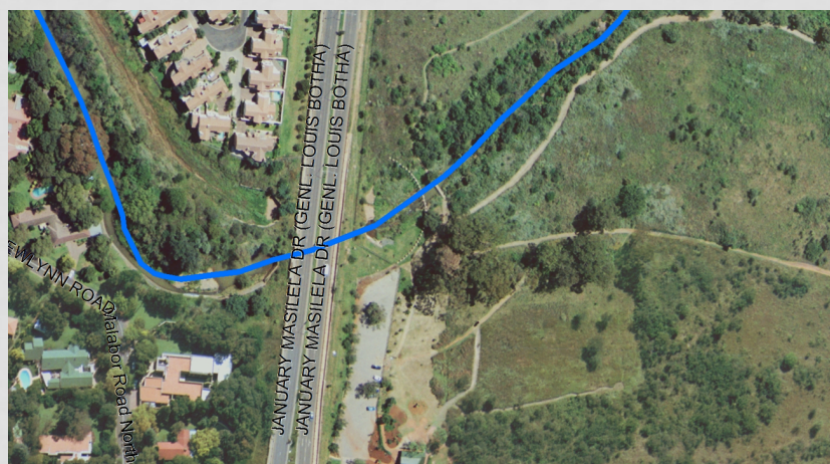


CONTENT

- Importance of the Moreletaspruit
- Legislation governing management
- Ecological Management plan
- A-biotic factors
- Biotic factors
- Associated activities with nature conservation
- Challenges in Conservation vs Urbanization/
Infrastructures
- Positives



ENVIRONMENTAL SERVICES





HUMAN WELL-BEING SERVICES



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SERVICE INFRA-STRUCTURE



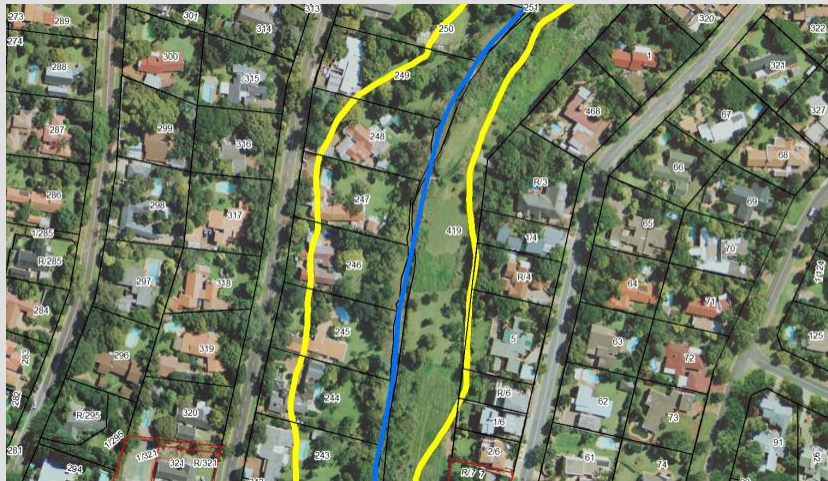
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STORM WATER MANAGEMENT



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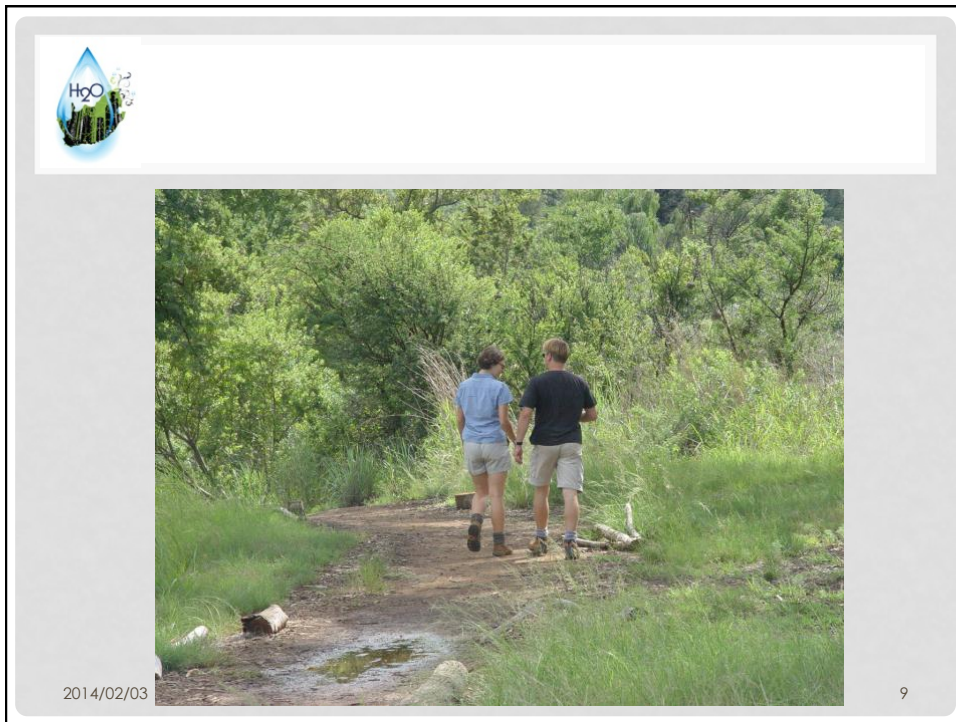
STORM WATER MANAGEMENT



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LEGISLATION

National
WA, NEMA, NEMPA, CARA, NBA

Provincial
Conservation , Policies, C-Plan
(Rivers and Ridges),

Municipal
Bylaws (public amenities),
Frame works (Open space) and
Policies (Biodiversity),

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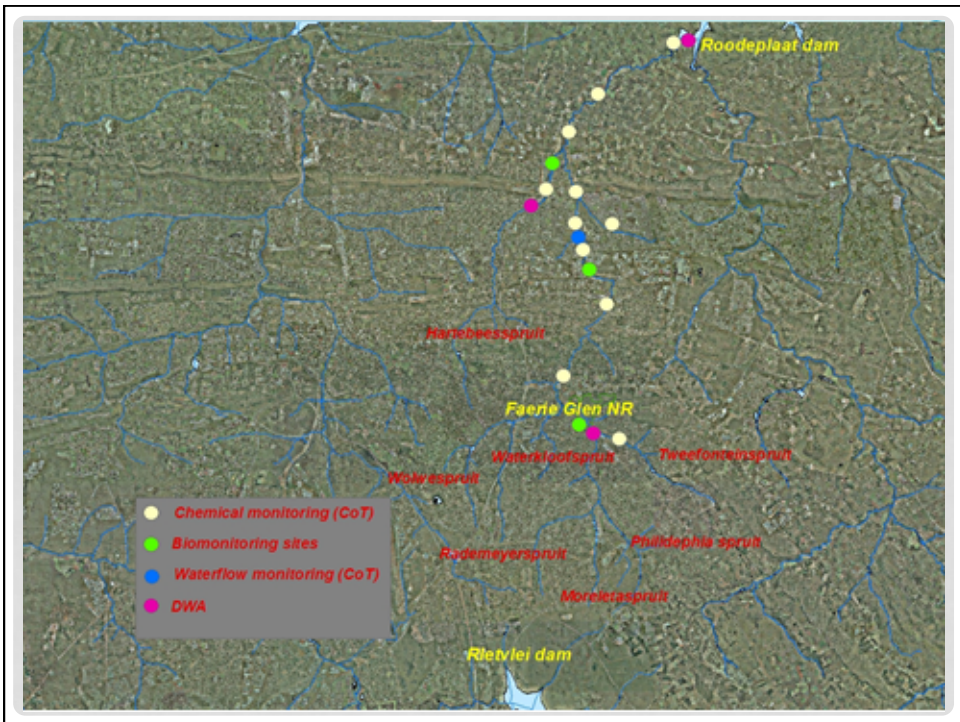
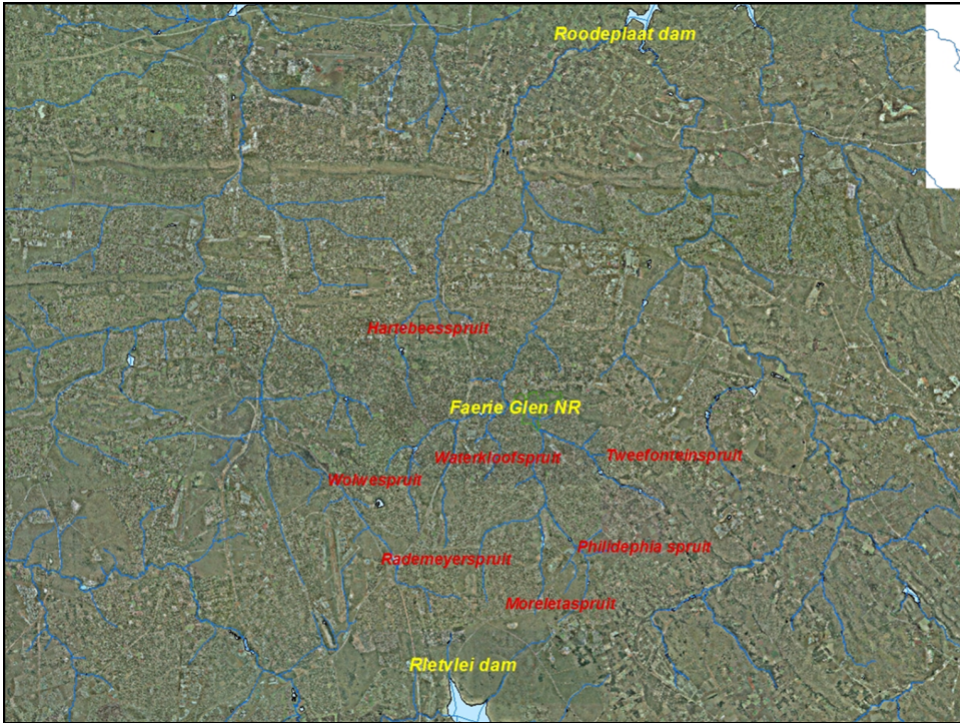
ECOLOGICAL MANAGEMENT PLAN (EMP)

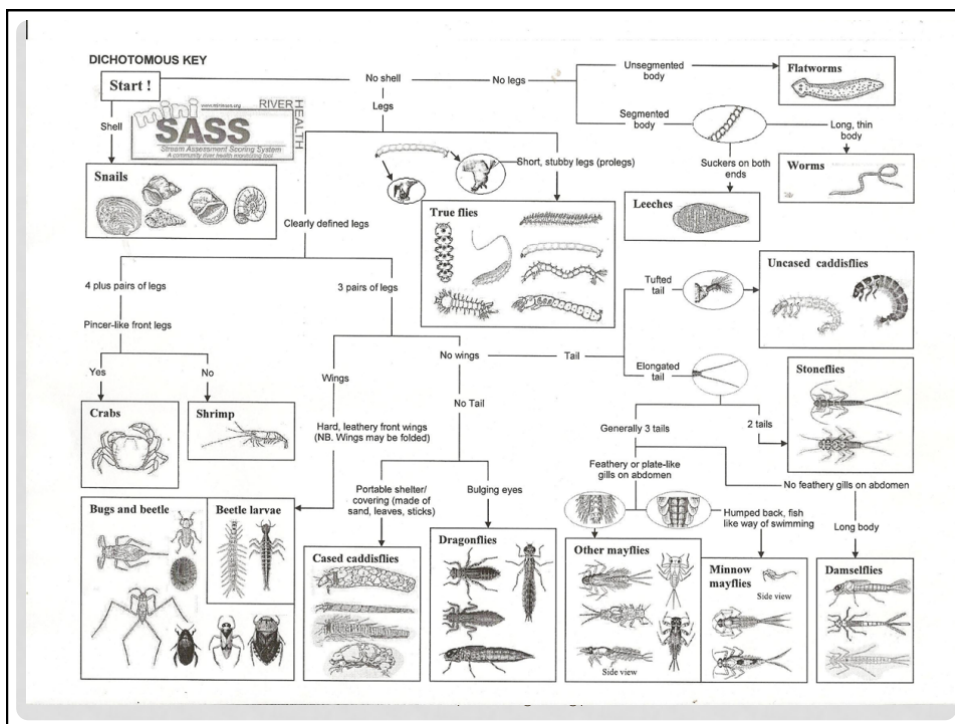
- Prescriptive format according to GDARD for all protected natural areas
- Legislation
- Includes the Biotic and the Abiotic factors
- Infrastructure



ABIOTIC FACTORS


- **Climatology**
 - Baseline information – Summer rainfall
 - Max and min temp
 - Frost
 - Related to type of vegetation
- **Geology**
 - Baseline info
 - Geology determines soils and soils determine vegetation
 - Flood plains with deeper more fertile soil
 - Erodability

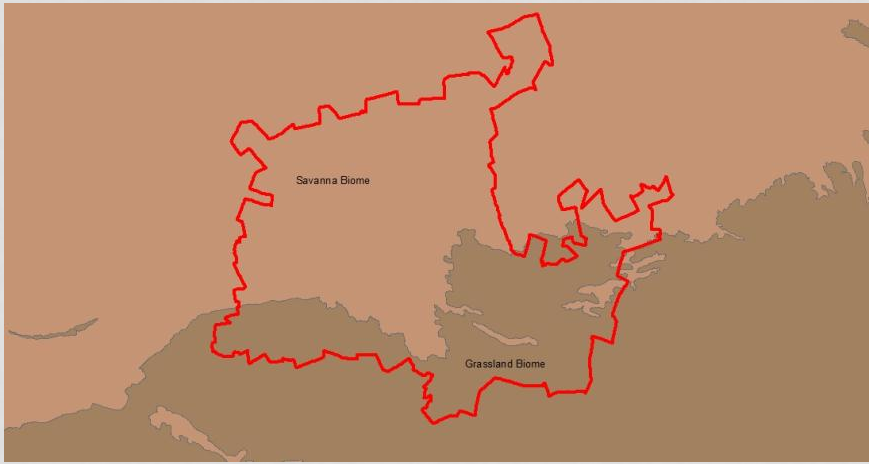




BIOTIC FACTORS

- Biomes
- Vegetation types
- Flora
- Fauna


 **BIOMES**

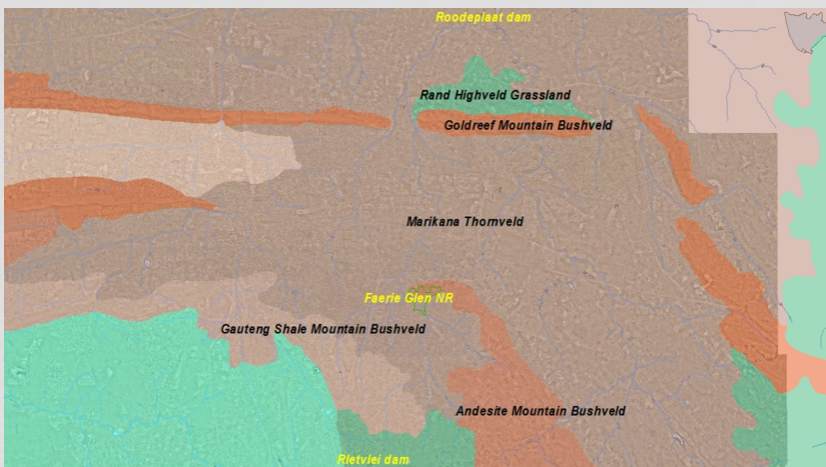


Savanna Biome

Grassland Biome

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 **VEGETATION TYPES**



Roodepoort dam

Rand Highveld Grassland

Goldreef Mountain Bushveld

Marikane Thornveld

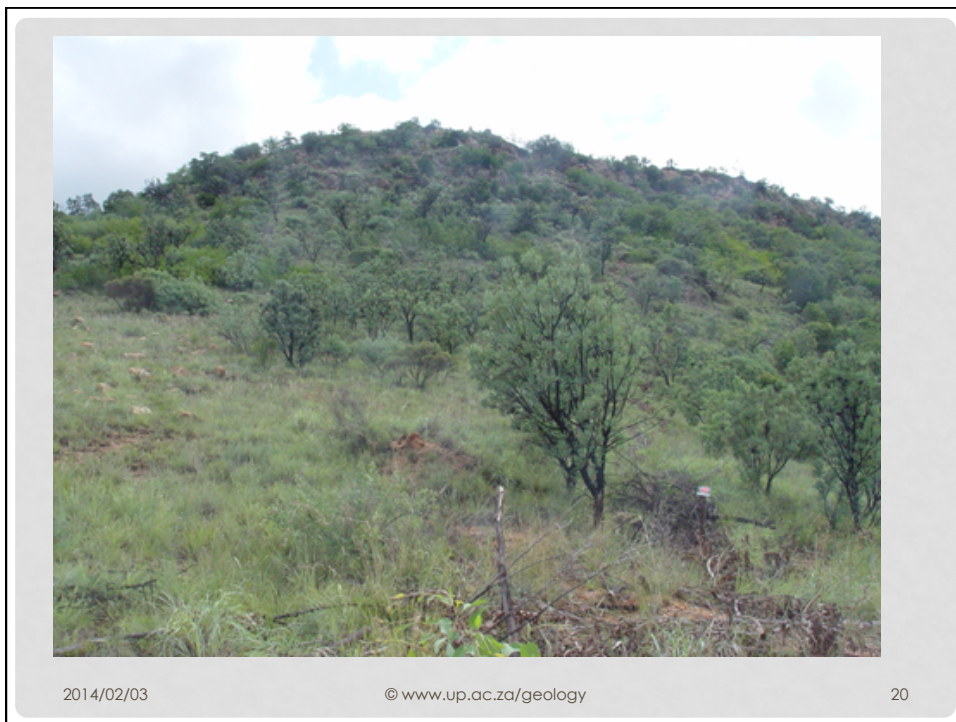
Faerie Glen NR

Gaateng Shale Mountain Bushveld

Andesite Mountain Bushveld

Pletvlei dam

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IMPACTS ON BIRDS



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IMPACT ON INSECTS & SPIDERS



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IMPACTS ON SMALLER MAMMALS



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IMPACTS ON FLORA



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ACTIVITY ASSOCIATED WITH CONSERVATION



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CHALLENGES

- Legislation
- Security
- Politics
- Legal teeth (support)
- Capacity (work force)
- Funding (local government)
- Current Social economic environment (vagrants/ squatters)
- Ignorance

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UNSENSITIVE TO ENVIRONMENT INFRASTRUCTURE



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POSITIVES



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THANK YOU

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Past, present and future



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