Active WRC Projects 2013 / 2014

k5	Title
2	Amanzi Quiz
1680	Thyroid-disrupting activity in South African waters: Amphibian metamorphosis as biological model to study effects of endocrine contaminants on thyroid function
1697	An Investigation into the Effects of Atmospheric Pollutants on Surface Water Quality in the Eastern Regions of South Africa
1770	Water use of fruit tree orchards.
1771	Water use of drought tolerant food crops.
1775	Rainwater harvesting and conservation (RWH&C) for rangeland and cropland productivity in communal areas in selected provinces in the semi-arid area of South Africa.
1798	Testing a prototype methodology for environmental water assessments in non-perennial rivers
1802	INTERACTION BETWEEN AQUACULTURE AND WATER QUALITY IN ON-FARM IRRIGATION DAMS: EXTENDED MONITORING AND MITIGATING PROCEDURES TO MANAGE ENVIRONMENTAL IMPACT
1803	THE IMPACT OF RE-ESTABLISHING INDIGENOUS PLANTS AND RESTORING THE NATURAL LANDSCAPE ON SUSTAINABLE RURAL EMPLOYMENT AND LAND
1803	PRODUCTIVITY THROUGH PAYMENT FOR ENVIRONMENTAL SERVICES
1804	IMPROVING PLOT HOLDER LIVELIHOOD AND SCHEME PRODUCTIVITY ON SMALLHOLDER CANAL IRRIGATION SCHEMES IN LIMPOPO PROVINCE
1822	Mass balances modelling over wastewater treatment plants III
1824	Effects of urine separation and treatment on wastewater effluent quality
1825	Denitrification in trickling filters
1865	SPATSIM – Hydrological Decision Support Framework
1874	WATER USE OF CROPPING SYSTEMS ADAPTED TO BIO-CLIMATIC REGIONS IN SOUTH AFRICA AND SUITABLE FOR BIO-FUEL PRODUCTION
1875	AN INVESTIGATION INTO THE LINK BETWEEN WATER QUALITY AND MICROBIOLOGICAL SAFETY OF FRUIT AND VEGETABLES FROM THE FARMING TO THE PROCESSING STAGES OF PRODUCTION AND MARKETING
1876	WATER USE AND ECONOMIC VALUE OF THE BIOMASS OF INDIGENOUS TREES UNDER NATURAL AND PLANTATION CONDITIONS
1879	ANALYSIS OF FOOD VALUE CHAINS IN RAIN-FED AND IRRIGATED AGRICULTURE TO INCLUDE EMERGING FARMERS IN THE MAINSTREAM OF THE ECONOMY
1880	METHODOLOGY TO MONITOR THE STATUS OF WATER LOGGING AND SALT AFFECTED SOILS ON SELECTED IRRIGATION SCHEMES IN SOUTH AFRICA
1881	IMPACT OF WASTEWATER IRRIGATION BY WINERIES ON SOILS, CROP GROWTH AND PRODUCT QUALITY
1882	ADAPTIVE INTERVENTIONS IN AGRICULTURE TO REDUCE VULNERABILITY OF DIFFERENT FARMING SYSTEMS TO CLIMATE CHANGE IN SOUTH AFRICA
1884	COMPILATION OF GUIDELINES FOR THE SELECTION AND USE OF HOME WATER TREATMENT SYSTEMS AND DEVICES
1887	Piloting and testing the pour-flush latrine technology for its applicability in South Africa
1894	Wastewater Reclamation for Potable Reuse
1907	THE USE OF ISOTOPE HYDROLOGY TO CHARACTERISE AND ASSESS WATER RESOURCES IN SOUTH(ERN) AFRICA
1915	Guideline for EDC management in water resources: Volume 1: Monitoring and Assessment
1920	Shared Rivers Initiative: Phase 2. KEVISED TITLE: Towards the sustainability of freshwater systems. Building competency and conective action to promote compilance with Environmental water.
1920	Requirements (Previous Title: Meeting the commitment to the sustainability of the lowveld rivers through strategic, integrated, adaptive management of water
1932	A STUDY OF THE INTERACTIVE EFFECTS OF PESTICIDE MIXTURES IN WATER ON SELECTED SPECIES
1935	A Management Tool for the Inkomati Basin with focus on Improved Hydrological Understanding for Risk-based Operational Water Management
1942	Development of Design and Operating Guidelines for High Rate Clarifiers in the South African Water Treatment Industry
1955	Improving the livestock carrying capacity with rainwater harvesting and conservation on grasslands for extensive and/or intensive livestock production and biogas generation from manure in rural areas of South Africa
1956	Investigation of the contamination of water resources by agricultural chemicals and the impact on environmental health
1957	Baseline and scoping study on the development and sustainable use of storage dams for inland fisheries and their contribution to rural livelihoods
1958	Investigation of water conservation in food value chains by beneficiaries of water allocation reform and land reform programmes in South Africa
1959	Optimal utilization of geothermal water resources
1961	Projected impacts of climate change on water quantity and quality in the Mgeni Catchment
1962	Implementation of the rule based agent for Microcystis In Rietvlei Dam
1963	The role of local community institutions in the adaptation of rural and urban communities to the impacts of climate change on water access and use
1964	Modelling daily rain-gauge network measurement responses under changing climate scenarios
1965	Developing water related climate change adaptation options to support implementation of policy and strategies for Water for Growth and Development
1969	Water governance decentralization in Africa: a framework for reform process and performance analysis
1971	The Development of an Institutional Adequacy Index using the Multi-dimensional Poverty Approach

k5	Title
1975	IWRM - from theory to practice
1977	Survey of potential ecological and human health risks posed by persistent organic pollutants in aquatic ecosystems in a densely industrialised and urbanised area
1980	Expanding upon a national wetland vegetation database for the purpose of conservation planning, monitoring and wetland rehabilitation
1981	Linking hydrology and lateral riparian vegetation zones
1982	Primary producers as sinks for nitrogen and phosphorus in the Great Brak Estuary
1984	LINKING LAND USE TO WATER QUALITY FOR EFFECTIVE WATER
1984	RESOURCE AND ECOSYSTEM MANAGEMENT
1986.1	Wetlands and Livelihoods: Restoration of the wetlands ecological process, form and function to provide the ecosystem goods and services necessary to support livelihoods
1999	Ultra-sensitive electrochemical nanobiosensor array devices for real-time determination of estrogenic endocrine disruptors in municipal wastewater (ENDOTEK)
2000	Biotech in Sanitation: Biopolymer production with Natronococcus occultus, a Haloalkaliphile, using Municipal Wastewater and other waste resources.
2001	Co-digestion of sewage sludge and industrial concentrates
2002	Evaluation of the DEWATS process for decentralised wastewater treatment
2003	Microbial population database- a tool for evaluating the BNR processes in KwaZulu-Natal.
2004	Urban effluent treatment in a rhizofiltration system
2006	The development of nanocomposite polysulphone membrane with reduced fouling properties for use in wastewater treatment
2007	Investigation into pumps and pressurised flow in separate sewer systems
2009.1	A tunable immobilised lignocellulosic enzyme (TILE) system for treatment of industrial wastewaters
2011	Application of emulsion liquid membranes in the recovery of platinum group metals from precious metal refinery wastewaters and mining effluents.
2018	Developing climate change adaptation measures and decision-support system for selected South African water boards
2021	Hydrology of South African soils and hillslopes (HOSASH)
2022	The long term impact of Acacia mearnsii trees on evaporation, streamflow, low flows and ground water resources. Phase II: Understanding the controlling environmental variables and soil water processes over a full crop rotation.
2025	Structural Health Monitoring of Arch Dams using Dynamic and Static Measurements
2026	Development of technical and financial norms and standards for drainage of irrigated lands
2036	Setting objectives for Urban River Rehabilitation
2037	Hyperspectral Remote Sensing of Water Hyacinth: From plant physiology to landscape level changes
2038	Aquatic microbial diversity: a sensitive and robust tool for assessing ecosystem health and functioning
2039	TO UNDERSTAND THE UNINTENDED SPREAD AND IMPACT OF ALIEN AND INVASIVE FISH SPECIES IN ORDER
2039	TO DEVELOP MITIGATION AND PREVENTION GUIDELINES A joint study by Golder Associates (Groot Marico River Catchment - North-West Province) and the SA Institute for Aquatic Biodiversity (Sundays River- Eastern Cape Province)
2040	SEDIMENT AS A PHYSICAL WATER QUALITY STRESSOR ON MACRO-INVERTEBRATES: A CONTRIBUTION TO THE DEVELOPMENT OF A WATER QUALITY GUIDELINE FOR SUSPENDED SEDIMENT
2048	Development of a groundwater resource assessment methodology for South Africa: towards a holistic approach
2049	The hydrogeology of Groundwater Region 17: Central Highveld
2050	Unifying Weather and Climate Variability Predictions - An Operational Seamless Forecasting System for Southern Africa at Time Scales from Days to Seasons.
2051	Surface water, groundwater and vadose zone interactions in selected pristine catchments in the Kruger National Park
2052	Vadose Zone Hydrology: Spatial and Temporal Influences, Assessment Techniques and Aquifer Susceptibility
2053	Impact of fault structures on the occurrence of groundwater in fractured rock aquifers
2054	Groundwater-surface water interaction: From theory to practice
2055	Investigation of Groundwater potential in fractured crystalline rocks of the Northwest Province, South Africa
2056	Implementing uncertainty analysis in water resources assessment and planning
2057	Developing a citizen based rainfall monitoring system
2058	Development of the pressure release flowing test method for artesian flow aquifers with case study in TMG.
2059	Optimising fog water harvesting
2060	South African Climate Multidisciplinary Analysis
2061	Development of defensible regional climate change projections for adaptation and policy
2062	The establishment of rain gauge networks for rainfall estimation calibration of the South African new weather radar network
2063	Implementation of salinity and water management tools for the Berg and Breede catchments in the Western Cape

k5	Title
2064	Towards an integrated framework for the assesment and management of sediment related impacts on water resources in South Africa: A dam performance case.
2065	Nutritional factors influencing the biosynthesis of the neurotoxin Beta-N-methylamino-L-alanine by cyanobacteria
2066	Validation of the forcing variables (evaporation and soil moisture) in Hydrometeorogical models
2067	The limits of predictability of the South African seasonal climate
2068	Improvement of early preparedness and early warning systems for extreme climatic events flood warning
2070	Preventing production borehole clogging by in situ iron removal in South African aquifer systems
2071	Water Sensitive Urban Design (WSUD) or Low Impact Design (LID) for improving water resource protection/conservation and reuse in urban landscapes
2072	Advancing Strategic Adaptive Management (SAM) as a framework for implementation of IWRM by Catchment Management Agencies.
2074	Title: Change Oriented Learning and Water Management Practices: Knowledge Flows and Mediation Tools
2075	Approaches to Engaging Basin Risk and the Political Economy of Water in the Western Cape system
2076	Investigating stakeholder engagement cycles and identities within Water Resource Management, using narrative techniques.
2077	CONSIDERING ALTERNATIVE DISPUTE SETTLEMENT PRACTICES FOR WATER RESOURCES MANAGEMENT IN SOUTH AFRICA
2078	An analysis of water pricing instruments governed by the DWA water pricing strategy, and its potential for generating revenue for CMAs
2079	Water use efficiency of irrigated agricultural crops determined with satellite imagery
2080	Investigating the possibility to improve water use efficiency and reduce canopy management inputs of wine grapes through deficit irrigation.
2081	Rehabilitation of alien invaded riparian zones and catchments using indigenous trees: An assessment of indigenous tree water use.
2082	Empowerment of women through water use security, land use security and knowledge generation for improved household food security and sustainable rural livelihoods in selected areas of amongst others Limpopo Province
2083	Empowerment of women through water use security, land use security and knowledge generation for improved household food security and sustainable rural livelihoods in selected areas of amongst others the Eastern Cape Province
2084	Insights into Indigenous Coping Strategies to Drought for Drought Adaptation in Agriculture: The Southern Cape Scenario
2085	Mechanism for pricing and financing the implementation of the Green Drop Report to guide the strategic decrease of the risk factor of waste water treatment works
2087	Providing water services at tariff levels that cover cost and that are sensitive to demand
2088	Adapting and piloting the new concepts of Community-Led Total Sanitation (CTLS) into the South African municipal environment
2089	Comparative analysis of water management devices in the municipal water services environment in south africa
2091	Social Norms and moderation of water consumption in a major South African City
2095	Energy Generation from distribution systems
2096	Exploring knowledge on natural processes for novel approaches to constructed wetlands design and performance for wastewater using biomimicry
2097	Investigation into the long term risks associated with deep row entrenchment of pit latrine and wastewater treatment sludges for forestry and land rehabilitation purposes
2098	An investigation into technical sanitation solutions for informal areas Adapting water footprints for South Africa and exploring the value of integrating water, carbon and energy (environmental) footprints for the South African industrial
2099	Adapting water roophilis for South Africa and exploring the value of integrating water, carbon and energy (environmental) roophilis for the South African industrial sector
2100	Industrial Brine Minimization: Determining the Physical Chemical Parameters that Affect Evaporation Rates on Multi - Component Hyper - Saline Effluents
2101	Evaluation of Forward Osmosis Technology for the treatment of concentrated brines
2103	Valuing water for South African industries: A production function approach
2104	Adapting constructed wetlands for real world applications
2105	Integrated photo-catalytic and anaerobic treatment of industrial wastewater for biogas production
2107	Toxicity evaluation of metal and metal oxide nanoparticles to aquatic invertebrates and algae
2108	Removal of Metal Ions from Industrial Effluents and Acid Mine Drainage by Metal Sulphide Precipitation
2109	Development of a toolkit to enable quantitative microbial ecology studies of sulphate reducing and sulphide oxidising systems Addressing the challenges facing biological sulphate reduction as a strategy for AMD treatment through analysis of the reactor stage: raw materials, products and
2110	process kinetics Assessment of locally manufactured radio telemetry equipment for manual and remote behavioral monitoring of fish in lentic and lotic freshwater ecosystems in South
2111	Africa.
2112	Promoting and Improving Water Services Authority/Provider Performance and Identification of Good Practices through Benchmarking Integrated Water Sector Skills Intervention Man Record on a Sector Skills Can Applying
2113A	Integrated Water Sector Skills Intervention Map Based on a Sector Skills Gap Analysis. Consolity Linked water curply and continues improvement for Africa's pair when and Burel Areas (CLARA).
2114	Capacity-Linked water supply and sanitation improvement for Africa's peri-urban and Rural Areas (CLARA)
2115	Investigation into pollution from onsite dry sanitation systems Improved Analytical Strategies for Monitoring Heavy Metals Removal in Selected Wastewater Treatment Works and Constructed Wetlands in Gauteng and KwaZulu-
2116	Natal Provinces
2117	Characterization of Indigenous Anaerobic Ammonium Oxidizing (anammox) Bacteria Grown in Anaerobic Environments

k5	Title
2118	Identifying efficiency and inefficiency in municipal water service provision
2119	Decision-support model for the selection, costing and application of drinking water treatment and supply options to address water shortages and improve water services delivery (with focus on upgrading options, water relamation and desalination)
2120	Constraints on providing sewerage in South African informal settlements: A study of social and institutional management concerns
2121	Investigation into the Cost and Water Quality Aspects of South African Desalination and Reuse Plants
2122	Fate and behaviour of engineered nanomaterials (ENMs) in wastewater treatment systems
2123	Performance and efficacy of Integrated Algae Ponding Systems in waste water treatment for water reuse and cost recovery through biomass valorization
2124	Point of use disinfections systems designed for domestic rainwater harvesting (DRWH) tanks for improved water quality in rural communities
2125	Integration of Aquatic Chemistry with bio-process models
2126	Capacity Building for Climate Change Adaptation and Disaster Risk Reduction in Rural South African Communities: Tsengiwe, Eastern Cape
2127	Development of Risk Criteria for water management aspects of mine closure
2128	Application of mineral carbonation processes for brine remediation
2129	Treatment of mine water using a combination of coal fly ash and flocculants in a jetloop reactor system
2130	Municipal Guidelines for Implementing WDM
2131	Quantifying the fertilizer value of municipal sludges for agriculture
2132	Advanced oxidative water treatment
2132	process for water disinfection using an electrohydraulic discharge reactor and TiO2 immobilised on nanofibres
2133	SOCIAL PROTESTS AND WATER SERVICE DELIVERY IN SOUTH AFRICA
2134	Investigation into risks of exposure of workers and households to pathogens through current desludging practices and development of guidelines to minimise risks
2135	Practical guidelines for operation and maintenance of water distribution systems in South Africa
2136	Sanitation Subsidies in Perspective ♦ How to Increase the Effectiveness of Sanitation Subsidies in South Africa
2137	Characterisation of on-site sanitation material and products: VIP latrines and pour-flush toilets
2138	An investigation into the presence and impact of free living amoebae and amoeba resistant bacteria on drinking water production, storage and distribution to health care institutions in greater Johannesburg, South Africa
2139	Investigation of carbon flux and sulphide oxidation kinetics during passive biotreatment of mine water
2140	Determination of the change in hydraulic capacity in pipelines
2142	A detailed acid-base accounting study of the Karoo formations in the Waterberg coalfield
2143	Update of water resources of South Africa (WR2005): Phase 1
2144	Presence, levels, and potential implications of HIV anti-retrovirals in drinking, treated, and natural waters
2145	Surveillance of viral, feacal indicator bacteria and Vibrio pathogens in the final effluents of wastewater treatment facilities in the Eastern Cape Province: a vehicle for capacity development in microbial water quality science in the Province.
2146	The effect of long-term fire frequency and season treatments on the soil hydraulic properties and soil water balance within semi-arid savannas in the Kruger National Park
2147	Pinpointing human infectious disease risks & climate vulnerability; an integrative approach using cholera as a model.
2148	Non-parametric multi-site stochastic rainfall generation including climate change - related nonstationarity
2149	Development of an interactive vulnerability map and preliminary screening level monitoring protocol to assess the potential environmental impact of hydraulic fracturing.
2150	Hydrogeological Heritage Overview: Upper and Lower Fountains, Pretoria, City of Tshwane
2151	Encouraging citizens' water quality management through subcatchment forums
2152	Planning for adaptation: Applying scientific climate change projections to local social realities
2153	SCREENING STUDY TO DETERMINE THE DISTRIBUTION OF COMMON BROMINATED FLAME RETARDANTS IN WATER SYSTEMS IN GAUTENG
2154	Implementation of a South African National Standard for Water Retaining Structures
2155	Evaluation of the Monthly Stochastic Rainfall Generator in Existing Department of Water Affairs Risk-based Water Resources Yield Assessment Processes
2156	Investigating climate change effects under altered land uses on water yield and downstream ecosystem services
2157	Groundwater yield-reliability analysis and operating rules for rural areas
2158	Favourable zone identification for groundwater development: Options analysis for local municipalities
2159	Using an integrated water quality management model to support the implementation of National Water Act water use authorisations.
2160	The selection and validation of sediment toxicity test methods to be included in the National Toxicity Monitoring program
2161	Natural resource governance system in South Africa
2162	WRF Rainfall Parameterisation and Verification
2162	WRF Rainfall Parameterisation and Verification

k5	Title
2163	Stratospheric and tropospheric radiative forcing of southern African climate variability and change.
2164	A methodology to create a South African river network with hydraulic intelligence.
2165	The economics of sustainable aquifer ecosystem services: a Guideline for the comprehensive Valuation of Aquifers and Groundwater
2166	Insights towards an improved Governance model and practical implementation of rural development and community upliftment projects, centred around the productive use of water
2167	GROUNDWATER REMEDIATION TECHNOLOGIES MANUAL FOR SOUTH AFRICA - A THEORETICAL TREATISE AND PRACTICAL GUIDE
2168	Investigating the occurrence and survival of Vibrio cholerae in surface water sources in KwaZulu-Natal province of South Africa
2169	Microbial pathogens in water resource sediments: their dynamics, risks and management.
2170	An analysis of paradigms shaping water research in South Africa: questions for future research
2171	Nutritional water productivity of indigenous food crops
2172	Current rain-fed and irrigated production of food crops and its potential to meet all year round nutritional requirements of rural poor people in North West, Limpopo, KwaZulu-Natal and Eastern Cape Provinces
2173	Water use and crop parameters of pastures for livestock grazing management
2174	Scoping study on different on-farm treatment options to reduce the high microbial contaminant loads of irrigation water to reduce the related food safety risk.
2175	Evaluation of the risks associated with the use of rain-water, harvested from roof-tops, for domestic use and homestead food gardens; and groundwater for domestic use and livestock watering.
2176	Empowerment of women in rural areas through water use security and agricultural skills training for gender equity and poverty reduction in KwaZulu-Natal and North West Province
2177	Up-scaling of rainwater harvesting and conservation on communal crop- and rangeland through integrated crop and livestock production for increased water use productivity
2178	Water use productivity associated with appropriate entrepreneurial development paths in the transition from homestead food gardening to smallholder irrigation crop farming in Eastern Cape Province
2179	Water use productivity associated with appropriate entrepreneurial development paths in the transition from homestead food gardening to smallholder irrigation crop farming in Limpopo Province
2181	Biodiversity and ecological processes in Nelson Mandela Bay temporary wetlands
2183	Trajectories of change in wetlands of the Fynbos Biome.
2184	Critcal analysis of water quality in South Africa: historic and current trends
2185	Ecosystem functioning, sustainable utilization and management of aquatic resources of the Lower Phongolo River and floodplain.
2186	Connectivity through allochthony: reciprocal links between adjacent aquatic and terrestrial ecosystems in South Africa
2187	The resilience of South Africa's estuaries to future water resource development based on a provisional ecological classification of these systems
2188	Determination of the Status of the Nile Crocodiles in north eastern KwaZulu-Natal and Conservation Management Recommendations
2190	The classification of endorheic wetlands (pans) and the effect of Acid Mine Drainage on the hatching success of the egg banks of selected invertebrates communities within pans
2191	Identification of wetland processes impacting water resources at catchment scale
2192	Consolidation and optimization of wetland health assessment methods through development of a Decision Support Tree (DST) that will provide guidelines
2193	Self-regulation of the package plants/SWWTW industry: Development of framework of standards, a conceptual model for a test facility and an accreditation system for each technology provided by suppliers
2194	Development and testing of a water treatment bottle for use during emergency diarrhoeal outbreak conditions
2195	New housing unit designed for ceramic water filters to be more applicable in rural and periurban communities in South Africa
2197	Filter for the removal of suspended solids naturally found in harvested water
2198	Developing a low flush latrine for application in public schools
2200	DEVELOPMENT OF A METHODOLOGY TO DETERMINE THE APPROPRIATE BUFFER ZONE WIDTH AND TYPE FOR DEVELOPMENTS ASSOCIATED WITH WETLANDS, WATERCOURSES AND ESTUARIES (Short Title: Wetland Buffer Zones)
2203	Demonstration and scaled-up implementation of pour flush sanitation in South Africa
2204	An Investigation of the Association between Genetic Diversity and Contaminants in the Klip River System
2204	An Investigation of the Association between Genetic Diversity and Contaminants in the Klip River System
2205	Development and Assessment of an Integrated Water Use Quantification Methodology for South Africa
2206	Development of a framework for sanitation governance in South Africa
2208	An investigation into the social, institutional and economic implications of reusing reclaimed wastewater for domestic application in South Africa
2209	Development of innovative institutional management scenarios for water services in rural areas.
2210	An investigation into the barriers to implementation of effective wastewater charges by municipalities in South Africa
2212	Monitoring, management and communication of water quality and public acceptance in the direct reclamation of municipal wastewater for drinking purposes
2213	Water safety and security: emergency response plans
2214	An assessment of incentivising community engagement in drinking water supply monitoring.
2215	Detection and Quantification of Emerging Organic Pollutants in Durban Waterways, and Remediation Options Integrating Nanostructured Materials and Advanced Oxidation Processes

k5	Title
2216	Pressure drop prediction for effficient sludge pipeline design
2217	Development of Web-enabled (and Supportive Spreadsheet-based) Wastewater Risk Abatement Planning Tools
2218	Nutrient and energy recovery from sewage: demo-researching an integrated approach
2219	Energy generation using low head hydro technologies
2220	Integrating agriculture in designing low cost sanitation technologies in social housing schemes; a case study of Kwadinabakubo, eThekwini Municipality
2221	WWTP modelling to support the Green Drop programme
2222	Development of a strategic framework for the sustainable management of water resources found within catchments where ESKOM operates, with initial focus on wetlands
2223	Using Membrane Distillation Crystallization for the treatment of industrial wastewater
2224	Revision of Natsurv 2: Water and Wastewater Management in the Metal Finishing Industry (edition 2)
2225	Integrated bioremediation and beneficiation of bio-based waste streams
2226	Revision of Natsurv 4: Water and Wastewater Management in the Dairy Industry (edition 2)
2227	Effluent Treatment: Retrofitting of Integrated Algal Pond system (IAPS) to
2227	existing Conventional Ponds as well as combination of Industial and Domestic Effluent Treatment
2228	Micro-nutrient requirements for anaerobic digestion of concentrated industrial effluents: Development of a speciation/precipitation model to optimise micro-nutrient dose for methane production from industrial waste streams
2229	Continuous Eutectic Freeze Crystallization
2230	Limiting and mitigating the impact of coal mines on wetlands
2231	An industrial ecology approach to sulphide containing mineral wastes to minimise ARD formation: characterising potential for ARD, design for disposal and extraction of products with value.
2232	The BIOSURE PROCESS: A sustainable, long term treatment option for acid mine drainage treatment
2233	Feasibility study on the use of irrigation as part of a long-term neutralised acid mine drainage management strategy in the Vaal Basin
2234	Mine water atlas of South Africa.
2235	Using satellite data to identify and track convection over southern Africa
2236	Establishment of a more robust observation network to improve understanding of global change in the sensitive and critical water supply area of the Drakensberg
2237	Development and application of a simple South African water quality model for management of rivers and reservoirs under current and future development and climate change scenarios
2238	Key Interventions to Improve Local Groundwater Governance
2239	Water-Energy nexus in the context of climate change: investigating trade-offs between water use efficiency and renewable energy options for South Africa
2240	Investigating projected changes in the nature of extreme rainfall over South Africa during the twenty-first century.
2241	Revision of the Mean Annual Precipitation (MAP) estimates over Southern Africa1
2242	Polycyclic aromatic hydrocarbons (PAHs) in the aquatic ecosystems of Soweto/Lenaia.
2243	Sediment yield modelling in the uMzimvubu River Catchment
2244	Dam surveillence and monitoring using dynamic and static measurements
2246	The use of GIS and remote sensing techniques to evaluate the impact of land-use and land cover change on the hydrology and water resources of Luvuvhu River Catchment in Limpopo Province
2247	Future climate change impacts on flood and drought hazards in South Africa for planning and decision-making
2248	Water Resources Management in South Africa: Towards a New Paradigm
2249	Managing limits in skill for seasonal climate forecasting
2250	A compendium of the legal narrative of the South African White paper and National Water Act of 1998
2251	The hydrogeology of Groundwater Region 65: Northern Zululand Coastal Plain
2252	Water's role in driving regional economic integration in Southern Africa
2253	Extending the Ogee spillway relationship to accommodate the unsymmetrical upstream cross sectional details, the relative orientation of the wall structure and the influence of the curvature of the dam structure
2254	Characterising the chemical composition of deep and shallow groundwater in an area considered for shale-gas exploration in the Main Karoo Basin
2255	Institutional arrangements for implementing water equity mechanisms in South Africa
2256	Groundwater use by alien invasive plants: assessing the impact of Prosopis spp invasions on water supply to groundwater dependent communities
2257	Dynamics of climate variability over the all-year rainfall region of South Africa
2258	A Gap Analysis of Technologies, Techniques and Capacity for the Water and Wastewater (domestic and industrial) sector in South Africa
2259	Linkages between the hydrodynamic and biological drivers of the Mgobezeleni Catchment
2260	Investigating the impact of landscape connectivity on water-linked ecosystems.

k5	Title
2261	Evaluating fish and macro-invertebrate recovery rates in the Rondegat River, Western Cape, after river rehabilitation by alien fish removal using the rotenone
2263	Integrating a daily disaggregation modelling tool into a water resources simulation model
2267	Building resilient landscapes by linking social networks and social capital to ecological infrastructure
2268	Understanding estuarine processes in uMfolozi /uMsundazi/St Lucia estuary from Earth Observation data of vegetation composition, distribution and health
2269	The design of a National Wetland Monitoring Programme (NWMP) following a phased approach
2270	The development of a comprehensive manual for river rehabilitation in South Africa
2271	Development of a immobilized receptor based EDC detection kit
2272	Evidence-based analysis of environmental degradation: Impact of ecological degradation on water resources, ecosystems and socio-economic development.
2273	Water footprint of selected vegetable and fruit crops produced in South Africa
2274	Determining water use of indigenous grain and legume food crops
2275	Quantifying citrus water use and water stress at tree and orchard scale
2276	Knowledge transfer on water resource management for improved integrated aquaculture and agriculture systems
2277	Action oriented strategy for knowledge dissemination and training for skills development of water use in homestead gardening and rain water harvesting for cropland food production
2278	Water use productivity associated with appropriate entrepreneurial development paths in the transition from homestead food gardening to smallholder irrigation crop farming in KwaZulu-Natal and North West Provinces
2279	The optimisation of electricity and water use for sustainable management of irrigation farming systems
2280	Vulnerability, adaptation to and coping with drought: The case of commercial and subsistence rainfed farming in the Eastern Cape
2281	Develop and test a landscape-based multidisciplinary and multi-sectoral decision support system to support Integrated Water Resource Management in Mpumalanga
2282	Development of decision-support guidelines for vulnerability assessments and adaptation requirements among rural economies and communities, including gender issues (phase 1)
2283	Adaptive Climate Change Technologies and Approaches for local governments: Water Sector Response
2284	Phase 2: Recovery and beneficiation of nutrients and water from brewery effluent by means of unique combination of algal assimilation, constructed wetlands, hydroponics and aquaculture.
2285	Revision of Natsurv 1: Water and Wastewater Management in the Malt Brewing Industry (edition2)
2286	Revision of Natsurv 3: Water and Wastewater Management in the Soft Drink Industry (edition 2)
2287	Development and demonstration of a woven fabric immersed membrane
2287	bioreactor (WFIMBR) package plant for decentralized sanitation.
2288	Guidelines for the delineation of protection zones in a complex aquifer setting
2289	Water Management Efficiency: The development and testing of an optimization model at selected Eskom sites for an integrated water solution
2291	Development of the Micro Flush Toilet
2292	Water Wise Hotels
2303	Extending EDC Toolbox I to include thyroid and androgenic bioassays