LEGAL NOTICE NO. 116

THE WATER ACT
(No. 43 of 2016)

IN EXERCISE of the powers conferred by section 22 (1) of the Water Act, 2016, the Water Resources Authority makes the following Order —

THE LAKE OL BOLOSSAT CATCHMENT PROTECTION AREA ORDER, 2023

1. This Order may be cited to as the Lake Ol Bolossat Catchment Protection Area Order, 2023.

2. In this Order, except where the context otherwise requires —

   “Act” means the Water Act, 2016;

   “association” means a water resources usets association registered by the Authority in accordance with the Act;

   “Authority” means the Water Resources Authority established under section 11 of the Act;

   “basin area” means the area designated by the Authority as a Basin Area under section 24 of the Act.

   “Protected Area” means the area declared to be a Catchment Protected Area under paragraph 4 of this Order and is demarcated for protection and conservation within the Lake Ol Bolossat Catchment Management Plan;

   “Plan” means the Lake Ol Bolossat Catchment Management and Conservation Plan as set out in the Second Schedule;

   “riparian reserve” means land in respect of which management obligations are imposed on users or owners by the Authority due to its proximity to the Protected Area;

   “soil and water conservation plan” means a soil and water conservation plan as defined in the Water Resources Regulations, 2021; and

   “sub-basin area” means the area designated by the Authority as a Basin Area under section 24(2) of the Act.

3. This Order shall apply to the National Government, national government entities, county governments, county government entities and any other person being a user of water resources and the riparian reserve of the Protected Area.
4. (1) The Lake Ol Bolossat Catchment Protection Area is declared to be a protected area for the purposes of the Act.

(2) The area declared in subparagraph (1) shall be as per the extent and description set out in the First Schedule and is demarcated for protection and conservation within the Lake Ol Bolossat Catchment Management Plan.

5. (1) The Plan shall, without prejudice to the provisions of the Regulations developed under the Act, be the basis for protection, conservation and use of the water resources within the Groundwater Conservation Area.

(2) The Authority shall place signboards and beacons in or near the Protected Area or in appropriate public places frequented by land and water users and at the Authority’s offices; displaying up-to-date information about the condition of the water resources of the Protected Area.

(3) The public notices shall contain information regarding the action required of water and land users to conserve and protect the water resources of the Protected Area.

6. Any person who contravenes this Order commits an offence and is liable upon conviction to a fine of twenty thousand shillings or imprisonment for a term not exceeding six months, or to both such fine and imprisonment.
FIRST SCHEDULE
THE LAKE OL BOLOSSAT CATCHMENT PROTECTION AREA  (r. 2, 4)

Legend

- △ Catchment outlet
- Rivers
- □ Watershed boundary

Note: (i) The lake Ol Bolossat is located at S01° 7'.33"S and 36° 25'4.60"E at an average altitude of 2,340 masl in Nyandarua County within Engare Narok Melghis Sub-Basin Area in drainage area Number 5AA. Its catchment and lake surface covers an area of approximately 147Km² and is within the Lake Ol Bolossat WRUA sub catchment. Its sources of water are from Aberdares ranges mainly from the Nduthi springs among other several springs. It
drains into Engare Narok River at Manguo within Nyahururu Town in Laikipia East Sub-County.

(ii) Lake Ol Bolossat is partly fed by rainfall, sub-surface flow and springs from the Aberdare ranges to the east of the Lake. The area that contributes surface run-off into the Lake has been delineated through the use of a GIS software. The area measures 134 km² out of the 1,357 km² catchment area of the whole 5AA sub basin.

1.1 This Plan may be cited as the Lake Ol Bolossat Catchment Management Plan.

1.2 The following acronyms shall have the meanings as assigned below:

- AEZ - Agro-Ecological Zone
- b.g.l - below ground level
- ENNCA - Ewaso Ngiro North Catchment Area
- KFS - Kenya Forest Service
- Km² - Square Kilometer
- m.a.s.l - Meters Above Sea Level
- m³/d - Cubic Meters per day
- MoALF - Ministry of Agriculture
- MoL - Ministry of Lands and Physical Planning
- NEMA - National Environment Management Authority
- NGAO - National Government Administration Officers
- NLC - National Land Commission
- °C - Degrees Celsius
- OND - October-November-December
- Q50 - Flow that is equaled or exceeded 50% of the time
- Q80 - Flow that is equaled or exceeded 80% of the time
- Q95 - Flow that is equaled or exceeded 95% of the time
- RGS - Regular Gauging Station
- RQOs - Resource Quality Objectives
- ToR - Terms of Reference
- WDC - WRUA Development Cycle
- WRM - Water Resources Management
- WRA - Water Resources Authority
- WRUA - Water Resources Users Association

1.3 This Plan shall apply in respect to the management and use of the Protected Area.

1.4 The overall goals of the Lake Ol Bolossat Catchment Management Plan are to ensure sustainable management and use of water resources within the Protected Area while promoting equitable sharing of water resources.

1.5 A catchment area is defined as the land from which water naturally flows into a water course. The status and conditions of a
catchment determines the reliability, quantity and quality of its water yields. A catchment area acts like a water storage facility where during the rains, the vegetation cover allows the water ample time to percolate deep down and move as a sub-surface flow to recharge the rivers, springs and ground water storage in both shallow and deep aquifers. This sub-surface flow is slow resulting in rivers from a well-maintained catchment having higher base flows even during the dry season as well as good water yield from boreholes in the vicinity. In poorly maintained and degraded catchment, the rainfall results in the rapid surface run-off which is channeled into the river courses, resulting in flashfloods and high volumes of suspended solids. Since there is little storage in such a catchment, the rivers originating from such catchment will not be able to sustain their base flows during the dry season.

Catchment areas are thus a vital component in water resource management and they should be formally delineated, declared as protected areas by being gazetted as such, protected from encroachment and pollution and managed sustainably to maintain their ecological integrity.

1.6 The Lake Ol Bolossat is located at S01° 7’.33”S and 36° 25’4.60”E at an average altitude of 2,340 masl in Nyandarua County within Engare Narok Melghis Sub Basin Area in drainage area Number 5AA. Its catchment and lake surface covers an area of approximately 147Km2 and is within the Lake Ol Bolossat WRUA sub catchment. Its sources of water are from Aberdares ranges mainly from the Nduthi springs among other several springs. It drains into Engare Narok River at Manguo within Nyahururu Town in Laikipia East Sub-county.

1.7 The lake serves as the main source of water for the Ewaso Narok River and hence contributes to the flow of Ewaso Ng’iro North River downstream within Laikipia, Samburu, Isiolo and Wajir counties. It is characterized by different physiological features and diverse species of flora and fauna. One of the peculiar features is that the lake has both fresh and saline water, and the water does not mix at any one time.

1.8 Its water resources support the livelihoods in five (5No.) counties namely; Nyandarua, Laikipia, Samburu, Isiolo and Wajir. It also supports tourism-related activities in these counties including among others the scenic 75m Thomson falls, hotels and globally renowned conservancies such Ol Pajeta and Lewa.

1.9 Lake Ol Bolossat has been identified as a wetland under the National Government and its land was demarcated and issued with a Title Deed (LR Nyandarua/Ol Bolossat/482) measuring approximately 14,700 hectares (147 km² or 36,750 acres).

1.10 The protected area is found within Ndaragwa Sub-county (eastern side) and Ol Joro Orok and Ol Kalau sub-counties (western side), Nyandarua County, located 21 km to the south of Nyahururu Town, off the Gil Gil – Nyahururu Highway and 131 km north of Nairobi City. The sub catchment covers an area of 147 km2 and is within the 5AA-sub basin of the Ewaso Ngiro North Basin Area.

1.11 Lake Ol Bolossat is partly fed by rainfall, sub-surface flow and springs from the Aberdare ranges to the east of the lake. The area
that contributes surface run-off into the Lake has been delineated through the use of a GIS software. The area measures 134 km² out of the 1,357 km² catchment area of the whole 5AA sub basin.

1.12 WRA has taken into account of the considerations provided under the Seventh Schedule of the Water Resources Regulations, 2021.

PART II: PROCEDURES TO BE APPLIED FOR THE MANAGEMENT OF THE LAKE OL BOLOSSAT CATCHMENT PROTECTION AREA

2.1 The Lake Ol' Bolassat area has gently sloping areas that form part of the Kinangop and Ol’ Kalou/ Ol’ Joro Orok plateaus. The gentle slopes and plain-like features encourage the formation of marshlands and swamps. The Ol Bolassat plain was formed through volcanic and faulting activities which gave rise to major land forms; the Great Rift Valley to the west and Aberdare ranges to the east.

2.2 Further to the west, the land surface is broken by faults forming a complex of shallow horst and graben structures. The graben in which Lake Ol’ Bolassat lies is bounded by weak faulting on the west, developing increasingly to the south, and on the east by the Satima Escarpment (36 km-long and 2,500 masl. altitude) running south from Thomson’s Falls.

2.3 The lake lies at an average altitude of about 2,340 masl. in a wedge-shaped rift valley floor known as Ongata Pusi. In the southeast corner of the area, Mount Kipipiri which is part of the Aberdare (Nyandarua) Mountains is 3,349 masl (Birdlife International, 2017) and 914.4 masl from the Ol’ Bolassat plain, is an isolated volcanic eminence separated from the Satima massif by the deep cleft of the Wanjohi Valley (McCall, 1967).

2.4 The Nyahururu climate is largely semi-humid. Lake Ol Bolassat is located in a high-altitude area bordering the Aberdare ranges. These ranges have a great influence on the climate of the catchment. The area experiences very narrow variations in annual temperatures. The rainfall received on the Lake Ol Bolassat side of the ranges is minimal as it is on the leeward side of the mountain ranges.

2.5 This catchment is within the tropics. Areas within the Tropic of Capricorn and the Tropic of Cancer experiences a bi-modal rainfall regime. This is because of the influence of the Inter-Tropical Convergence Zone (ITCZ). This is a low-pressure belt within the tropics where there is convergence of the northern and southern trade winds. This has an effect on the rainfall and wind patterns within the areas. These zones experience long rains during the months of April and June while short rains are experienced during the months of October and November.

2.6 Rainfall data collected from the AMS Nyahururu rainfall station (ID: 8903068) was used for analysis of the precipitation received in the area. The station is located within Nyahururu Agricultural offices in Nyahururu town. Analysis of rainfall trends is provided in Annexures 2 and 3 of the Second Schedule.
2.7 The rainfall records from the AMS Nyahururu Station indicates that the basin received an average rainfall of 1021 mm over the 17 years record. These rainfall records also indicate that the year 2018 was the wettest year with a total rainfall amount of 1360 mm. 2019 was the driest year within the time series analysed. The data also shows that there has been variation in the amount of rainfall received in the basin but the trends have not been consistent. The past two years have also received rainfall amounts that are below average.

2.8 An analysis of the monthly average rainfall indicated that the month of August has been the wettest over the years. January is the driest month of the year. The data also shows that the first quarter of the year exhibits a trend of steady in the rainfall amounts received. The average rainfall is between 0.6 and 5 mm per month over the past 17 years.

2.9 According to Lake Ol’ Bolossat Management Plan (2000-2013), there are several land use practices within and around the lake. These include agriculture, forestry, fishing, wildlife conservation, mining and infrastructural development and have been described in details in the subsequent sub-sections. The land use practices have impacts on the overall ecosystem integrity.

2.10 The Lake Ol’ Bolossat area is a fertile agricultural area classified as Agro-ecological zone UH3IV with agriculture, mainly rain fed, being the main land use in Lake Ol’ Bolossat basin and but with several areas under irrigation. Crops grown include maize, beans, wheat, potatoes, pyrethrum and a wide range of vegetables. Increased horticultural activities especially flower farming in the area have contributed to increase in irrigation activities around the lake.

2.11 Indigenous forest cover in the area has declined tremendously due to human settlement, deliberate fires and indiscriminate felling of trees for firewood and other uses. However; farmers practice agro-forestry and farm forestry on a limited scale. Key forests around the lake include Ol’ Bolossat Forest, Ndaragwa Forest and Aberdare Forest.

2.12 The lake still does not support commercial fisheries, but there is subsistence fishing particularly in the central and southern parts of the lake.

2.13 The lake and its catchment are important for wildlife conservation with a variety of wildlife species that include hippopotamus, birds, leopard, and small mammals. The encroachment on the riparian reserve has given rise to human – wildlife conflicts.

2.14 There is quarrying sites for the production of building materials mostly on public land and within less than 100 m from the lake boundaries. These activities are very detrimental to the lake integrity as they result in siltation of the lake.

2.15 The area around Lake Ol’ Bolossat has witnessed significant land-use changes, which are believed to be the major cause of the dwindling Lake volumes.
2.16 Lake Ol Bolossat is partly fed by rainfall, sub-surface flow and surface flows from springs and streams.

2.17 Due to land use and land cover change in the catchment area, the lake is facing the threat of reduced inflows while at the same time water demand is increasing. Other human activities around the lake and its catchment area includes—

(a) quarrying;
(b) planting of exotic trees (eucalyptus);
(c) catchment degradation due to intensive land pressure, small plot sizes, and charcoal burning;
(d) soil erosion due to poor farming methods;
(e) encroachment on springs’ sources;
(f) pollution of water resources from agro-chemical;
(g) encroachment on riparian lands and wetlands;
(h) conflicts between farmers/wildlife/pastoralists; and
(i) illegal abstraction/poor compliance to water laws

2.18 Section 20 of the Act requires the Authority to prescribe the criteria for classifying water resources for the purposes of determining water resources quality objectives for each class of water resource.

The Resource Quality Objectives represent the desired status of the resource, covering all aspects of quantity, quality, timing and aquatic biota. The RQO’s are different for different classes of water resource. The objectives generally relate to the extent to which the water body is allowed to be adversely impacted by water use with respect to its natural state. Conceptually the RQO’s provide a “target” condition of the resources. Management decisions should be made such that the condition of the resource is progressively trending towards the RQO. The status of the resource is a measure of how far the condition of the resource is from the RQO.

The Ewaso Ngiro North Basin Plan developed by WRA in consultation with various stakeholders, has classified Lake Ol Bolossat sub-catchment as of high ecological importance. Ecological important areas have almost natural ecological characteristics. The focus for water resources management is the protection of the natural ecological characteristics for ecological, recreational and development of tourism with economic importance.

Sustainable regional water resources management require cooperation, collaboration and synergy with the Kenya Forest Service, the Kenya Wildlife Service, National and County Governments MDAs, WRUAs and user communities.
2.19 The present aquifer classification system in Kenya is partly demand-oriented and partly geo-political and entails five classes:

2.19.1 STRATEGIC aquifers: Aquifers used to supply significant amounts/proportions of water to an area where there are no alternatives, or where alternatives would take time and money to develop.

2.19.2 MAJOR aquifers: High-yielding aquifers with good quality water.

2.19.3 MINOR aquifers: Moderate-yielding aquifers with variable water quality.

2.19.4 POOR aquifers: Low-yielding aquifers with poor to reasonable quality water.

2.19.5 SPECIAL aquifers: Aquifers or parts of aquifers designated 'special aquifers' by the WRA.

2.20 Each is further defined in terms of its status, i.e.:

2.20.1 Satisfactory: No immediate stress, pressure or threat.

2.20.2 Alert: Stress, pressure or threat identified or anticipated.

2.20.3 Alarm: Water levels declining, water quality declining (stress, pressure or threat identified).

2.21 The Lake Ol Bolossat sub-catchment can be classified as “Alert” as the water availability is tending towards scarcity and is at times not adequate to meet the demand.

2.22 The population around Lake Ol Bolossat which is within the catchment area has been growing rapidly over the years. Several commercial/trading centres are located within close proximity to the lake and this has increased the impacts on the lake.

2.23 The potential impacts on the water resources as a result of human acts includes:

(a) Encroachment: People have encroached on springs and waterways.

(b) Overexploitation of available resources: The population in the area has been rapidly growing over the years. This leads to excessive pressure on available land and water resources leading to encroachment of the lake catchment and riparian reserve.

(c) Soil Erosion: Following uncontrolled farming and other human activities, soil erosion leads to siltation of the Lake hence affecting its overall depth and water levels.
(d) Deforestation: The forest cover around the Lake, the immediate catchment areas as well as the wider catchment has been depleted due human activities. Forests have been cleared to give way for farmlands, settlements as well as charcoal burning and timber.

(e) Water Pollution: Due to excessive economic activities around the Lake, the water has been polluted. The farms in the surrounding area use pesticides and herbicides which eventually find their way into the Lake and leading to pollution. Other pollutants include solid waste that is washed into the Lake by runoff water during rains.

PART III: MEASURES FOR PROTECTION, CONSERVATION AND REHABILITATION OF THE PROTECTED AREA

3.1 The activities to be undertaken within the Protected Area are those with zero impact on its ecological status and integrity.

The following activities are hereby specifically prohibited in the groundwater conservation area—

(i) tillage or cultivation;
(ii) clearing of indigenous trees or vegetation;
(iii) building of permanent structures (especially boreholes and houses);
(iv) disposal of any form of waste;
(v) excavation of soil or development of quarries;
(vi) planting of exotic species that may have adverse effect to the water resource; and
(vii) land reclamation.

3.2 The catchment protection plan aims at protecting Lake Ol Bolossat catchment by encouraging activities that enhance both water quality and quantity while promoting beneficial land and water management practices and discouraging activities that cause catchment degradation.

The Catchment protection activities planned to be undertaken shall include those contained under Annexure 5 of the Second Schedule.

3.3 The objective of the conservation plan is to provide a long-term environmental sustainability of the catchment for enhanced water resources yield and maintain its ecological functions in terms of flora and fauna.

The conservation/protection plan includes the following activities—

(a) enhancing implementation of existing regulations to protect the rights of all users;
(b) promoting water use efficiency that is hydrologically and economically beneficial to domestic, agricultural, and industrial water users and the environment; and

(c) identifying funding sources to implement water conservation programs that help to enhance water resources.

Activities under the conservation Plan are contained under Annexure 4 of the Second Schedule.

3.4 The objective of the monitoring plan is to collect water resources data and maintain a comprehensive database on the Lake Ol Bolossat catchment that provides information on water levels and quality as well as catchment health.

The particulars of the Catchment and Water Resources Monitoring Plan are contained under Annexure 6 of the Second Schedule.

3.5 The objective of the management structure is to ensure that the Lake Ol Bolossat catchment protected area is managed in a sustainable manner with the involvement of all stakeholders under the leadership and co-ordination of WRA - TBA. This will be achieved through—

(a) setting up the management structure with defined ToRs and mandates; and

(b) operationalization of the management structure as set out under Annexure 7 of the Second Schedule.

WRA as the agent of the National Government in the regulation of use and management of water resources, will be the coordinator of the committee. The members appointed to the Management Committee will serve on honorary basis as this will be a not for profit, non-commercial venture. The Committee will be required to solicit for funding from well-wishers and other sources to supplement the income that may be derived from activities permitted in a protected area.

The linkages between various stakeholders are represented under Annexure 8 of the Second Schedule. The arrows indicate the direction of flow of information. The dotted lines indicate WRUA can also communicate directly to communities and vice versa.

3.6 The matrix contained under Annexure 9 of the Second Schedule shall be adopted for Monitoring and Evaluation to capture detail of the progress of implementation of the planned activities.
ANNEXURE 1: THE LAKE OL BOLOSSAT CATCHMENT PROTECTION AREA

Legend

▲ Catchment outlet
--- Rivers
□ Watershed boundary

3 1.5 0 3 Kilometers
ANNEXURE 2: ANNUAL RAINFALL AT AMS NYAHURURU RAINFALL STATION

Total rainfall received annually (AMS Nyahururu rainfall station)

ANNEXURE 3: MEAN MONTHLY RAINFALL AT AMS NYAHURURU RAINFALL STATION

Average monthly rainfall
## ANNEXURE 4: CONSERVATION PLAN

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sub-activity</th>
<th>Time Frame</th>
<th>Cost (KSh.)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish the water balance</td>
<td>Assess demand and availability</td>
<td>2024</td>
<td>2,000,000</td>
<td>WRA, County Government, WRUA, KWS, KFS</td>
</tr>
<tr>
<td>Develop water allocation plan for the Lake Ol Bolossat</td>
<td>Develop Water Allocation Plan</td>
<td>2024</td>
<td>5,000,000</td>
<td>WRUA, WRA, KWS, County Government</td>
</tr>
<tr>
<td></td>
<td>Implement water allocation plan</td>
<td>continuous</td>
<td>15,000,000</td>
<td>WRA, WRUA,</td>
</tr>
<tr>
<td></td>
<td>Enforce permit conditions</td>
<td>continuous</td>
<td>10,000,000</td>
<td>WRA, WRUA,</td>
</tr>
<tr>
<td>Enhance Water use efficiency (introduction of technologies)</td>
<td>Sensitization and model water use units – irrigation, domestic Demonstration on efficient water use technology</td>
<td>Continuous</td>
<td>8,000,000</td>
<td>WRA, WRUA, County Government</td>
</tr>
<tr>
<td>Alternative livelihood activities</td>
<td>Promote eco-tourism, bee keeping, poultry farming and butterfly keeping.</td>
<td>Continuous</td>
<td>10,000,000</td>
<td>WRA, KWS, WRUA, Agriculture and livestock</td>
</tr>
<tr>
<td>Re-vegetation of the catchment area</td>
<td>Establish native Plant Propagation</td>
<td>Continuous</td>
<td>2,000,000</td>
<td>WRUA, WRA, KFS</td>
</tr>
<tr>
<td></td>
<td>Planting and growing of propagated seedlings (Watering and tending)</td>
<td>Continuous</td>
<td>5,000,000</td>
<td>WRUA</td>
</tr>
<tr>
<td></td>
<td>Exotic species control</td>
<td>Continuous</td>
<td>500,000</td>
<td>WRUA</td>
</tr>
<tr>
<td>Rain water storage enhancement.</td>
<td>Installation of 20 10m³ Rain water harvesting tanks in public institutions/public land</td>
<td>Continuous</td>
<td>4,000,000</td>
<td>WRA, County Government and WRUA</td>
</tr>
<tr>
<td></td>
<td>Construction of 2 No. 10,000m³ water pans</td>
<td>Continuous</td>
<td>10,000,000</td>
<td>WRA, County Government and WRUA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong> 71,500,000</td>
</tr>
</tbody>
</table>
## ANNEXURE 5: CATCHMENT PROTECTION PLAN

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sub-activity</th>
<th>Time Frame</th>
<th>Cost (KSh.)</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gazettement of Lake Ol Bolossat Catchment as a protected area</strong></td>
<td>Delineate and survey the lake’s catchment area.</td>
<td>1 Year</td>
<td>2,000,000</td>
<td>WRA, WRUA, Nyandarua County Lands and Survey Team</td>
</tr>
<tr>
<td></td>
<td>Create awareness on the status of the lake’s catchment area.</td>
<td>Continuous</td>
<td>300,000</td>
<td>WRA, KWS, WRUA, NEMA, County Government.</td>
</tr>
<tr>
<td></td>
<td>Develop guidelines and conservation/ protection plan through stakeholders’ engagement</td>
<td>2023</td>
<td>1,500,000</td>
<td>WRA with all stakeholders</td>
</tr>
<tr>
<td></td>
<td>Submit gazettement instrument to the AG</td>
<td>2023</td>
<td>500,000</td>
<td>WRA</td>
</tr>
<tr>
<td><strong>Enforcement of Lake Ol Bolossat catchment guidelines and other legislations</strong></td>
<td>Enforce Lake Ol Bolossat Management Guidelines and relevant legislations</td>
<td>continuous</td>
<td>5,000,000</td>
<td>WRA, County Govt, NEMA, KWS.</td>
</tr>
<tr>
<td><strong>Restricting activities that may lead to pollution and destruction of the catchment.</strong></td>
<td>Public awareness creation</td>
<td>Annually</td>
<td>1,000,000</td>
<td>WRA, County Government, KWS, KFS, WRUA.</td>
</tr>
<tr>
<td></td>
<td>Controls/restrictions on charcoal burning, grazing, bathing and farming near sensitive areas.</td>
<td>Continuous</td>
<td>300,000</td>
<td>WRA, County Govt, KWS, KFS, WRUA.</td>
</tr>
<tr>
<td></td>
<td>Enforcement</td>
<td>Quarterly</td>
<td>500,000</td>
<td>County Commissioner, KWS, WRA, KFS, NEMA, WRUA.</td>
</tr>
<tr>
<td><strong>Controlling encroachment and review of grants</strong></td>
<td>Review legality of titles and resolving</td>
<td>Continuous</td>
<td>5,000,000</td>
<td>NLC, WRA, County Government.</td>
</tr>
<tr>
<td><strong>Controlling access to the lake riparian reserve</strong></td>
<td>Fence off the lake and its riparian reserve to control access</td>
<td>3 years</td>
<td>30,000,000</td>
<td>WRA, County Government</td>
</tr>
<tr>
<td></td>
<td>Grow live fence on the boundary of the catchment.</td>
<td>Continuous</td>
<td>3,000,000</td>
<td>WRA, KFS, WRUA</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>49,100,000</td>
<td></td>
</tr>
</tbody>
</table>
### ANNEXURE 6: CATCHMENT AND WATER RESOURCES MONITORING PLAN

<table>
<thead>
<tr>
<th>Action</th>
<th>Sub-activities</th>
<th>Time Frame</th>
<th>Cost (KSh.)</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water sampling and analysis</td>
<td>Collecting water resources samples.</td>
<td>Continuous</td>
<td>200,000</td>
<td>WRA</td>
</tr>
<tr>
<td></td>
<td>Conduct biological and physico-chemical analysis of water samples</td>
<td>Continuous</td>
<td>500,000</td>
<td>WRA</td>
</tr>
<tr>
<td>Capacity Building</td>
<td>Capacity building on data collection and monitoring</td>
<td>Continuous</td>
<td>1,000,000</td>
<td>stakeholders and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>WRA</td>
</tr>
<tr>
<td>Water resources monitoring</td>
<td>Install water level gauging stations at strategic locations in the sub catchment</td>
<td>1 year</td>
<td>1,500,000</td>
<td>WRA, WRUA</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>3,200,000</td>
<td></td>
</tr>
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</table>
### ANNEXURE 7: MANAGEMENT STRUCTURE

<table>
<thead>
<tr>
<th>Activity</th>
<th>Sub-activity</th>
<th>Time Frame</th>
<th>Cost (KSh.)</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| Setting up the management structure | Appoint one Member from each of the following stakeholders:  
(a) Kenya Forest Service  
(b) National Environment Mgt Authority  
(c) National Government Administration in Nyandarua County;  
(d) Kenya Wildlife Service;  
(e) County Government of Nyandarua;  
(f) Lake Ol Bolossat WRUA;  
(g) Oraiutia WRUA  
Terms of References (ToR) will include but not limited to:  
- To manage the catchment prudently on behalf of other stakeholders  
- To submit quarterly reports to WRA - ENNBA on all planned and implemented activities;  
- To develop by - laws and submit a copy to WRA – ABA for approval before implementation | 3 months | 250,000 | WRA |
| Mandate and responsibilities: |  
- Promote the conservation and protection of the catchment  
- Promote equitable distribution of the resources within the catchment  
- Promote socio-economic and environmental sustainability of the catchment;  
- Resource mobilization and fundraising | Continuous | 0 | Lake Ol Bolossat WRUA, WRA |
The sources of funds for the committee may include:
- Bee keeping
- Tree Nursery;
- Eco-tourism;
- Well-wishers/Donors
- WRA/WRUA - (WDC)

<table>
<thead>
<tr>
<th>Continuous</th>
<th>5,000,000</th>
<th>WRA</th>
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</thead>
<tbody>
<tr>
<td>Sub-total</td>
<td>5,250,000</td>
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</tbody>
</table>
ANNEXURE 8: REPORTING LINKAGES FOR THE MANAGEMENT COMMITTEE

STAKEHOLDERS

WRA

MANAGEMENT COMMITTEE

COMMUNITY

WRUA

Note:

(i) The arrows indicate the direction of flow of information. The dotted lines indicate WRUA can also communicate directly to communities and vice versa;

(ii) WRA as the agent of the National Government in the regulation of use and management of water resources, will be the co-ordinator of the committee. The members appointed to the Management Committee will serve on honorary basis as this will be a non-profit, non-commercial venture. The Committee will be required to solicit for funding from well-wishers and other sources to supplement the income that may be derived from activities permitted in a protected area.
ANNEXURE 9: MONITORING AND EVALUATION TEMPLATE

<table>
<thead>
<tr>
<th>Activities</th>
<th>Implementation Schedule</th>
<th>Status (% Completion)</th>
<th>Planned Cost KSh.</th>
<th>Total Expenditure to Date</th>
<th>Source of funds</th>
<th>Output</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Dated the 17th July, 2023.

MOHAMED M. SHURIE,
Chief Executive Officer,
Water Resources Authority.

LEGAL NOTICE NO. 117

THE WATER ACT
(No. 43 of 2016)

IN EXERCISE of the powers conferred by section 23(1) of the Water Act, 2016, the Water Resources Authority makes the following Order —

THE KARAI WETLAND CONSERVATION AREA ORDER, 2023

1. This Order may be cited to as the Karai Wetland Conservation Area Order, 2023.

2. In this Order, except where the context otherwise requires —
   “Act” means the Water Act, 2016;
   “association” means a water resources users association registered by the Authority in accordance with the Act;
   “Authority” means the Water Resources Authority established under section 11 of the Act;
   “basin area” means the area designated by the Authority as a Basin Area under section 24 (1) of the Act;
   “Protected Area” means the area declared to be a protected area under paragraph 4 and is demarcated for protection and conservation within the Karai Wetland Conservation Management Plan;