### MANAGEMENT PLAN FOR TAKHNI REHMAPUR WILDLIFE SANCTUARY (2018-19 to 2027-28)

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### PART – I

# THE PROTECTED AREA: EXISTING SITUATION

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#### CHAPTER – 1 INTRODUCTION

#### I. INTRODUCTION OF THE AREA

Shiwalik is one of the regions in the state of Punjab which harbour natural biodiversity and provide a home to many rare and endangered and plants. Since District Hoshiarpur of the state is located in the lower Shiwalik region of Punjab and contain many Virgin pockets of forests rich in wildlife, the then Deputy Commissioner, Hoshiarpur requested the then Hon'ble Forest Minister, Punjab on 03-10-1992 at Mahilpur during wildlife week celebration to create a wildlife sanctuary in Hoshiarpur foot hills. The continuous perusal of this idea by the Forests and Wildlife Preservation Department, Punjab resulted in the selection and subsequent declaration of Government Protected Forests of Village Takhni and Village Rehmapur bordering the State of Himachal Pradesh as a Wildlife Sanctuary by Government of Punjab and Sanctuary was finally notified vide Punjab Government Notification No. 34/10/99-FT/IV/7/82, dated 08-06-1999.

#### 1.1 NAME, LOCATION, CONSTITUTION AND EXTENT OF AREA.

The name of Wildlife Sanctuary is Takhni-Rehmapur. It is a representative area of Shiwalik range of the Himalayas passing through Ropar, Hoshiarpur and Gurdaspur Districts of Punjab bordering H.P. and J & K states. It is located in district Hoshiarpur near Village Mehngrowal. The Notified area of Takhni Rehmapur Wildlife Sanctuary is 382 ha or 956 acres and falls in Toposheet No.44 M/14. The notified area consists of 498 acre area of Village Takhni and 458 acre area of village Rehmapur.

#### 1.2 APPROACH AND ACCESS

The sanctuary forms a part of the Shiwalik Range running along the border of H.P. and J & K . It is 26 kms from Hoshiarpur via Haryana town. It can also be approached direct from Hoshiarpur after crossing the Mehngrowal choe and thus the distance is 14 KMs. There is no direct rail link and the nearest railhead is Hoshiarpur. The nearest civil airport is Chandigarh/Amritsar which is about 150 KMs from the sanctuary. The State transport buses ply from Hoshiarpur to Hariana from where one can go up to Sanctuary by local means.

#### 1.3 STATEMENT OF SIGNIFICANCE

Takhni Rehmapur sanctuary is situated in the foot hills of Shiwalik range of Himalyas and is representative of Shiwaliks ecosystem. It has special ecological and biological significance. Being located between plains and hills, it provides a habitat to variety of organisms that are found in plains as well as in hills. The rare species of wild animals and birds like Barking Deer, Pangolin, Python and Kaleej pheasant add further to the significance of the protected area. Sometimes carnivores like leopard also migrate to the area from bordering state of Himachal Pradesh. The area is also significant because its protection development saves the plains below from soil erosion and land slides in the upper reaches. The area provides ample opportunity to nature lovers for bird watching as the choes and nallahs during winter months add picturesque beauty to the area. The area has been important from research point of view as it offers a suitable place to study flora & fauna and other micro organisms.

#### CHAPTER – 2

#### BACKGROUND INFORMATION AND ATTRIBUTES

#### 2.1 BOUNDARIES

1. Northern Boundary : Village Patari, Rehmapur,

Tehsil and District Hoshiarpur.

2. Southern Boundary : Village Mehngrowal, Takhni

Tehsil and District Hoshiarpur.

3. Eastern Boundary : Village Malot, Tehsil and

District Hoshiarpur.

4. Western Boundary : Village Rehmapur and Takhni,

Tehsil & District Hoshiarpur.

#### 2.2 GEOLOGY, ROCK AND SOIL

The Upper Shiwaliks and the Quaternary deposits constitute the main geological formation of the area. It comprises conglomerate beds, friable sandstone, siltstone and clay beds. Sandstones are soft and friable. Quarternary deposits constitute gravel beds, alluvial fans and river terraces. Lower foot hills are mostly sandy in texture. But inside the choes and riverines the area is bouldary and sedimentary. At places the texture is loamy to clayey loam. Near the agriculture areas of villages the texture has become alluvial loam.

#### 2.3 TERRAIN

The terrain is small hilly at the foot of the Himalayas. At places there are plain patches also. The highest point of the sanctuary is less than 400 mt. The terrain is very suitable for hill species like barking deer, wild boar, sambhar, etc.

#### 2.4 CLIMATE

Climate is typical of the foot hill ranges of the Shiwalik belt of Distt. Hoshiarpur and Gurdaspur. The climate can be divided into seasons as under:-

#### **2.4.1 WINTER**

Winter is severe and misty. Winter starts from November and after crossing the peak in December ends in mid March.

#### **2.4.2 SUMMER**

Sumer is hot and wet. It begins from early April and extends upto October. June is the hottest month.

#### **2.4.3 MONSOON**

Monsoon starts from July and extends to mid September. The rainfall data of the Sanctuary for the last ten years is given at Annexure XIII.

#### **2.4.4 WIND**

Winds are moderate and usually blow South Westerly.

#### 2.4.5 TEMPERATURE

Temperature ranges from almost freezing levels to above 44° C.

#### 2.5 WATER SOURCES

Two choes flow namely Mehngrowal Choe and Chamaar Choe flow through the sanctuary and cater to the needs of water for wildlife. Department has installed a deep water tubewell on the outskirts of the sanctuary from where water is lifted to katch water holes through underground pipe lines layerd in sanctuary for animals/birds. Deep water tubewell which was nonfunctional now is working condition. Five more water holes are required for wild animals in Sanctuary.

### 2.6 RANGE OF WILDLIFE, STATUS, DISTRIBUTION AND HABITAT

#### 2.6.1 VEGETATION

#### **2.6.1.1 FOREST TYPES**

The Vegetation is mixed deciduous type comprising tree species like shisham, khair, ber, subabul, acacia, dhak, neem, drek, siris, toot, mango arjan, pipal, bohr, sembal, phalahi, jaman, guava, etc. List of species found is given at Annexure. Most of the area has been covered with lantana. Before declaration of area as wildlife sanctuary, some villagers had grown fruit trees of kinoo and mango which are now inside the sanctuary area. These are good for monkeys and variety of birds.

#### 2.6.1.2 PLANTATIONS

There is no major plantation in the sanctuary but in recent year plantation has been done by wildlife department in sanctuary. Recently minor plantation work of harar, kathal, kinw, bamboo, bahera, amla and jamun were undertaken. A few plants of mango were also planted by thedepartment after declaration of area as wildlife sanctuary.

#### 2.6.1.3 **GRASS LANDS**

There are no vast grass lands in the sanctuary. There is good conopy cover of big trees like Shisham, Phalahi, Kikar, Pipal, Nim, Ber, Siris, Kachnar, Toot, Simbal, Bamboo, etc. The major grass species are common grass and baggar grass. Most of the area of the sanctuary has been covered by weeds like Lantana which can be removed in a phased manner.

#### **2.6.1.4 WETLANDS**

There is no proper wetland in the area. Two perennial choes pass through the sanctuary which can be made out in to wetland if check dams are constructed on their way. They can serve as a water—source and will also attract water birds. One check dam was constructed under IWDP Hills II. Project in the year 2002-03 which caters to the needs of wild life in the surrounding areas but now have needs repair work as no water can be stored in dam.

#### 2.6.2 FAUNA

Main faunal species are Sambar, Hog deer, Barking deer, Jungle cat, Jackal, Common Indian Hare, Mongoose, Leopard (migratory from HP), Wild boar, Pangolin, Rat Snake, Cobra, Python, Monitor lizard, Garden lizard, etc. 86 species of birds are found including. A List of animals is given in Annexure II.

#### 2.6.2.1 VERTEBRATES-STATUS:

The following are the Vertebrates found in the Sanctuary

- (i) Order Choeroptera-Fruit Bats
- (ii) Order Pholidata Indian Pangolin
- (iii) Order Primates Rhesus Monkey
- (iv) Order Rodentia Procupine, common squirrel.
- (v) Order Carnivores-Jungle Cat. Jackal, Mangoose, civet.
- (vi) Order perissodactyla-Barking deer, Sambar.
- 2.6.2.2 REPTILIA Python, Rat Snake, Cobra.
- 2.6.2.3 AMPHIBIAN- Common Frog.
- 2.6.2.4 PISCES-WATER IS FLOWING. Fish Species Not Found.
- 2.6.2.5 INVERTEBRATES: Butter Flies And Moths.

#### **CHAPTER-3**

#### HISTORY OF MANAGEMENT AND PRESENT PRACTICES

#### 3.1 GENERAL

A comprehensive management plan is being prepared for the first time. A simple working plan was written by Sh. Prem Nath Bhatti the then Wild Life Warden, Hoshiarpur. But that plan was not as per the guide lines of MoEF. So this management plan is being prepared.

#### 3.2 HISTORY OF MANAGEMENT

This is the first ever management plan to be written as per guidelines of Ministry of Environment & Forests, Govt of India. The Sanctuary was subject to management interventions with the help of funds of Government of India received under centrally sponsored scheme. Two watch towers and seven water holes were constructed plantations of fruit bearing trees, bamboo etc. were raised the fast few years. However there was no planning in the implementation of wild life development works. In order to ensure continuity of planning the sanctuary requires a comprehensive management plan for at least ten years duration. So this is an attempt to prepare a detailed and time bound plan to be adopted during the coming ten years. This plan will encompass the detailed proposals and their mode of implementation with recurring and non recurring expenditure.

#### 3.3 NON WOOD FOREST PRODUCE

There is no commercial explanation of forest produce. During the period of summer, local people try to find their entry into the Sanctuary area and use choes water for meeting their irrigation need. The sanctuary has a few trees of kinoos and mangoes, the fruits of which attract people of the surrounding villages towards the sanctuary.

#### 3.4 ILLEGAL ACTIVITIES

The sanctuary being open from all sides, it is prone to illegal activities like poaching, grass and wood collection by neighboring villages.

#### 3.4.1 POACHING

Though every attempt has been made to check hunting yet the openness of the area always keeps the possibility of poaching alive. The details of poaching cases are in Annexure IX.

#### 3.4.2. ILLEGAL FELLING OF TREES

The sanctuary is full of wood trees like Sheesham, Kikar and Khair. This is a big allurement for people around for wood works in houses. The details of illicit feeling cases and their status is given in Annexure VIII.

#### 3.4.3. ILLEGAL REMOVAL OF FUEL WOOD

The area is prone to fuel wood collection by all villages around. Adequate protection measures have been adopted which need to be reinforced as a future strategy.

#### 3.4.4. ENCROACHMENTS

Since the declaration of the sanctuary apparently no new encroachments have been made. But few settlements were existing in the sanctuary, which are a hindrance in the way of management. These settlements need to be settled out. The proper demarcation needs to be carried out to find out the exact situation and accordingly action is required to be taken. There are 6 suspected cases of encroachments, which can be confirmed after proper demarcation. On confirmation of encroachments after demarcation, action will be taken to remove these encroachments. Boundary pillars will be put in place after getting the boundary of Sanctuary demarcated.

#### 3.4.5 LIVESTOCK GRAZING:

The sanctuary is open from all the sides. Grazing is prohibited in sanctuary. There are two check posts on the periphery and mobile patrolling is also done to ensure that there is no grazing. Sanctuary is not fenced as yet.

#### 3.5 WILD FIRE

The area is a part of long stretch of Shiwalik ranges which are prone to fire. But sanctuary area is small and well traversed with nallahs and chos. So fire incidents are rare. However, for better management of the area, anti fire measures such as staff, fire lines, two watch towers are available. Despite these measures, ten fire watchers are needed to minimize the incidents of fire. Sanctuary has not been divided into compartments so far. One fire tender and a complete set of modern fire fighting equipment need to be procured to meet any eventuality. In addition to paths which are presently being used and maintained as fire lines, an additional 10 K.m of fire lines need to be maintained.

#### 3.6 TOURISM

At present the sanctuary is not a tourist place but it has a lot of potential for tourism due to diversity of flora and fauna, hilly terrain and peaceful virgin locality. Efforts will be made to provide staying facilities, watch towers and binoculars in addition to an awareness center. One forest rest house at Mehngrowal may be used to supplement the accommodation facilities.

#### 3.7 RESEARCH AND MONITORING

At present no such activity is being undertaken for want of facilities and staff. But research and monitoring is the dire need. For this purpose additional staff and paraphernalia is a required. The important aspects of research which can be considered are under as:-

- 1. Socio Economic impact of villagers on Sanctuary.
- 2. Man-animal relationship in Sanctuary.
- 3. Study of Python in Sanctuary.
- 4. Study regarding Pangolin in Sanctuary.
- 5. Population of Kalij Pheasant.
- 6. Population of Red Jungle Fowl.
- 7. Population of Barking Deer.

#### 3.8 TRAINING

The staff posted in the sanctuary is neither trained nor sufficient. Refresher course in wildlife management is must for staff posted in sanctuary for better management of sanctuary.

#### 3.9 CONSERATION STRATEGY AND EVALUATION

No coherent management plan or practice has ever been in place and interventions have been few and sporadic.

#### 3.10 ADMINISTRATION

The Sanctuary is under control of Divisional Forest Officer Wild Life and is being managed as per provisions of Wild Life (Protection) Act 1972 and various guidelines issued from time to time. Presently field officer of rank of Dy Ranger is incharge of sanctuary for the development of the sanctuary. It will require augmentation both in terms of rank and number of staff the detail of which is given under heading 10.4.1 (Reorganization)

#### 3.11 COMMUNICATION

#### 3.11.1 ROADS

The Santuary is well connected with Hoshiarpur via Mehngrowal and Hariana through metalled roads. One road passes through the sanctuary also. Presently sanctuary has a small stretch of Katcha roads and paths which need to be supplemented to ensure proper management of PA.

#### **3.11.2 RAIL LINES**

Rail Line comes upto Hoshiarpur City from jalandhar Railway Junction.

#### 3.11.3 TELEPHONES

There is no telephone connection in the sanctuary. One telephone connection for Takhni-Rehmapur wildlife sanctuary is required for communication with staff in sanctuary.

#### 3.11.4 WIRELESS NETWORK

At present there is no wireless station in the Sanctuary. There is need to establish one major wireless station within the Sanctuary and one in Divisional Office at Hoshiarpur. Twenty Wireless handsets would be required to be used in the Field. Requirement of wireless operators needed to run this system has been enumerated under heading 10.4.1 of Chapter-10.

#### 3.12 SUMMARY OF THREATS / PROTECTION TO WILDLIFE

#### 1. Threat to Habitat:

The wild life sanctuary is at the base of Shiwalik ranges and prone to erosion and exploitation from all sides. The major threats to the habitat are discussed one by one as under:-

#### 2. Poaching:

The sanctuary is open from all sides and prone to poaching by adjoining population and poachers from out side. Previously reported case of poaching pertain to big game. To provide enhanced protection to animals reinforcement of infrastructure with one jeep, motorcycles, wireless network as proposed in 3.11.4, and additional staff as proposed in Chapter 10 under heading 10.4.1 is required. Other proposed measures would be mobile patrolling, temporary nakas and permanent nakas at periphery of sanctuary. Temporary nakas and mobile squads would be used in adjacent areas and approach routes.

#### 3. Illicit Felling:

It is prone to illicit felling and theft of wood. Strong protection measure has to be taken to avoid damage to habitat. Shisham and Khair are potential attractions for illicit felling. Fencing of the Sanctuary boundary, mobile patrolling, posting of additional staff with LCV and motorcycles at their disposal, would reduce the incidence of such cases. List of illicit felling cases has been given in Annexure-VIII.

#### 4. Encroachment:

The sanctuary is open from all sides and there is a tendency to encroach the land of the PA. Some hutments are already inside the PA which need relocation. Rights of community have been settled by District Collector Hoshiarpur. No claim from community was received during the settlement process.

#### 5. Grazing:

Grazing is prohibited in sanctuary. There are two check posts on the periphery and mobile patrolling is also done to ensure that there is no grazing. Sanctuary is not fenced as yet. There is no reported case of grazing in the Sanctuary.

#### **6.** Fire :

The area is traversed with nallahs and choes and paths which serve as fire lines but habitations in side and around Sanctuary pose problem of fire. The available fire fighting equipment need to be supplemented by fire fighting engines, two additional fire watch towers, and set of modern fire fighting equipment.

#### 7. Disease:

Sanctuary is surrounded by Villages having domestic cattle, sheep and goats. The wild species are prone to local diseases like black water, anthrax and foot and mouth disease. Domestic animals falling within 5 K.M. radius are vaccinated by Animal Husbandry Department and same will be monitored in future also. Villages falling within 5 KM radius are Takhani, Dhakki, Chak Gujaran, Pattiari, Atwarapur, Dandoh, Mehngrowal, Malot, Hussainpur, Neela Naloa, Nangal, Kantian Arniala, Mustapur, Kapahat.

# PART-II THE PROPOSED MANAGEMENT

#### CHAPTER – 4

#### THE VISION, OBJECTIVES, ISSUES AND PROBLEMS

#### 4. THE VISION

To prepare a holistic plan to rehabilitate the PA ecologically and biologically taking physical, mechanical and sociological measures and to develop the full potential of the area inclusive of the human interface with the ecosystem. This plan would be flexible to the extent that unforeseen needs emerging with time could be incorporated after due permission from competent authority.

#### 4.1 OBJECTIVES OF MANAGEMENT

- 1. To conserve the integrity and biodiversity of the sanctuary.
- 2. To conserve the endangered, threatened and rare species of flora & fauna.
- 3. To conserve Pangolin and python as flagship species.
- 4. To maintain growth trends.
- 5. To rehabilitate the wipes out species.
- 6. To mitigate man animal conflict through the eco development programmes.
- 7. Capacity building of staff and community and to facilitate research.
- 8. To involve community in management of PA and to promote ecotourism & conservation awareness.

#### 4.2 ISSUES AND PROBLEMS IN ACHIEVING OBJECTIVES

Punjab being an agriculture dominant state, it is very difficult to preserve the wilderness of the sanctuary and each objective poses many problems as it is pursued for achievement.

#### **4.2.1 OBJECTIVE – 1**

Sanctuary area is very small for the unit to be self sufficient and that makes the unfenced boundary of the sanctuary porous both ways.

#### 4.2.2 OBJECTIVE -2

The objectives need to be achieved to preserve the area which is open from all sides and is prone to poaching, felling, grazing, erosion, fires and all kinds of exploitation which need to be tackled. This will be achieved by mobile patrolling, temporary nakas and permanent nakas at periphery of sanctuary. Temporary nakas and mobile squads would be used in adjacent areas and approach routes.

#### 4.2.3 OBJECTIVE -3

The Pangolin and Python being rare species and key representatives of the area, need preservation and propagation which will be achieved by toning up the working at the level of protection, communication, propagation and eco-development measures. Regular census needs to be carried out.

#### **4.2.4 OBJECTIVE -4**

Strict vigil will have to be maintained to prevent the deterioration of present status and every effort will have to be made to add to the floral and faunal diversity of the sanctuary.

#### **4.2.5 OBJECTIVE -5**

The present carrying capacity of the sanctuary need to be assessed and if needed be new species like Hog deer, Black Buck, Goral and Cheetal can be introduced to add to the diversity of the area.

#### **4.2.6. OBJECTIVE -6**

The sanctuary is under pressure for fodder, fuel wood and agriculture land. Level of awareness and hostile attitude of the surrounding community remains a challenge which can be met through eco development programme.

#### **4.2.7. OBJECTIVE -7**

At present there is a dearth of trained and properly oriented staff. The staff needs to be trained by resource persons within the department as well as from places like WLI, Dehradun.

#### **4.2.8 OBJECTIVE -8**

Hostile attitude of the community towards PA and lack of awareness about wild life pose problems in achieving this objective. Lack of roads, paths, tracks and interpretation centre are main bottlenecks for management. To elicit the cooperation of neighbouring villagers, ecotourism programmes will be arranged and special awareness camps will be organized. An interpretation center with audio video hall will be set up to make people aware about environment conservation. A library on wildlife and environment books will be provided in the sanctuary to promote awareness for nature conservation.

#### **CHAPTER-5**

#### THE STRATEGIES

#### 5.1 BOUNDARIES

Demarcation of the area will be done and suitable fence will be erected. Sanctuary area also needs to be increased by notifying adjoining areas as part of the same sanctuary to make it more viable from management point of view.

#### **5.1.1 LEGAL**

- 1. Survey and demarcation.
- 2. Preparation of detailed geo-referenced Map of Sanctuary.
- 3. Installation of boundary pillars.
- 4. Clearance of encroachments.
- 5. Fencing
- 6. Protection

#### 5.2 THEMES AND THEME PLANS

#### 5.2.1 MANAGEMENT OF WOOD LANDS

A balance of various vegetative strata needs to be evolved as the top cover is heavy and middle and ground covers have been suppressed. Phasing out of unwanted trees and introduction of new ones and creation of grass lands will be undertaken.

#### 5.2.2 GRASS LAND MANAGEMENT

At present most part of sanctuary has been infested with lantana weed cover. The grass lands are very few. In a phased manner latana will be cleared and grass land will be created in place. The present vegetation cover will be cut and thinned to allow the ground flora to come up.

#### **5.2.3 WATER MANAGEMENT**

Two perennial choes pas through sanctuary. But the flow of the water in the choes cause erosion and some times water becomes scarce if rains are scanty. To put the water to optimum use dams will be constructed to make a lake cum water source for the animals. The present tube well supply will also be improved to make water available at higher reaches. Water holes will be renovated as presently their water retention is poor due to porous beds. In order to ensure round the clock availability of water to wild life renovation of these water holes and creation of new waterholes is of utmost importance. There has been considerable decrease in prenniality of choes. Choe have almost become seasonal and with construction of a check dam upstream on Mehangrowal Choe availability of water down stream in lean period has considerably reduced. Keeping this change in view creation of new artificial water resources is a major thrust area so as to prevent the animals from straying outside in search of water which makes them prone to external threats. With depleting ground water table the submersible motor needs further lowering down.

#### **5.2.4 FIRE MANAGEMENT**

To avoid fires, regular vigil will be maintained and fire fighting equipments will be made available to the staff. Fire lines will be maintained where necessary. But sanctuary area is small and well traversed with nallahs and choes. So fire incidents are rare. However, for better management of the area, anti fire measures such as staff, fire lines, two watch towers are available and two more are required. Despite these measures ten fire watchers are needed to minimize the incidents of fire. Sanctuary has not been divided into compartments so far. One fire tender and a complete set of modern fire fighting equipments need to be

procured to meet any eventuality. In addition to paths which are presently being used and maintained as fire lines, an additional 10 KM of fire lines need to be maintained.

#### 5.2.5 PEOPLES PARTICIPATION

Adjoining villagers participation in the conservation process is a must for smooth management. This will be achieved by implementing eco development programme. Detailed strategy regarding eco development has been given in Chapter 7. An interpretation center with audio video hall will be set up to make people aware about environment conservation. A library on wildlife and environment books will be provided to promote awareness for nature conservation. For enhanced participation of community in management and protection of sanctuary, an advisory committee would be set up under section 33B of Wild Life (Protection) Act 1972 with its constitution being proposed as under:-

- 1. CF Wild Life Shiwalik (Hills) Circle Head
- 2. MLA Sham Churasi- Member
- 3. D.F.O. Wild Life Hoshiarpur Member Secretary
- 4. D.S.P. Hoshiarpur Member
- 5. Senior Veterinary Officer, Hoshiarpur Sub-Division- Member
- 6. Two individuals in field of wild life conservation- Members
- 7. Two N.G.O.'s s- Members
- 8. Honourary Wild Life Warden, Hoshiarpur
- 9. Sarpanch Village Takhani
- 10. Sarpanch Village Rehmapur.
- 11. Sarpanch Village Pattiari.

#### 5.2.6 WILD LIFE HEALTH

Health of the wild life will be taken care of by providing fresh and clean water, suitable habitat and immunization of livestock inside and outside the PA against known diseases like black water, foot and mouth and anthrax diseases. A veterinary dispensary is proposed at Rehmapur which will cater to the needs of livestocks of local community as well as animals of sanctuary.

#### 5.2.7 MAN ANIMAL CONFLICTS AND MITIGATION

The major causes of conflict between the local people and sanctuary is damage to their crops by wild life and for the exploitation of sanctuary resources such as grass, fuelwood etc. With improved habitat and fencing, instances of wild animals straying into farms will decrease thus winning over the people for the cause of conservation.

#### **5.2.8 INVOLVEMENT OF NGO'S**

Local NGO's will be involved in the management where desired process to make it two and more effective.

#### 5.2.9 ROADS PATHS AND TRACKS

Presently sanctuary has a small stretch of Katcha roads and paths which needs to be supplemented so as to ensure proper management of PA and to explore potential of ecotourism in sanctuary. Another stretch of 10 KM Katcha road, 10 KM path on the periphery of PA, and 5 KM of tracks would be required.

#### 5.2.10 RESOURCE MOBILISATION

All effort would be made to mobilize financial resources through state, central and international funding for implementing strategies.

#### CHAPTER - 6

### ECOTOURSIM, INTERPRETATION AND CONSERVATION EDUCATION

#### 6.1 GENERAL

Sanctuary is a considerable chunk of natural, virgin forest with undulating, small hilly terrain traversed with gullies and choes, thus having a tremendous potential for ecotourism. Till date this potential has not been exploited by the management of PA. If developed into a ecotourism spot in a planned manner it can become a paradise for nature lovers and bird watchers. Hoshiarpur is a corridor for tourists visiting the religious shrines of Himachal Pardesh namely Mata Chintpurni and Jawalaji. Tourist coming to these places would love to visit this spot and find solace in this natural patch of forest rich with wild life. Ecotourism clubbed with interpretation and conservation education will go a long way in making it a meaningful recreational activity and in effectively spreading the message of conservation in a speedy manner. Not only this it will also help to garner the moral and physical support of community in conservation of forests and wild life.

#### 6.2 OBJECTIVES

- (i) To exploit the vast tourist potential of this natural spot to the maximum extent.
- (ii) To elicit moral and physical support of public in conservation of nature.
- (iii) To spread the message of conservation through public by sensitizing them about its need through interpretative and educative skills with young school going future generation being one of the main target groups.

(iv) To promote ecotourism as Income Generating activity (I.G.A) for community residing in the vicinity of sanctuary so that they can come forward to conserve this PA.

#### 6.3 PRESENT STATUS

Much efforts have not been made so far by the PA Management so as to exploit the tourist potential of this PA. Absence of a comprehensive management plan, illequipped management paucity of staff and financial resources have always remained bottlenecks for achieving this objective. This has resulted in lack of basic infrastructure like Katcha roads, Paths, Tracks, Interpretation Centre and Recreational facilities.

#### **6.4 FUTURE STRATEGY**

#### A. JOINT FOREST MANAGEMENT (JFM) AND ECO-TOURISM

To give adequate protection to the existing forest resources in the sanctuary through effective people's participation and to maintain and improve the quality of the environment, it is imperative to involve people not only in protection but management of these area, so that the existing vegetation/tree cover could be maintained and expanded for the conservation and improvement of the environment.

- 1. To reduce the pressure on the forests by diverting the pressure with the alternative sources of energy.
- 2. To create awareness among the people about the importance of the forest resources/tree covers for a better future of humanity.
- 3. Overall socio-economic development of the forest fringe areas.

#### (i) NATURE'S TRAIL

A track called Nature's trial would be made which will be traversing the interior part of sanctuary. It will be aligned along the choes running across the sanctuary so as to improve its scenic beauty and for easy sighting of the wild life. These wild virgin surroundings with its richness in wild life would form an ideal place for nature lovers and birds watchers. Even urbanites would love to spend time in lap of nature to ease out pressures of daily fast urban life. It will be educative for the younger school/college going generation which will not only give a practical feel of ecology but will also sensitize them about conservation of nature. This activity will be made more attractive and recreative by introducing Elephant Ride by means of domesticated Elephants.

#### **B. INTERPRETATION CENTRE**

A good well equipped interpretation centre in the sanctuary would make the activities of ecotourism, conservation education more meaningful. Its design would be a very important factor with its exteriors and interiors giving a rear natural look. It will also house a library with a good collection of books and literature on wild life, Forest and the conservation. An exhibition all displaying various models, photographs on different conservation themes will prove very productive and effective tool. It will be supplemented by using audiovisual techniques. Slide shows and films on wild life, forests and their conservation would be made available to the visitors. Brochures and pamphlets depicting message of conservation would be provided free of cost to visitors.

#### C. INFRASTUCTURE DEVELOPMENT

Presently a small stretch of katcha path makes only a fraction of sanctuary accessible to management and tourists. An additional 10 KM of Katcha roads-cum-firelines and 15KM of paths/tracks are needed for promotion of ecotourism and better management of PA. Similarly provision of toilets facilities for the visitors would be an in dispensable requirement.

#### D. RECREATION ZONE

In order to provide all amenities to the tourist it is proposed to develop a recreation Zone outside the PA. It will not only take care of the requirements of tourists but also add value to their enjoyment and recreation. Local entrepreneurs amongst the local youth would be encouraged to take it as I.G.A. It can also be a public-private partnership. Refreshment places, swings and rides for children and resorts for boarding and lodging facilities would make this spot really attractive for the tourists.

#### E. CONSERVATION EDUCATION

Awareness camps, quiz and painting competitions for the school children, local community would be arranged to sensitize them about conservation of forest and wild life. Brochures and pamphlets on this theme would be provided free of cost to school children's, local community and tourist so as to spread the message of conservation in a speedy manner. Audio-visuals at interpretation centre would be an effective tool to achieve this objective. Local community would be taken on exposure visits to PA's out side the state and to Chhatbir Zoo to further achieve this objective. Community would be able to see and

get first hand information about conservation and ecotourism so as to replicate here also.

#### F. CONSULTANCY AND INVOLVEMENT OF N.G.O's

In order to maximize the harnessing of ecotourism potential consultancy services of repute and experience in this field would be hired. At the same time N.G.O's would be involved to achieve in a more meaningful ways.

#### G. RULES AND REGULATIONS

Prevalent rules, regulations and guidelines issued by State, Central Government and Judiciary would be kept in mind to ensure that ecotourism dose not pose any problem to existing wild life and its habitat. Proper rules and regulations along with proper checks and counter checks would be put in place before throwing open the PA for ecotourism.

#### **CHAPTER -7**

#### **ECO-DEVELOPMENT**

#### 7.1 GENERAL

As mentioned earlier biotic pressure in zone of influence poses a constant problem in management of Protected Area. To ease out this biotic pressure, involvement of community in zone of influence becomes a necessity for a better management and implementation of conservation measures. It becomes essential that management should be receptive to genuine problems of the community in zone of influence so as to negate the hostile attitude of community towards P.A. and its management. This issue can be effectively tackled through ecodevelopment by making up developmental activities which will reduce pressure on PA and alleviate their daily life hardships. This will not only dampen the hostile attitude of community but will also result in building up of mutual trust and rapport with community.

#### 7.2 OBJECTIVES

- 1. Mitigating man animal conflict.
- 2. To reduce pressure on wild life habitat by minimizing forest resource depletion.
- 3. To elicit participation of the community in conservation and management of PA by adopting participatory approach.
- 4. Organizing community into village level Institutions (VLI;s) like Self Help Groups (SHG's), user groups and building up their capacity through trainings and exposure visits.
- 5. Empowerment of community so as to improve their socio economic status by augmenting alternative means of livelihood through Income Generating Activities (I.G.A.'s).

6. To raise awareness level among local community regarding conservation of natural resources and sustainable development approach.

## 7.3 FOREST DEPENDENCY AND CONFLICTS IN ZONE OF INFLUENCE

In villages constitution Zone of influence there are arable lands within and adjacent to P.A where agriculture is practiced. But boundary of PA being porous, wild animals like Sambar, Wild Boar and Blue bull stray into these arable lands and badly damage the Crops. This not only brings in hostile attitude of community towards wild life, but it also makes wild life susceptible to external threats of poaching. People depend upon forest for grazing their livestock because trend for stall feeding livestock is not very prevalent. The arable chunks of land within the Sanctuary and in periphery increase the risk of encroachment in PA. PA being a considerable patch of forest area and having good vegetal cover becomes an attraction for the region to dump their stray cattle. Community still uses fuel wood for their domestic use thus making them dependent on the adjacent forests. A section of community depends upon collection of Baggar grass for rope making. Due to restrictions on these activities in P.A and damaging of their crops by wild life and encroachments mananimal conflict is prominently visible on ground.

#### 7.4 CURRENT AND PAST ECO DEVELOPMENT ACTIVITIES.

Some eco development activities in villages falling under zone of influence were taken up under I.W.D.P. Hills-II project, where focus of the project was watershed management. Activities undertaken were creation of irrigation facilities, drinking water supply, plantations in community lands, promotion of I.G.A.'s, supply of cattle sheds, managers

and chaff cutters. These efforts fall far short of our desired objectives with respect to PA. Otherwise also I.W.D.P. Hills-II Project had come to an end in 2006. Management of PA is presently facing financial constraints in absence of a management plan and proper funding by State, Central or International agency.

#### 7.5 FUTURE STRATEGY

#### 7.5.1 ECO DEVELOPMENT ZONE

All the villages surrounding P.A namely Takhni, Dhakki, Pattiari, Rehmapur, Atwarapur, Dandoh, Mehngrowal, Malot, Hussainpur, Neel, Nangala Naloa, falling in zone of influence mainly will be initially taken up for eco development works. However in case of good results on this front this activity can be further extended to villages falling within 5 Kms of sanctuary.

## 7.5.2 CONSTITUTION OF VILLAGE ECO-DEVELOPMENT COMMITTES AND THEIR BYE LAWS

To ensure participation of community in planning, execution and monitoring of eco development interventions Village Level Eco development Committes (E.D.C.s) would be constituted in each target village and their byelaws framed before starting with the preparation of their microplan so as to ensure need based and prioritized development in a tailor made fashion. EDC's would be sensitized through training and exposure visits regarding their roles and responsibilities.

#### 7.5.3 PREPARATION OF ECO DEVELOPMENT PLAN

An eco development plan would be prepared separately for each village. This will be done by the staff and EDC using PRA technique. Each Microplan will include complete socio-economic village profile, problems prioritized and plans for their redressal. A comprehensive

need based microplan for each village will ensure continuity of planning. While preparing plan it will be ensured that socio-economic condition, gender issued and equity is kept in mind. Negotiations would be done with community regarding possible cost sharing in various development activities.

#### 7.5.4 ENTRY POINT ACTIVITIES

Entry Point Activities would be carried out as conceived in the microplan of each village. Proable entry point activities would be :-

- (i) Drinking water supply in needy pockets of the target villages.
- (ii) Fencing around private arable lands on basis which will be maintained subsequently by the concerned stake holders.
- (iii) Community asset creation
- (iv) Development of non conventional energy resources like Solarcooker, Solar lights, Solar Pumps, Solar Water Heater, Gobar Gas Plants etc.
- (v) Supply of sport kits to local youth.
- (vi) Trainings on income generating Activities.
- (vii) supply of cattle sheds, managers, and chaff cutters to economically weaker sections.
- (viii) Creation of basic rural infrastructure.

#### 7.5.5 MITIGATING MAN ANIMAL CONFLICT

- (i) Boundary of the sanctuary would be fenced by Chain link fence to mitigating the man animal conflict 6 km boundary to restrict the entry of stray cattle in sanctuary detail attached as per chapter 11 (1.3).
- (ii) Management would try to explore possibility of relocating few settlements within the sanctuary to areas outside PA.
- (iii) In order to check menace of stray cattle efforts would be made by all EDC's to maintain records of their livestock in respective villages. Existing stray cattle would be rehabilitated in gaushalas which will be

managed by EDC's and concerned Panchayats E.D.C's with the help of Panchayats will ensure that no stray cattle is left in the sanctuary from other villages of the region.

# 7.5.6 CATTLE IMMUNISATION AND SETTING UP OF CIVIL VETERNARY DISPENSARY

The surrounding domestic cattle population in an area of 5 Km radius will be immunized against common diseases like black water, anthrax and foot and mouth diseases. Animal husbandry department would be approached for a veterinary dispensary at Rehmapur which will cater to the needs of sanctuary as well as community.

#### 7.5.7. AGROFORESTY

People living in the surrounding area of the sanctuary will be encouraged to undertake plantation of agro forestry species like popular, Burma Dhek and Clonal Eucalyptus to supplement their income so as to reduce biotic pressure on PA. This would also solve their problem of damage to their crops by wild animals. Inter cropping of aromatic grasses like lemon grass, citronella would be encouraged.

#### 7.5.8. MEDICAL FACILITY

Efforts will be made to provide the area with medical facilities by asking the concerned department. To open primary health centers in the adjoining villages.

#### 7.5.9 EMPOWERMENT OF COMMUNITY.

Community will be organized into various Village Level Institutions like self help groups and user groups. Existing self help groups would be adopted. Several capacity building measures like trainings, exposure visits and camps would be organized to promote Income Generating

Activities (I.G.A.'s ) which would wean away community from their dependency on forests. Though maximum thrust would be on capacity building but these VLI's can be financially supported by department promotion of group income generating activities provided they are ready for cost sharing. Natural resources based I.G.A's like basket making, rope making, socks making, tailoring and embroidery, amla shredding, pickle making, honey bee keeping, sericulture, poultry, stall fed dairy units would be encouraged. In order to encourage stall feeding cattle sheds, chaff cutters and managers would be provided for unprivileged weaker sections of society which would not only reduce pressure on PA but would also improve their economic condition and dampen their hostile attitude towards PA management. Local youth would be taken on exposure visits to other part of country to have first hand information about scope and potential of ecotourism. They will be further motivated and empowered to take up this activity by improving entrepreneurships kills through Entrepreneurships Development Programmes.

#### 7.5.10 COMPENSATION

PA management will try to explore ways and means to give compensation to individuals in case of injury/death by wild animals which can be given from money earmarked for contingencies. Community surrounding PA will be entitled for compensation for damages accrued to their crops by wild life in case of policy decision by government.

#### 7.5.11. INVOLVEMENT OF N.G.O'S

All interested individuals and organizations will be approached to get their assistance in developing the sanctuary.

#### 7.5.12. MONITORING AND EVALUATION

The input of eco development efforts will be closely monitored and evaluated at the office level and required changes will be effected from time to time. Parameters will be evolved for the purpose involving all the stakeholders.

#### 7.5.13 KEY POINTS FOR SUCCESS OF THIS PROGRAMME

It is essential to keep following key points in mind for effective implementation of eco development plan.

- i) Proper byelaws for EDC's should be in place.
- ii) Regular meeting of EDC's for establishing rapport and mutual trust.
- iii) Proper Implementation of entry point activities with sufficient accountability and transparency measures.
- iv) Attitudinal changes in staff through training and exposure visits within and outside state.
- v) Effective motivation of community and its capacity building through training and exposure visits.
- vi) Honouring commitments made to community in time bound manner.
- vii) Acknowledging efforts of good VLI's and individuals cosntributing in this field.

#### CHAPTER – 8

#### LANTANA CAMARA MANAGEMENT

#### 8.1 GROUND STORY MANAGEMENT

In view of increasing density of invasive weeds like Lantana and Parthenium, it is important to manage crop composition of ground story with objectives to decrease the domain of invasive weeds and to change the crop composition of ground story by replacing invasive weeds with traditionally occurring/cultivated ground story valuable spp.

- 1. Supplementary artificial regeneration with suitable valuable spp will also be useful for soil and moisture regime. For better silvicultural substitution of Lantana by other appropriate species site specific planning and treatment should be done.
- 2. Soil beds will be prepared along contours and planted with tufts or seed broadcasting.
- 3. Sowing of grasses will be done in sanctuary. Suitable fodder spp.which can compete with Lantana include Napier grass, Guinea grass, Desmanthus, Cenchrusspp. etc.
- 4. Other appropriate spp. including lemon grass, citronella, palmarosa, vetiver and medicinal herbs like chasku, kalmegh, ashwagandha, tulsi, agave, aloe-vera, kaunch etc. could also be planted as a part of forest floor/understorey management.
- 5. Bamboo, Subabul and other tree species may also be planted in close spacing for suppression of Lantana.

#### 8.2 LANTANA MANAGEMENT/LANTANA HARVEST RULES

Lantana management is a critical issue which needs attention in sanctuary areas. Being an invasive alien weed which has covered very large tracts of Shiwalik in last few decades the problem needs to be addressed urgently. Therefore for Lantana removal/harvest from any site following rules are made:

- 1. Lantana eradication/removal has to be done carefully. Therefore Lantana will not be burnt for clearing of site for plantation sanctuary.
- 2. Uprooting or stubbing should be done in phased manner and simultaneously plantation work will be done with fast growing species.
- 3. Lantana can also be cut /stubbed in a careful manner from such areas which are required for earthwork for plantation and improving the quality of ground cover.
- 4. Heavy machinery will not be allowed to be used to harvest Lantana.
- 5. No large scale Lantana cutting/stubbing will be done during fire season (16 April-15July) except as a part of advance earthwork for planting.

#### CHAPTER – 9

#### RESEARCH, MONITORING AND TRAINING

#### 9.1 GENERAL

So far no such activity has been undertaken with regard to Takhni wildlife sanctuary. But for the scientific management of flora and fauna and for the evaluation of other biotic factors, research and monitoring is direly needed. To execute such duties the training of staff is also essential.

#### 9.1.1 INHOUSE RESEARCH

To begin with the staff will be put under the senior officers of the department who have got diploma in wildlife management from Wildlife Institute of India, Dehradun.

#### 9.1.1.a DATA COLLECTIONS

Staff strength will be increased and specific work of data collection regarding census and survey will be entrusted to them. If need be expert help from PAU and Wildlife Institute of India, Dehradun will also be sought.

#### 9.1.1.b MONITORING OF VEGETATION

The land use pattern will be monitored and addition and deletion of present flora will be undertaken in phases.

## 9.1.1.c MONITORING OF ANIMAL POPULATION, HEALTH AND DISEASE

The carrying capacity of the PA will be studied regularly and optimum living and propagating space will be made available to animals sto keep the population healthy.

#### 9.2 RESEARCH STRATEGIES

Research work will be entrusted to experts from PAU and Wildlife Institute of India, Dehradun. Local data collection such as census,

categorization of habitat, etc. will be done by the local staff. Probable subjects which are worth taking for research are enumerated as under:

- 9.2.1 Man-animal relationship in Sanctuary.
- 9.2.2 Study of Python in Sanctuary.
- 9.2.3. Study regarding of Pangolin in Sanctuary.
- 9.2.4 Population of Kalij Pheasant.
- 9.2.5 Population of Red Jungle Fowl.
- 9.2.6 Population of Barking Deer.

#### 9.3 HERBARIUM

In due course a herbarium will be built in the PA to know about vegetation dynamics.

#### 9.4 MUSEUM

For minute study on invertebrates and small vertebrates, a museum will be set up in the premises of the santutary.

#### 9.5 LIBRARY

Library on wildlife and environment related books will form a part of interpretation center.

#### 9.6 DATA STORAGE

To keep the date safe computer facility will be provided.

#### 9.7 CHECK LISTS

Local staff with the help of experts from PAU and Wildlife Institute of India, Dehradun will prepare check lists of flora and faura.

#### 9.8 TRAINING

Staff posted in the sanctuary will be duly trained for their job. Capacity building of the community will be taken up for their main steaming in the conservation process.

#### 9.9 ON THE JOB TRAINING

In the beginning staff/community will get training from the seniors who are already trained.

#### 9.10 FORMAL TRAINING

Staff/Community will be sent for training at WII, Dehradun, Veterinary Institute, Izatnagar, Bareilly (UP) and other places of repute. They will also be taken on exposure tours to some of the prominent PA's of the country.

#### CHAPTER – 10

#### ORGANISATION AND ADMINISTRATION

#### 10.1 GENERAL

At present the sanctuary is one unit attended by one wild life division at Hoshiarpur. The new set up will have staff as incharge, assisted by one Dy Ranger Officer and Forest Guard and peon, chowkidar and driver/operator.

#### 10.2 OBJECTIVES

The new set up aims at managing the PA on scientific lines and envisages all round development of the sanctuary including management of habitat, ecotourism, eco development and research and training.

#### 10.3 PROBLEMS

The new setup will require addition of posts, vehicles, equipments and buildings involving additional expenditure. All state and central resources will have to be tapped for the purpose.

#### 10.4 STRATEGIES

For the time being additional charge will be given to other officers but in due course a new set up has to come up.

#### 10.4.1 REORGANISATION

The sanctuary will be made into a range with two blocks of two beats each. One block will be protection/habitat management and the other will be eco development. One Guard will be at the range headquarters. Under the new set up following new posts will have to be created:-

1)	Forest Ranger	-	1
2)	Dy Forest Ranger/Forester	-	2
3)	Clerk	-	1
4)	Driver/Operator	-	2
5)	Wireless Operator	-	8
6)	Forest Guard	-	5
7)	Peon	-	1
8)	Chowkidaar	_	1

#### 10.4.2HUMAN RESOURCES DEVELOPMENT

Due care will be taken for their living, medical, conveyance and family welfare facilities. Training will form an integral part of this component.

#### 10.4.3.DEVELOPMENT AND UPKEEP OF INFRASTRUCTURE

To run the new set up more vehicles and paraphernalia need to be added. LCV, Motorcycle, TV, Multi Media Projectors, Films and Slides, etc will be purchased and maintained. Fire fighting equipments will be of utmost importance.

#### **10.4.4 PROVISION OF STAFF AMENITIES**

Due attention will be given to staff and their families. Schooling, hospital, recreation, conveyance and emergency facilities will be mae available in/near the sanctuary itself.

### PART – III

**ANNEXURE** 

#### ANNEXURE – I

#### LIST OF FLORA FOUND IN THE SANCTUARY

#### 1. Trees/Shrubs

- 1) Sheesham
- 2) Phalahi
- 3) Kikar
- 4) Bohr
- 5) Peepal
- 6) Neem
- 7) Beri
- 8) Khair
- 9) Sirih
- 10) Kaner
- 11) Kamal
- 12) Karaunda
- 13) Toot
- 14) Amb
- 15) Jamun
- 16) Amla
- 17) Simbal
- 18) Jand
- 19) Palah
- 20) Barna
- 21) Chilla
- 22) Rajain
- 23) Bill
- 24) Bhanguri
- 25) Sahanjana

- 26) Gullar
- 27) Dek
- 28) Sagwan
- 29) Malah
- 30) Ajeer
- 31) Subabul
- 32) Lasura
- 33) Bans

#### II Grasses

- 1. Common Grass
- 2. Baggar Grass

#### ANNEXURE II

#### LIST OF ANIMALS FOUND IN THE SANCTUARY

#### I Mammals

1.	Panther	Panthera Pardus (Rerely from H.P.)
2.	Jungle Cat	Felis Chaus
3.	jackal	Canis Aureus

4. Blue Bull Bosephus Tragocamelus

5. Sambhar Cervus Unicolour

6. Barking Deer Muntiacus Muntijak

7. Common Indian Hare Lepus Nigricollis

8. Wild Boar Sus Scrofa

9. Rhesus Monkey Macaca Mulatta

10. Common Indian - Presbytis Entellus

Langoor

11. Indian Monitor Lizard

12. Common Indian Herpestes Auropunctatus

Mangoose.

13. Porcupine Hystrix Indica

14. Indian Pangolin Manis Crassicaudata

15. Hog Deer

#### II. Reptiles

- 1. King Cobra
- 2. Rat Snak
- 3. Python (Red Data Species)
- 4. Indian Egg Eating Snakes
- 5. Indian Cobra

#### III. Birds

- 1. Kalij Pheasant
- 2. Red Jungle Fowl.
- 3. Peafowl
- 4. Green Pigeon
- 5. Blue Rock Pigeon
- 6. Spotted Dove
- 7. Little Brown Dove
- 8. Collared Dove
- 9. Black Partridge
- 10. Grey Partridge
- 11. Common Quail
- 12. Rain Quail
- 13. White Browed Fantail
- 14. White Throated Fantail
- 15. White Breasted Kingfisher
- 16. Common Kingfisher
- 17. Chestnut Headed Bee-eater.
- 18. Little Green Bee-eater
- 19. Hoopoe
- 20. Indian Roller
- 21. Grey Hornbill
- 22. Green barbet
- 23. Golden backed Woodpecker
- 24. Maharatha Woodpecker
- 25. Indian Pitta
- 26. Crested Lark
- 27. Small sky Lark

- 28. Yellow Headed Wagtail
- 29. White Wagtail
- 30. Indian Pipit
- 31. Large Cuckooshrike
- 32. Common Woodshrike
- 33. Scarlet Minivet
- 34. Red Vented Bulbul
- 35. White chested Bulbul
- 36. Rufous Backed Shrike
- 37. Indian Grey Shrike
- 38. Magpie Robbin
- 39. Jungle Babbler
- 40. Large Grey Babbler
- 41. Grey Tit
- 42. Purpul Sunbird
- 43. Lal Munia
- 44. Spotted Munia
- 45. Bays Weaver
- 46. Back Throated Weaver
- 47. Indian Hills Mynah
- 48. Common Myna
- 49. Pied Myna
- 50. Brahminy Myna
- 51. Bank Myna
- 52. Indian Eagle Owl
- 53. Spotted Owlet
- 54. Pied Crested Cuckoo
- 55. Common Crow

- 56. Quail
- 57. Jungle Crow
- 58. Black Drongo
- 59. Bloosom Headed Parakeet
- 60. Alexender Parakeet
- 61. Crow Pheasant
- 62. Long Billed Vulture
- 63. Scavenger Vulture
- 64. Black Winged Kite
- 65. Red Wattled Lapwing
- 66. Indian Nightjar.

# ANNEXURE III LIST OF EQUIPMENTS

S.No.	Name of Equipment	Required (Number)
1.	LCV/Jeep	1
2.	Water Tanker	2
3.	Tranquilizing gun	1
4.	Wireless Sets	20
5.	Multi Media Projector	1
6.	Slide Projector	1
7.	Television Set	1
8	DVD Player	1
9	GPS	5
10.	Binoculars	5
11.	Motor Cycles	2
12.	Mobiles	15
13.	Fire Tender	1
14.	Tractor And Trolly	1

#### **ANNEXURE IV**

#### LIST OF WATCH TOWERS AVAILABLE

Sr.	Locations	Range	Height	Kind	Condition	Remarks
No.						
1.	Takhni	Hoshiarpur	30'	Steel	Good	Used for Vigil
2.	Takhni	Hoshiarpur	20'	Steel	Good	Used for Vigil

### REQUIREMENT OF WATCH TOWERS

Sr.	Locations	Range	Height	Kind	Condition	Remarks
No.						
1.	Near Guard Qtr.	Hoshiarpur	30'	Steel	Good	For sight seeing.
2.	Near	Hoshiarpur	30'	Steel	Good	For Vigil
	Takhni/Khruni Village					

## ANNEXURE V LIST OF MAJOR WIRELESS STATIONS REQUIRED

Sr. No.	Location	Number
1.	Takhni	1
	Sanctuary	
2.	D.F.O. Office	1
	Hoshiarpur	

#### ANNEXURE VI

#### **DETAIL OF FOREST ROADS**

Sr	Location	Length	Name of	Forest road	Maintenance	Utility
No.			road			
1.	Takhni	0.5Km.	Haryana	Passes	Maintained	Approach
			Takhni	through		road
				Sanctuary		
2.	Takhni	1 Km.	Dholbaha	Passes	Maintained	Approach
			to Takhni	through		road
				sanctuary		
3.	Takhni	1 Km.	Maingate	Katcha Path	Mainained	Serves as
			to watch			Fire Line &
			towers			approach
4.	Takhni	1 KM	Hoshiarpur	Through	Maintained	Approach
			to Takhni	Mehngrowal		road
				choe		

#### **ANNEXURE VII**

#### LIST OF TUBEWELL BORINGS

S.NO.	Location	Number	Condition
1.	Haryana Takhni road	1	Working

#### PRESENT LIST OF WATER SOURCES

Sr.	Name	Range	Block	Remarks
No.				
1.	Mehngrowal Choe	Hoshiarpur	Takhni	Natural
2.	Chamaar Choe	Hoshiarpur	Takhni	Natural
3.	Waterhole(4 No.s)	Hoshiarpur	Takhni	Man Made
4.	Deep Water Tubewell	Hoshiarpur	Takhni	Electrically
				operated

### REQUIRED LIST OF WATER SOURCES

Sr.No	Name	Range	Block	Remarks
3.	Waterhole(5 No.s)	Hoshiarpur	Takhni	Pacca

ANNEXURE VIII
LIST OF ILLICIT FELLING CASES AND THEIR STATUS

Sr.No.	Year	No. of Cases	No. of Tree	Volume	Compensation
			Fell	Cubic Meter	Recovered
1.	1995-96				
2.	1996-97	7	1		
3.	1997-98				
4.	1998-99				
5.	1999-2000	2	1		
6.	2000-01				
7.	2001-02				
8.	2002-03				
9.	2003-04				
10.	2004-05				
11.	2005-06				
12.	2006-07				
13.	2007-08				
14.	2008-09				
15.	2009-10				
16.	2010-11				
17.	2011-12	1	6		
18.	2013-14				
19.	2014-15				
20.	2015-16				
21.	2016-17				
22.	2017-18				

## ANNEXURE IX DETAILS OF ILLEGAL HUNTING OF WILDLIFE

Sr.	Year	No. of	No. of	No. of	No. of Cases	Amt. Received
No.		Cases	Persons	cases	Compounded	as
			Arrested	sent to		Compensation
				Court		
1.	1995-96	3		3		
2.	1996-97	9		9		
3.	1997-98	2		2		
4.	1998-99			7		
5.	1999-2000	7		8		
6.	2000-01					
7.	2001-02					
8.	2002-03					
9.	2002-04					
10.	2004-05					
11.	2005-06					
12.	2006-07					
13.	2007-08					
14.	2008-09					
15.	2009-10					
16.	2010-11					
17.	2011-12					
18.	2013-14					
19.	2014-15					
20.	2015-16					
21.	2016-17					
22.	2017-18					

#### ANNEXURE X

#### LIST OF PROTECTED AREA VALUES

No.	Category		Value
1.	Global Conservation	*	Biodiversity
		*	Species specific concervation
			- Barking deer
			- Red Jungle Fowl
2.	National	*	Foot Hill terrain ecosystem
			Conservation.
		*	Barking Deer Habitat
		*	Kalij Pheasant Conservation
3.	Regional	*	Foot hill varied ecosystem
4.	State	*	Ecosystem Conservation
			Catchment Area
			Shiwalik Area
			> Eco Tourism & Wild life
			awareness
			Ecotourism activities
			Non wood produce
			➤ Wild – Socio Cultural religious
			values.

#### ANNEXURE XI

### List of Arms Licenses of the Villages within the limits of $10 \ \mathrm{kms.}$ of Takhani Rehmapur Sanctuary

SR. NO.	NAME AND ADDRESS OF LICENSES	LICENSES NO.	GUN NO.	ISSUED DATE OF LICENSES
1.	SURJIT SINGH S/o KHAZAN SINGH R/o TAKHNI	1837/GUN/DM/HSP	12Bore DBBL	13/10/2006
2.	CHARANJIT SINGH S/o JAGJIT SINGH R/o TAKHNI	2317/GUNS/DM/HSP	12 Bore SBBL	31/07/2008
3.	RUPINDER SINGH S/o IQBAL SINGH R/o TAKHNI	3028/GUN/DM/HSP	12Bore DBBL	15/11/2007
4.	RAM RAKHA S/o MILKHI RAM R/o TAKHNI	647/GUN/DM/HSP	12Bore DBBL	-
5.	SUBH SHANKAR S/o ISHWAR SINGH R/o TAKHNI	2214/A/MISC/DM/HSP	12Bore DBBL	23/07/2007
6.	SUNIL KUMAR S/o JAGDISH SINGH R/o TAKHNI	6/GUN/PS HARIANA/DM/HSP	.12 Bore DBBL	24/08/2007
7.	SUKHJINDER SINGH S/o IQBAL SINGH R/o TAKHNI	985/PISTOL/DM/HSP	315 Bore RIFLE	08-06-2003
8.	SUKHJINDER SINGH S/o IQBAL SINGH R/o TAKHNI	985/PISTOL/DM/HSP	12Bore DBBL	08-06-2003
9.	SUKHJINDER SINGH S/o IQBAL SINGH R/o TAKHNI	985/PISTOL/DM/HSP	.32 Bore Revolver	08-06-2003
10.	ARJAN SINGH S/o NIKU RAM R/o TAKHNI	927/GUNS/DM/HSP	.12 Bore SBBL	22/01/2008
11.	SUNIL KUMAR S/o JAGDISH SINGH R/o TAKHNI	6/GUN/PS HARIANA/DM/HSP	.12 Bore DBBL	29/10/2015
12.	CHARANJIT SINGH S/o JAGJIT SINGH R/o TAKHNI	2317/GUNS/DM/HSP	12 Bore SBBL	1/8/2007
13.	SUBH SHANKAR S/o ISHWAR SINGH R/o TAKHNI	2214/A/MISC/DM/HSP	12Bore DBBL	24/07/2006
14.	SATWINDER SINGH S/o RATTAN SINGH R/o DHAKKI	2998/gun/dm/hsp	.12 Bore DBBL	6/7/2016
15.	NIRMAL SINGH S/o MAHANGA SINGH R/o DHAKKI	1293/a/misc/dm/hsp	.12 Bore DBBL	1/3/2016
16.	SARWAN KUMAR S/o BIR SINH R/o ARNIALA	1024/II/DM/HSP	.12 Bore SBBL	22/01/2008
17.	KULWINDER SINGH S/o SURJIT SINGH R/o ARNIALA	GUN/PS HARIANA/DM/HSP	.12 Bore SBBL	22/12/2006
18.	KARNAIL SINGH S/o VAKIL SINGH R/o ARNIALA	1011/GUNS/DM/HSP	.12 Bore SBBL	22/01/2008
19.	JARNAIL SINGH S/o VAKIL SINGH R/o ARNIALA	15341/rifle/ps hariana/dm/hsp	.12 Bore SBBL	30/11/2015
20.	INDERJIT SINGH S/o VIR SINGH R/o ARNIALA	123/Gun/PS Hariana/DM/HSP	.12 Bore SBBL	19/01/2010
21.	BALWINDER SINGH S/o RAM MAHANT R/o HARIANA	3691/GUN/DM/HSP	.12 Bore SBBL	
22.	GULSHAN RAI PASSI S/o SHAM SINGH PASSI R/o HARIANA	10531/Gun/PS Hariana/DM/HSP	.12 Bore SBBL	17/08/2016
23.	GULSHAN RAI PASSI S/o SHAM SINGH PASSI R/o HARIANA	10531/Gun/PS Hariana/DM/HSP	.32 Bore Revolver	17/08/2016
24.	GULSHAN RAI PASSI S/o SHAM SINGH PASSI R/o HARIANA	10531/Gun/PS Hariana/DM/HSP	.22 Bore Rifle	17/08/2016
25.	KAMALJIT SINGH S/o TARLOK SINGH R/o HARIANA	6301/a/m/dm/hsp	.12 Bore SBBL	24/02/2016
26.	KAMALJIT SINGH S/o TARLOK SINGH R/o HARIANA	6301/a/m/dm/hsp	.315 Bore Rifle	24/02/2016

27.	KAMALJIT SINGH S/o TARLOK SINGH R/o HARIANA	6301/a/m/dm/hsp	.32 Bore Pistol	24/02/2016
28.	BRIJ BHUSHAN S/o TEK CHAND R/o HARIANA	136/REV/PS HARIANA/DM/HSP	.315 Bore Rifle	27/10/2010
29.	BRIJ BHUSHAN S/o TEK CHAND R/o HARIANA	136/REV/PS HARIANA/DM/HSP	.32 Bore Revolver	27/10/2010
30.	SANJAY SABHARWAL S/o PARSHOTAM SABHARWAL R/o	212/Rev/PS Hariana/DM/HSP	110,01,01	
31.	HARIANA  NAGAR SINGH S/o AMRIK SINGH R/o HARIANA	251/rifle/dm hsp	.12 Bore SBBL	17/08/2016
32.	KAUSHALIA DEVI S/o K.K. KALIA R/o HARIANA	2573/A/MISC/DM/HSP	.12 Bore SBBL	13/11/2006
33.	VISHVASA P KAHOL S/o OM PARKASH KAHOL R/o HARIANA	745/V/DM/HSP	.12 Bore SBBL	24/04/2006
34.	JATINDER KUMAR S/o BALDEV RAJ R/o HARIANA	36/REV/HARIANA/DM/HSP/PS Hariana/Jan-2008	.12 Bore SBBL	21/01/2008
35.	KAMALDEEP SINGH S/o BALBIR SINGH R/o HARIANA	15544/rev/ps hariana/dm/hsp	.32 Bore Revolver	16/02/2016
36.	HARJINDER SINGH S/o MANSA SINGH R/o HARIANA	3091/GUNS/DM/HSP	.12 Bore SBBL	9/8/2007
37.	MANOHAR SINGH S/o DIWAN SINGH R/o HARIANA	1401/A/DM/HSP	.12 Bore SBBL	-
38.	HARJINDER SINGH S/o DES RAJ R/o HARIANA	138/GUN/PS HARIANA/DM/HSP	.12 Bore SBBL	6/1/2011
39.	HARJINDER SINGH S/o DES RAJ R/o HARIANA	138/GUN/PS HARIANA/DM/HSP	.32 Bore Revolver	6/1/2011
40.	JAGDEEP SINGH S/o JOGINDER SINGH R/o HARIANA	221/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	6/2/2014
41.	SUNIL KUMAR BHALLA S/o SURINDER KUMAR BHALLA R/o HARIANA	220/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	6/2/2014
42.	MUNISH KUMAR S/o AVINASH CHANDER R/o HARIANA	89/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	6/2/2008
13.	MUNISH KUMAR S/o RAMAN KUMAR R/o HARIANA	223/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	13/02/2014
14.	DEV RAJ S/o SAGLI RAM R/o HARIANA	54/gun/ps hariana/dm/hsp	.32 Bore Revolver	2/6/2016
<b>1</b> 5.	YASHPALJIT SINGH S/o BHIM SINGH R/o HARIANA	3278/guns/dm/hsp	.12 Bore SBBL	6/7/2016
16.	PANKAJ BHALLA S/o SHAM SUNDER BHALLA R/o HARIANA	191/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	-
17.	MUNISH CHANDER S/o JAGDISH LAL R/o HARIANA	1259/51/rev/ ps hariana/dm/hsp	.32 Bore Revolver	-
18.	MADHU SUDAN VIJ S/o AMRIT LAL VIJ R/o HARIANA	2550/5/rev/ps hariana/dm/hsp	.32 Bore Pistol	-
19.	LACHHMAN SINGH S/o CHAMAN LAL R/o HARIANA	2995/gun/dm/hsp	.12 Bore SBBL	-
50.	MUNISH CHANDER S/o JAGDISH LAL R/o HARIANA	1259/51/rev/ ps hariana/dm/hsp	.12 Bore SBBL	-
51.	AJAY KUMAR S/o MANGAT RAM R/o HARIANA	2884/A/M/DM/HSP	.12 Bore SBBL	22/11/2012
52.	AVNINDER SINGH S/o SH DALBIR SINGH R/o HARIANA	14136/rev/ps/hariana/dm/hsp	.32 Bore Revolver	-
53.	BAKHSHISH SINGH S/o BANTA SINGH R/o HARIANA	1427/A/MISC/DM/HSP	.12 Bore SBBL	-
54.	GURDARSHAN SINGH S/o NARINDER SINGH R/o HARIANA	3555/GUN/DM/HSP	.12 Bore SBBL	31/01/2006
55.	SUSHIL KUMAR S/o TILAK RAJ R/o HARIANA	3010/GUN/DM/HSP	.12 Bore SBBL	-
56.	SUDESH KUMAR S/o DINA NATH R/o HARIANA	3771/gun/dm/hsp	.12 Bore SBBL	16/03/2016

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57.	COL K.C S/o DINA NATH SABHARWAL R/o HARIANA	2049/GUNS/DM/HSP	.12 Bore SBBL	-
58.	JATINDER PAL S/o TEK CHAND R/o	11463/gun/pshariana/dm/hsp	.32 Bore	17/08/2016
38.		11463/gun/psnariana/um/nsp		17/08/2016
59.	HARIANA SANJEEV KUMAR S/o OM	159/REV/PSHARIANA/DM/HSP	Revolver .32 Bore	20/07/2011
39.		159/REV/PSHARIANA/DM/HSP		20/07/2011
<b>60</b>	PARKASH R/o HARIANA	150/DEX/DOLLADIANA/DAA/HCD	Revolver	20/07/2011
60.	SANJEEV KUMAR S/o OM	159/REV/PSHARIANA/DM/HSP	.12 Bore	20/07/2011
	PARKASH R/o HARIANA		SBBL	
61.	DALJIT SINGH S/o JAGIR SINGH R/o	158/REV/PSHARIANA/DM/HSP	.12 Bore	20/07/2011
	HARIANA		SBBL	
62.	PUSHPINDER SINGH S/o SARBJIT	3146/GUN/DM/HSP	.12 Bore	22/03/2006
	SINGH R/o HARIANA		SBBL	
53.	IQBAL RAI S/o CHANDA R/o	3689/GUN/DM/HSP	12 Bore	25/07/2006
	HARIANA		SBBL	
54.	BALBIR SINGH S/o ANAND SINGH	134/REV/PS HARIANA/DM/HSP	.32 Bore	22/09/2010
	R/o HARIANA		Revolver	
55.	RAJESH KUMAR SOI S/o FAQIR	78/REV/PS HARIANA/DM/HSP	.32 Bore	24/08/2007
	CHAND SOI R/o HARIANA		Revolver	
56.	BALBIR SINGH S/o KASHMIRA	212/gun/dm/hsp	.12 Bore	-
	SINGH R/o HARIANA		SBBL	
57.	ARJAN SINGH S/o HARNAM SINGH	850/GUNS/DM/HSP	.12 Bore	30/01/2008
	R/o HARIANA		SBBL	
58.	BAL KISHAN S/o INDER MOHAN	141/REV/PS HARIANA/DM/HSP	.32 Bore	28/02/2011
	R/o HARIANA		Revolver	
59.	ROSHAN LAL S/o ATRA RAM R/o	2759/A/M/DM/HSP	.12 Bore	21/09/2010
	HARIANA		SBBL	
70.	PREM NATH S/o CHARANJI LAL R/o	764/OCT/DM/HSP	.12 Bore	
	PATIARI		SBBL	
1.	SAMBODH SINGH S/o MOTI SINGH	725/AUG/DM/HSP	.12 Bore	6/8/2007
	R/o PATIARI		SBBL	
72.	SONIA DADWAL W/o RAJ KUMAR	244/Rifle/PS Hariana/DM/HSP	NPB	29/04/2016
	DADWAL R/o			
73.	RAJESH KUMAR S/o PREM NATH	12978/gun/ps hariana/dm/hsp	.12 Bore	18/01/2016
	R/o PATIARI		SBBL	
74.	DHARAM PAL BHARDWAJ S/o	1115/A/MISC/DM/HSP	.12 Bore	19/07/2007
	CHARNJI LAL BHARDWAJ R/o		SBBL	
	PATIARI			
75.	SARBJIT SINGH S/o MOTI SINGH	96/guns/dm/hsp	.12 Bore	27/04/2016
	R/o PATIARI		SBBL	
76.	ASHNI KUMAR S/o BIR SINGH R/o	K/58 G/DMS	.12 Bore	4/6/2010
	PATIARI		SBBL	
77.	PREM NATH S/o CHARANJI LAL R/o	764/OCT/DM/HSP	.12 Bore	_
	PATIARI	, , , , , , , , , , , , , , , , , , , ,	SBBL	
78.	HARVINDER SINGH S/o HARBANS	3371/GUNS/DM/HSP	.12 Bore	25/10/2005
	SINGH R/o ATBARAPUR		SBBL	
79.	KARNAIL SINGH S/o TEJA SINGH	2630/GUN/DM HSP	.12 Bore	3/6/2005
-•	R/o ATBARAPUR		SBBL	2, 3, 2003
30.	HARPAL SINGH S/o RAJINDER	12226/gun/ps hariana/dm/hsp	.12 Bore	16/03/2016
	SINGH R/o ATBARAPUR	12220/ Suit po hariana ani/nop	SBBL	10/03/2010
31.	AMARJIT SINGH S/o KISHAN	3931/dec/dm/hsp	.12 Bore	18/12/2015
,1.	SINGH R/o ATBARAPUR	5,51, dee, dill, lisp	SBBL	10/12/2013
32.	MALKIAT SINGH S/o RALLA SINGH	3814/gun/dm/hsp	.12 Bore	26/05/2016
	R/o ATBARAPUR	2017/8dil/dill/lish	SBBL	20/03/2010
3.	MALKIAT SINGH S/o RALLA SINGH	3814/gun/dm/hsp	.32 Bore	26/05/2016
· J ·	R/o ATBARAPUR	5014/guii/uii/lisp	Revolver	20/03/2010
34.	SUKHWINDER SINGH S/o PRITAM		.12 Bore	
٠+.			SBBL	
35.	SINGH R/o ATBARAPUR	791/g/misg/dm/hsm	.12 Bore	
υ.	HAKUMAT RAI S/o TEHAL DASS	781/a/misc/dm/hsp		-
	R/o BASSI BAZID	270C/CLING/PN //LIGP	SBBL	15/01/2000
86.	HARPREET KAUR THIARA S/o	3706/GUNS/DM/HSP	.12 Bore	15/01/2008
36.			זייות	
36.	JAMIAT SINGH R/o BASSI UMAR KHAN		DBBL	

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87.	JAMIAT SINGH S/o LAKHA SINGH R/o BASSI UMAR KHAN	846/sep/dm/hsp	.12 Bore DBBL	-
88.	SATNAM SINGH S/O GURBACHAN SINGH R/O BASSI MAROOF		.12 Bore SBBL	-
89.	JARNAIL SINGH S/o DIDAR SINGH R/o BASSI MAROOF	3112/GUN/DM/HSP	.12 Bore SBBL	-
90.	HARVINDER SINGH S/o KARAM	1558/GUN/DM HSP	.12 Bore	8/6/2005
91.	SINGH R/o BASSI MAROOF  SATINDER VIR SINGH S/o THAKUR JAGDEV SINGH R/o BASSI MAROOF	6561/a/m/dm/hsp	7.62 MM Pistol	17/08/2016
92.	SUKHDEV SINGH S/o TARSEM SINGH R/o BASSI MAROOF	3684/GUN/DM/HSP	315 Bore RIFLE	17/07/2006
93.	SUKHDEV SINGH S/o TARSEM SINGH R/o BASSI MAROOF	3684/GUN/DM/HSP	.32 Bore Revolver	17/07/2006
94.	SUKHDEV SINGH S/o TARSEM SINGH R/o BASSI MAROOF	3684/GUN/DM/HSP	.12 Bore SBBL	17/07/2006
95.	SUCHA SINGH S/o KEWAL SINGH R/o BASSI MAROOF	1043/rev/dm/hsp	.12 Bore SBBL	25/05/2016
96.	SUCHA SINGH S/o KEWAL SINGH R/o BASSI MAROOF	1043/rev/dm/hsp	.32 Bore Pistol	25/05/2016
97.	SUDARSHAN SINGH S/o JAGDEV SINGH R/o BASSI MAROOF	1629/gun/dm/hsp	.12 Bore SBBL	30/11/2015
98.	KEWAL SINGH S/o GOBIND R/o BASSI MAROOF	2794/GUN/DM/HSP	.12 Bore SBBL	-
99.	SUCHA SINGH S/o KEWAL SINGH R/o BASSI MAROOF	1043/rev/dm/hsp	.315 Bore Rifle	25/05/2016
100.	AJAY KUMAR S/o GURBAX LAL R/o BASSI BALLO	216/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	-
101.	AMARJEET KUMAR S/o SOHAN LAL R/o BASSI BALLO	222/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	13/02/2014
102.	AMRIT LAL S/o NANAK CHAND R/o BASSI BALLO	977/FEB/DM/HSP	12 Bore SBBL	25/01/2007
103.	CHARANJIT SINGH S/o PURAN SINGH R/o BHIKHOWAL	60/GUN/PS HARIANA/DM/HSP	12 Bore DBBL	28/07/2006
104.	HARMEET KAUR W/o GURMAIL SINGH R/o BHIKHOWAL	622/REV/DM/HSP	.32 Bore Revolver	20/06/2005
105.	SANTOKH SINGH S/o SANT CHARAN SINGH R/o BHIKHOWAL	426/REV/DM/HSP	.32 Bore Revolver	20/03/2006
106.	SWARAN SINGH S/o NARANJAN SINGH R/o BHIKHOWAL	24/gun/hariana/dm/hsp	12 Bore DBBL	27/04/2016
107.	KASHMIRA SINGH S/o AMAR SINGH R/o BHIKHOWAL	3891/GUN/DM/HSP	12 Bore DBBL	16/10/2007
108.	KARAM SINGH S/o SHIV SINGH R/o BHIKHOWAL	462/VII/DM/HSP	12 Bore DBBL	-
109.	MOHAN SINGH S/o GHASITA RAM R/o BHIKHOWAL	644/VI/DM/HSP	.12 Bore SBBL	21/05/2007
110.	HARBINDER SINGH SANDHU S/o DALBIR SINGH R/o BHIKHOWAL	2291/A/MISC/DM/HSP	12 Bore SBBL	25/06/2007
111.	HARBINDER SINGH SANDHU S/o DALBIR SINGH R/o BHIKHOWAL	2291/A/MISC/DM/HS	.22 Bore Rifle	25/06/2007
112.	HARBINDER SINGH SANDHU S/o DALBIR SINGH R/o BHIKHOWAL	2291/A/MISC/DM/HSP	.32 Bore Revolver	25/06/2007
113.	SURJIT SINGH S/o BHAGAT CHARAN SINGH R/o BHIKHOWAL	83/RIFLE/DM/HSP	315 Bore RIFLE	9/5/2006
114.	KARAM SINGH S/o SHIV SINGH R/o BHIKHOWAL	462/VII/DM/HSP	12 Bore DBBL	-
115.	SURJIT SINGH S/o BHAGAT CHARAN SINGH R/o BHIKHOWAL	290/GUN/DM/HSP	12 Bore DBBL	-
116.	RAJINDER SINGH S/o HARSHARAN SINGH R/o TAJPUR	1669/GUN/DM HSP	12 Bore DBBL	21/02/2011

117.	CHARANJIT SINGH S/o MOHAN SINGH R/o TAJPUR	3862/gun/dm/hsp	12 Bore DBBL	17/08/2016
118.	BALBIR SINGH KAPOOR S/o PIARA SINGH KAPOOR R/o TAJPUR	403/A/MISC/DM/HSP	12Bore DBBL	23/04/2007
119.	BALJIT SINGH S/o KARNAIL SINGH R/o BAROTI	6/gun/ps sadar/dm/hsp	.12 Bore DBBL	5/10/2015
120.	BALJIT SINGH S/o KARNAIL SINGH R/o BAROTI	6/gun/ps sadar/dm/hsp	.32 Bore Revolver	5/10/2015
121.	SURINDER SINGH S/o JASWANT SINGH R/o BAROTI	152/Gun/PS Hariana/DM/HSP	.12 Bore DBBL	8/6/2011
122.	GURMUKH SINGH S/o SARWANT SINGH R/o BAROTI	9/gun/ps sadar/dm/hsp	.12 Bore DBBL	30/11/2015
123.	GURMUKH SINGH S/o SARWANT SINGH R/o BAROTI	9/gun/ps sadar/dm/hsp	.32 Bore Revolver	30/11/2015
124.	HARDIYAL SINGH S/o VATAN SINGH R/o BAROTI	-	.12 Bore DBBL	-
125.	DILBAG SINGH S/o HARMNAM	-	.12 Bore DBBL	-
126.	SINGH R/o BAROTI  HARPAL SINGH S/o MOTA SINGH R/o BAGPUR	-	.32 Bore Revolver	29/04/2016
127.	RAJIV KUMAR S/o SUSHIL KUMAR R/o BAGPUR	95/GUN/PS SADAR/DM/HSP	12 Bore SBBL	29/12/2006
128.	KAKA RAM S/o GURDITTA RAM R/o KAPAHAT	3482/XII/DM/HSP	12 Bore SBBL	-
129.	PAWAN KUMAR S/O PARKASH RAM R/o KAPAHAT	-	.32 Bore Pistol	-
130.	BAKHSHI RAM S/o THAINU RAM R/o KAPAHAT	2150/gun/dm/hsp	.12 Bore SBBL	4/5/2016
131.	ONKAR SINGH S/o BHAG SINGH R/o KAPAHAT	952/may/dm/hsp	.12 Bore DBBL	17/08/2016
132.	SHAM SINGH S/o HARI RAM R/o KAPAHAT	732/GUN/DM/HSP	.12 Bore SBBL	15/11/2007
133.	DAVINDER SINGH S/o DAULAT RAM R/o KAPAHAT	3509/gun/dm/hsp	.12 Bore SBBL	27/04/2016
134.	GURDIAL SINGH S/o BIDHI CHAND R/o KAPAHAT	1574/A/MISC/DM/HSP	12 Bore SBBL	-
135.	BASHAMBER DASS S/o BASANT RAM R/o DANDOH	739/SEP/DM/HSP	12 Bore SBBL	6/9/2006
136.	SURINDER SINGH S/o SANSAR CHAND R/o DANDOH	1690/guns/dm/hsp	12 Bore SBBL	17/08/2016
137.	HARBANS LAL S/o RAM DASS R/o DANDOH	1077/a/misc/dm/hsp	12 Bore SBBL	20/07/2016
138.	SUBASH CHANDER S/o PREM CHAND R/o DANDOH	2235/a/misc/dm/hsp	12 Bore SBBL	22/01/2016
139.	JOGINDER SINGH S/o RAI SINGH R/o DANDOH	951/II/DM/HSP	12 Bore SBBL	17/02/2006
140.	RUSHNAK SINGH S/o JAGAT RAM R/o DANDOH	1621/GUN/DM/HSP	12 Bore SBBL	-
141.	MANISH DADWAL S/o GURDAS SINGH R/o DANDOH	13186/rev/ps hariana/dm/hsp	.32 Bore Revolver	29/10/2015
142.	MANISH DADWAL S/o GURDAS SINGH R/o DANDOH	13186/rev/ps hariana/dm/hsp	.12 Bore DBBL	29/10/2015
143.	KRISHAN DUTT S/o PARMANAND R/o BHAGOWAL	1377/A/MISC/DM/HSP	12 Bore SBBL	9/2/2006
144.	RANJIT SINGH S/o WARYAM SINGH R/o BHAGOWAL	3242/GUNS/DM/HSP	12 Bore SBBL	3/4/2007
145.	RANJIT SINGH S/o WARYAM SINGH R/o BHAGOWAL	3242/GUNS/DM/HSP	7.62mm Rifle	3/4/2007
146.	HARMINDER SINGH S/o GIAN SINGH R/o BHAGOWAL	114/Gun/PS Hariana/DM/HSP	.32 Bore Revolver	15/10/2009
	AVTAR SINGH KAPOOR S/o	3438/GUN/DM/HSP	12 Bore	19/04/2006

148.	RUSHNAVDEEP SINGH S/o AVTAR	130/REV/PSS ARIANA/DM/HSP	.32 Bore	20/07/2010
140.	SINGH KAPOOR R/o BHAGOWAL	130/REV/133 ARIANA/DIVI/1131	Revolver	20/07/2010
149.	VIKRAM KAPOOR S/o JASBIR	64/GUN/PS HARIANA/DM/HSP	12Bore	29/08/2006
	SINGH R/o BHAGOWAL		DBBL	
150.	KULWINDER SINGH S/o KEWAL	743/v/dm/hsp	.32 Bore	4/5/2016
	SINGH R/o BHAGOWAL		Pistol	
151.	GURDEEP SINGH S/o ISHAR SINGH	3624/GUN/DM/HSP	12Bore	-
	R/o BHAGOWAL		DBBL	
152.	JAGTAR SINGH S/o PRITAM SINGH	82/REV/PS HARIANA/DM/HSP	.32 Bore	18/09/2007
	R/o BHAGOWAL		Revolver	
153.	HARMINDER SINGH S/o GIAN	114/Gun/PS Hariana/DM/HSP	12Bore	15/10/2009
154	SINGH R/o BHAGOWAL	110/6 /2011 : /201/1/62	DBBL	15/00/2000
154.	SUKHJINDER SINGH S/o HARNAM	110/Gun/PS Hariana/DM/HSP	.32 Bore	17/08/2009
155.	SINGH R/o BHAGOWAL SUKHJINDER SINGH S/o HARNAM	110/Gun/PS Hariana/DM/HSP	Revolver 12Bore	17/08/2009
133.	SINGH R/o BHAGOWAL	110/Gull/PS Hallalla/DM/HSP	DBBL	17/08/2009
156.	AVTAR SINGH KAPOOR S/o	3438/GUN/DM/HSP	.32 Bore	19/04/2006
150.	SWARAN SINGH R/o BHAGOWAL	3430/GUIV/DIVI/IISI	Revolver	17/04/2000
157.	SURINDER SINGH S/o SHAKTI	355/A/MISC/DM/HSP	12Bore	_
/ .	SINGH R/o BHAGOWAL		DBBL	
158.	HARJIT SINGH S/o WARYAM	550/GUN/DM/HSP	12Bore	14/09/2010
	SINGH R/o BHAGOWAL		DBBL	
159.	HARBHAJAN SINGH S/o	263/RIFLE/DM/HSP	315 Bore	9/4/2009
	GURBACHAN SINGH R/o		RIFLE	
	BHAGOWAL			
160.	AMARJIT SINGH S/o NASIB SINGH	1401/REV/PS HARIANA/DM/HSP	.32 Bore	24/02/2011
	R/o BHAGOWAL		Revolver	
161.	EX. SUB. SURJIT SINGH S/o KARAM	2253/a/misc/dm/hsp	.12 Bore	17/06/2016
	CHAND R/o MEHANGERWAL	22/1 //	DBBL	15/05/2015
162.	ASHWANI KUMAR SHARMA S/o	33/dm/hsp	12 Bore SBBL	17/06/2016
	KARAM CHAND R/o MEHANGERWAL		SBBL	
163.	NAVI MOHAMAD S/o FAZAL DIN	1702/guns/dm/hsp	.12 Bore	17/08/2016
105.	R/o MEHANGERWAL	1702/guiis/uii/iisp	DBBL	17/06/2010
164.	MUKHTIAR ALI S/o TAJ	119/Gun/PS Hariana/DM/HSP	12 Bore	7/1/2010
10	MOHAMMAD R/o MEHANGERWAL	1137 Guill 1 & Timinum 2112 1161	SBBL	77 17 2010
165.	JODHA MAL S/o BABU RAM R/o	2787/GUN/DM/HSP	12Bore	-
	MEHANGERWAL		DBBL	
166.	SHER MOHAMAD S/o RAMJAN	896/GUN/DM/HSP	12Bore	29/01/2008
	MOHAMAD R/o MEHANGERWAL		DBBL	
167.	TEJ MOHD S/o FAZAD DI R/o	614/JULY/DM/HSP	12 Bore	25/07/2006
	MEHANGERWAL		SBBL	
168.	DOLAT RAM S/o BHAGAT RAM R/o	2068/a/misc/dm/hsp	.12 Bore	29/10/2015
1.00	MEHANGERWAL	1000/CHN/DA / 740D	DBBL	6/0/000=
169.	SURINDER KUMAR S/o RASILA	1892/GUN/DM/HSP	12 Bore	6/3/2006
170	RAM R/o MALOT	2052/CHN/DM//HCD	SBBL	17/00/2016
170.	SUKHDEV SINGH S/o SADHU RAM R/o MALOT	2052/GUN/DM/HSP	12 Bore SBBL	17/08/2016
171.	SUKHDEV SINGH S/o KARAM	CP/DUP/M/0311/012	12Bore	13/01/2016
1/1.	SINGH R/o MALOT	C1/D01/W/0311/012	DBBL	13/01/2010
172.	SUB JASWANT SINGH S/o PARTAP	1125/A/MISC/DM/HSP	12 Bore	2/8/2007
	SINGH R/o MALOT		SBBL	
173.	SHAKTI SINGH S/o RASILA RAM	725/GUN/DM/HSP	12 Bore	-
- *	R/o MALOT		SBBL	
174.	GURNAM SINGH S/o BIR SINGH R/o	Gun/PS Hariana/DM/HSP	.32 bore	17/01/2008
	MALOT			
175.	GURNAM SINGH S/o BIR SINGH R/o	Gun/PS Hariana/DM/HSP	12 Bore	17/01/2008
	MALOT		SBBL	
176.	KARTAR CHAND S/o SUKHDIAL	2053/gun/dm/hsp	12 Bore	22/01/2016
	R/o MALOT		SBBL	27/04/2011
		3778/guns/dm/hsp	12 Bore	27/04/2016
177.	KARAN SINGH S/o AVTAR SINGH R/o JANAURI	3776/guns/un/nsp	SBBL	

178.	SUKHBIR SINGH S/o JAI SINGH R/o JANAURI	1691/A/MISC/DM/HSP	12 Bore DBBL	28/08/2007
179.	PAWAN KUMAR S/o MADAN LAL R/o JANAURI	200/REV/PS Hariana/DM/HSP	12 Bore DBBL	3/4/2013
180.	KAMALDEV SINGH S/o JASWANT SINGH R/o JANAURI	424/A/MISC/DM HSP	12 Bore SBBL	-
181.	THE MANAGER, PUNJAB NATIONAL BANK, JANAURI	647/X/DM/HSP	12 Bore DBBL	7/8/2007
182.	THE MANAGER, PUNJAB NATIONAL BANK, JANAURI	742/GUNS/DM/HSP	12 Bore DBBL	9/8/2007
183.	KAMALDEV SINGH S/o JASWANT SINGH R/o JANAURI	-	12 Bore SBBL	-
184.	SURINDER SINGH S/o AMIR CHAND R/o JANAURI	248/rev/dm/hsp	.32 Bore Pistol	17/08/2016
185.	BISHAN SINGH S/o JAI SINGH R/o JANAURI	913/II/DM/HSP	12 Bore DBBL	3/2/2006
186.	KASHMIR SINGH S/o GIRDHARI LAL R/o JANAURI	198/A/MISC/DM/HSP	12 Bore SBBL	-
187.	GULSHAN KUMAR S/o BALDEV	2229/GUN/DM/HSP	12 Bore DBBL	16/05/2007
188.	SINGH R/o JANAURI PIRTHI CHAND S/o RATTAN CHAND R/o JANAURI	761/V/DM/HSP	12 Bore DBBL	8/5/2006
189.	JARNAIL SINGH S/o JAI SINGH R/o JANAURI	788/a/misc/dm/hsp	12 Bore DBBL	-
190.	SURINDER SINGH S/o MUNSHI	471/GUN/DM/HSP	12 Bore SBBL	5/9/2007
191.	RAM R/o JANAURI  KALYAN SINGH S/o BANSI RAM R/o JANAURI	946/GUN/DM/HSP	12 Bore SBBL	6/2/2008
192.	KAUSHAL KUMAR DADWAL S/o	1091/AUG/DM/HSP	12 Bore	2/7/2007
193.	HARBHAGAT SINGH R/o JANAURI  JAGDISH RAM S/o RAN SINGH R/o JANAURI	1280/A/MISC/DM/HSP	SBBL 12 Bore SBBL	17/12/2007
194.	BACHAN RAM S/o CHARAN DAS R/o JANAURI	14583/rev/ps hariana/dm/hsp	.32 Bore Revolver	29/03/2016
195.	BADRI PARSHAD S/o AMI CHAND R/o JANAURI	1638/a/misc/dm/hsp	12 Bore SBBL	5/2/2016
196.	BARINDER SINGH S/o GURDEV SINGH R/o JANAURI	1737/A/MISC/DM/HSP	.30 MI	21/11/2007
197.	DILBAGH SINGH S/o MUNSHI RAM R/o JANAURI	617/GUN/DM/HSP	12 Bore SBBL	-
198.	MAJ SHAYM SUNDER S/o PRITAM SINGH R/o JANAURI	2871/A/M/DM/HSP	12 Bore SBBL	9/8/2011
199.	MADAN LAL S/o HARI RAM R/o JANAURI	2206/A/MISC/DM/HSP	12 Bore SBML	-
200.	RAVINDER SINGH S/o RAM DASS R/o JANAURI	2051/A/MISC/DM/HSP	12Bore DBBL	28/11/2006
201.	GURBACHAN SINGH S/o BALBIR SINGH R/o JANAURI	542/A/MISC/DM/HSP	12 Bore SBBL	-
202.	SUNIL KUMAR S/o KALIYAN SINGH R/o JANAURI	117/Gun/PS Hariana/DM/HSP	12Bore DBBL	-
203.	MADAN LAL S/o RASIL SINGH R/o JANAURI	824/MARCH/DM/HSP	12 Bore SBBL	19/03/2008
204.	TARA SINGH S/o DINA NATH R/o JANAURI	2331/GUN/DM/HSP	12 Bore SBBL	-
205.	DAVINDER SINGH S/o RANJIT SINGH R/o JANAURI	3722/GUN/DM/HSP	12Bore DBBL	17/08/2007
206.	HARDIAL SINGH S/o SITA RAM R/o JANAURI	531/GUNS/DM/HSP	12 Bore SBBL	24/08/2007
207.	RAM LAL S/o PARKASH SINGH R/o JANAURI	2449/GUN/DM/HSP	12 Bore SBBL	15/02/2008

209.	NAVEEN KUMAR S/o BACHHITTER SINGH R/o JANAURI	19/gun/hariana/dm/hsp	12 Bore SBBL	16/03/2016
210.	BARINDER SINGH S/o GURDEV SINGH R/o JANAURI	112/GUN/DM/HSP	12Bore DBBL	5/3/2007
211.	SURAM SINGH S/o FAQIR CHAND R/o JANAURI	87/a/misc/dm/hsp	.12 Bore DBBL	17/06/2016
212.	ONKAR SINGH S/o SITA RAM R/o JANAURI	435/iv/dm/hsp	12 Bore SBBL	17/06/2016
213.	SUDERSHAN KUMAR S/o KASHMIR SINGH R/o JANAURI	2257/gun/dm/hsp	12 Bore SBBL	17/08/2016
214.	SATISH KUMAR S/o MULAKH RAJ R/o JANAURI	30/gun/hariana/dm/hsp	12 Bore SBBL	17/08/2016
215.	KASHMIR SINGH S/o BHAGAT SINGH R/o JANAURI	674/AUG/DM/HSP	12 Bore SBBL	17/08/2006
216.	SHYAM SUNDER SHARMA S/o BIRAGI RAM R/o JANAURI	1897/A/MISC/DM/HSP	12 Bore SBBL	24/08/2007
217.	OPINDER SINGH S/o SUKHDEV SINGH R/o JANAURI	1642/gun/dm/hsp	.12 Bore DBBL	22/12/2015
218.	HARMESH SINGH S/o GURDEV SINGH R/o JANAURI	632/JUNE/DM/HSP	12 Bore SBBL	14/06/2006
219.	CHARANJIT SINGH S/o DAVINDER SINGH R/o JANAURI	162/GUN/PS HARIANA/DM/HSP	.12 Bore DBBL	26/07/2011
220.	ANIL KUMAR S/o SHAM SAROOP	36/guns/dm/hsp	.12 Bore DBBL	25/10/2015
221.	ASHWANI KUMAR S/o RAVINDER SINGH R/o JANAURI	3639/GUN/DM/HSP	.32 Bore Revolver	24/04/2006
222.	NARINDER SINGH S/o KALI RAM R/o JANAURI	103/gun/dm/hsp	.12 Bore DBBL	27/04/2016
223.	DALJIT SINGH S/o DEV RAJ R/o JANAURI	1727/a/misc/dm/hsp	.12 Bore DBBL	27/04/2016
224.	SHASHI PAL S/o SHAMSHER SINGH R/o JANAURI	309/GUNS/DM/HSP	12 Bore SBBL	30/07/2007
225.	NANAK CHAND S/o PRITAM SINGH R/o JANAURI	7/A/MISC/DM/HSP	12 Bore SBBL	15/05/2006
226.	FEEM RAM S/o INDER R/o JANAURI	716/A/MISC/DM/HSP	12 Bore SBBL	-
227.	PARBHAT KUMAR S/o SIRI RAM R/o JANAURI	37/gun/dm/hsp	.12 Bore DBBL	29/10/2015
228.	SARBJIT SINGH S/o DEV RAJ R/o JANAURI	43/gun/dm/hsp	.12 Bore DBBL	29/10/2015
229.	JAGTAR SINGH S/o GURDAS RAM R/o JANAURI	3523/gun/dm/hsp	.12 Bore DBBL	17/08/2016
230.	MADAN GOPAL S/o AMIR CHAND R/o JANAURI	334/GUN/DM/HSP	.12 Bore DBBL	23/07/2007
231.	PIARA SINGH S/o KARTAR SINGH R/o JANAURI	391/A/MISC/DM/HSP	12 Bore SBBL	-
232.	YASHPAL SINGH S/o DEVI SINGH R/o JANAURI	3535/A/MISC/DM/HSP	12 Bore SBBL	18/12/2007
233.	ONKAR SINGH S/o RAM DASS R/o JANAURI	3814/XII/DM/HSP	12 Bore SBML	28/12/2007
234.	RAGHBIR SINGH S/o SHANKAR SINGH R/o JANAURI	1443/A/MISC/DM/HSP	12 Bore SBBL	-
235.	ROOP CHAND S/o RATTAN CHAND R/o JANAURI	295/III/DM/HSP	12Bore DBBL	28/02/2006
236.	KARAN SINGH S/o AVTAR SINGH R/o JANAURI	3778/guns/dm/hsp	.12 Bore SBBL	27/04/2016
237.	SUKHDEV SINGH S/o BANSI LAL R/o KORT	574/A/MISC/DM/HSP	12Bore DBBL	-
	RAKESH KUMAR S/o MALKIAT	12898/gun/ps hariana/dm/hsp	.12 Bore	16/03/2016
238.	SINGH R/o KORT		DBBL	

240.	BAKHSHI RAM S/o MAHANT RAM R/o KORT	751/JAN/DM/HSP	.12 Bore SBBL	28/01/2008
241.	FATEH SINGH S/o MAHANT SINGH R/o KORT	439/GUN/DM/HSP	12Bore DBBL	-
242.	BALKAR SINGH S/o SOM NATH R/o KORT	414/GUNS/DM/HSP	.12 Bore SBBL	-
243.	DILBAG SINGH S/o HUKAM SINGH R/o KORT	50/gun/dm/hsp	12Bore DBBL	30/11/2015
244.	KARAM SINGH S/o NATHU RAM R/o KORT	272/A/MISC/DM/HSP	.12 Bore SBBL	-
245.	SURINDER SINGH S/o HARI RAM R/o KORT	253/A/MISC/DM/HSP	.12 Bore SBBL	-
246.	SUBHASH CHAND S/o AMAR SINGH R/o KORT	1915/a/misc/dm/hsp	.12 Bore SBBL	22/01/2016
247.	MADAN GOPAL S/o DINA NATH R/o KORT	3087/GUN/DM/HSP	.12 Bore SBBL	-
248.	GIAN CHAND S/o SHAMSHER SINGH R/o KORT	2814/GUN/DM/HSP	12Bore DBBL	6/1/2006
249.	SATPAL S/o RAM LOK R/o MUSTFAPUR	1038/II/DM/HSP	.12 Bore SBBL	20/03/2008
250.	PREM SAGAR S/o DURGA DASS R/o MUSTFAPUR	3211/gun/dm/hsp	.12 Bore DBBL	22/12/2015
251.	MEHNGA SINGH S/o DIDAR SINGH R/o HUSSAIN PUR	3738/GUN/DM/HSP	.12 Bore DBBL	23/10/2007
252.	HARDEV SINGH S/o AMAR SINGH R/o HUSSAIN PUR	923/iii/dm/hsp	.12 Bore DBBL	27/04/2016
253.	HARDEV SINGH S/o AMAR SINGH R/o HUSSAIN PUR	923/iii/dm/hsp	.315 Bore Rifle	27/04/2016
254.	HARJIT SINGH S/o SHANKAR SINGH R/o HUSSAIN PUR	327/A/MISC/DM/HSP	12 Bore SBBL	-
255.	NACHHATTAR SINGH S/o SARWAN SINGH R/o HUSSAIN PUR	26/GUN/HARIANA/DM/HSP	12 Bore SBBL	1/6/2007
256.	ARMINDER SINGH S/o HARMAIL SINGH R/o HUSSAIN PUR	211/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	21/10/2013
257.	ARMINDER SINGH S/o HARMAIL SINGH R/o HUSSAIN PUR	211/Rev/PS Hariana/DM/HSP	.12 Bore DBBL	21/10/2013
258.	SARBJIT KAUR W/D/o MANJIT SINGH R/o HUSSAIN PUR	187/Rev/PS Hariana/DM/HSP	.32 Bore Revolver	-
259.	JARNAIL SINGH S/o HAZARA SINGH R/o HUSSAIN PUR	3109/GUNS/DM/HSP	12Bore DBBL	-
260.	SARBJIT KAUR W/D/o MANJIT	187/Rev/PS Hariana/DM/HSP	12Bore DBBL	-
261.	SINGH R/o HUSSAIN PUR  DHARAM SINGH S/o PARTAP  SINGH R/o HUSSAIN PUR	671/A/MISC/DM/HSP	12 Bore SBBL	7/2/2006
262.	JATINDER SINGH S/o BALBIR SINGH R/o HUSSAIN PUR	49/rev/ps hariana/dm/hsp	.32 Bore Revolver	16/03/2016
263.	BALWANT SINGH S/o MUNSHI RAM R/o KHEPPAR	186/Gun/PS Hariana/DM/HSP	12Bore DBBL	18/10/2012
264.	PRITAM SINGH S/o BHAN SINGH R/o NEELA NALOYA	664/NOV/DM/HSP	12Bore DBBL	-
265.	KULDIP SINGH S/o RESHAM SINGH R/o NEELA NALOYA	184/Rev/PS Hariana/DM/HSP	12Bore DBBL	18/10/2012
266.	MANN SINGH S/o GURDIAL SINGH R/o NEELA NALOYA	139/REV/PS HARIANA/DM/HSP	.32 Bore Revolver	9/2/2011
267.	MANN SINGH S/o GURDIAL SINGH R/o NEELA NALOYA	139/REV/PS HARIANA/DM/HSP	.22 Bore Rifle	9/2/2011
268.	GURJEET SINGH S/o KISHAN SINGH R/o NEELA NALOYA	50/rev/ps hariana/dm/hsp	.32 Bore Revolver	16/10/2015
269.	GURJEET SINGH S/o KISHAN SINGH R/o NEELA NALOYA	50/rev/ps hariana/dm/hsp	30.06 RIFLE	16/10/2015
270.	GURJEET SINGH S/o KISHAN SINGH R/o NEELA NALOYA	50/rev/ps hariana/dm/hsp	.12 Bore DBBL	16/10/2015

271.	GURDIAL SINGH S/o PARTAP	2746/GUN/DM/HSP	.12 Bore	_
2,11	SINGH R/o NEELA NALOYA	27 137 361 (121121	DBBL	
272.	AJMER SINGH S/o PRITAM SINGH	2745/GUN/DM/HSP	.12 Bore	-
	R/o NEELA NALOYA		DBBL	
273.	JOGINDER SINGH S/o BIR SINGH	572/JAN/DM/HSP	12 Bore	15/01/2008
274.	R/o NEELA NALOYA PANJAB SINGH S/o JOGINDER	21/REV/GUN/ HARIANA/DM/HSP	SBBL .12 Bore	26/10/2005
2/4.	SINGH R/o NEELA NALOYA	21/KEV/GUN/ HARIANA/DM/HSP	DBBL	20/10/2003
275.	PANJAB SINGH S/o JOGINDER	21/REV/GUN/ HARIANA/DM/HSP	.32 Bore	26/10/2005
273.	SINGH R/o NEELA NALOYA		Revolver	20/10/2003
276.	PANJAB SINGH S/o JOGINDER	21/REV/GUN/ HARIANA/DM/HSP	315 Bore	26/10/2005
	SINGH R/o NEELA NALOYA		RIFLE	
277.	GURMAIL SINGH S/o UDHAM	95/Gun/PS Hariana/DM/HSP	.32 Bore	3/7/2008
278.	SINGH R/o NUR TALAI GURMAIL SINGH S/o UDHAM	95/Gun/PS Hariana/DM/HSP	Revolver 12Bore	3/7/2008
278.	SINGH R/o NUR TALAI	95/Guil/PS Hariana/Divi/HSP	DBBL	3/1/2008
279.	JIWAN LAL S/o PHUMAN RAM R/o	2887/a/m/dm/hsp	12Bore	25/01/2016
_,,,	SARAIN		DBBL	
280.	GURBAX SINGH S/o INDER SINGH	648/XI/DM/HSP	12Bore	1/4/2009
	R/o SARAIN		SBBL	
281.	MOHINDER SINGH SAHOTA S/o	754/V/DM/HSP	12Bore	9/5/2007
202	HARBANS SINGH R/o SARAIN	`587/GUNS/DM/HSP	SBBL 12Bore	
282.	SARWAN KUMAR S/o JALLU RAM R/o REHMAPUR	58//GUNS/DM/HSP	DBBL	-
283.	KULDIP SINGH S/o PAL SINGH R/o	90/Gun/PS Hariana/DM/HSP	12 Bore	_
205.	REHMAPUR	Joy Guill 15 Hariana Divi/HS1	SBBL	
284.	SARVJIT SINGH S/o KARAM	3808/gun/dm/hsp	12 Bore	17/06/2016
	CHAND R/o REHMAPUR	-	DBBL	
285.	MAJOR JANAK CHAND S/o	351/VI/DM/HSP	12 Bore	25/05/2006
206	COL.SANSAR CHAND R/o KAKKON	210/D /DG H : /DM/HGD	DBBL .32 Bore	15/10/2012
286.	TEJINDER SINGH S/o BHUPINDER SINGH R/o KAKKON	210/Rev/PS Hariana/DM/HSP	Revolver	15/10/2013
287.	RAJESH KUMAR S/o BAL KRISHAN	176/Rev/PS Sadar/DM/HSP	12Bore	16/03/2010
207.	R/o KAKKON	TYO/TE V/TS Suddi/SIV/TIST	DBBL	10/03/2010
288.	RAJESH KUMAR S/o BAL KRISHAN	176/Rev/PS Sadar/DM/HSP	.32 Bore	16/03/2010
	R/o KAKKON		Revolver	
289.	RAJESH CHAND S/o ROOP CHAND	387/gun/dm/hsp	12Bore	17/08/2016
290.	R/o KAKKON  RAJESH CHAND S/o ROOP CHAND	387/gun/dm/hsp	DBBL 30.06 RIFLE	17/08/2016
290.	RAJESH CHAND S/0 ROOP CHAND R/o KAKKON	387/gun/dm/nsp	30.06 RIFLE	17/08/2016
291.	AMRIK SINGH S/o SADHU SINGH	1503/GUN/DM/HSP	12Bore	15/05/2006
	R/o KAKKON		DBBL	
292.	GAURAV GUPTA S/o ASHOK	186/REV/PS SADAR/DM/HSP	.32 Bore	21/06/2010
	KUMAR R/o KAKKON		Revolver	
293.	VINOD KUMAR S/o BAL KRISHAN	193/REV/PS SADAR/DM/HSP	.32 Bore	22/07/2010
294.	R/o KAKKON ADESH CHAND S/o ROOP CHAND	2016/gun/dm/hsp	Revolver .22 Bore	25/10/2015
∠7 <b>4.</b>	R/o KAKKON	2010/gun/uni/nsp	Rifle	23/10/2013
295.	ADESH CHAND S/o ROOP CHAND	2016/gun/dm/hsp	.12 Bore	25/10/2015
	R/o KAKKON		DBBL	
296.	VARINDER SINGH SIDHU S/o	1738/A/MISC/DM/HSP	.32 Bore	27/07/2006
	TARLOCHAN SINGH R/o KAKKON		Revolver	
297.	HARISH KUMAR SHARMA S/o	183/Rev/PS Hariana/DM/HSP	.32 Bore	-
	PRAN NATH SHARMA R/o KAKKON		Revolver	
298.	MANDEEP SINGH S/o AMAR	11022/rev/ps city/dm/hsp	.22 Bore	14/01/2016
2,0.	SURJIT SINGH R/o KAKKON	11022/10 // po etcj/ diff/ fisp	Revolver	1 1/01/2010
299.	ASHOK KUMAR S/o RAM PARKASH	15706/rev/ps hariana/dm/hsp	.32 Bore	24/02/2016
	R/o KAKKON		Revolver	
300.	SUHAS RAJAN DHIR S/o SURESH		.32 Bore	29/04/2016
201	KUMAR DHIR R/o KAKKON	2044/A/MICC/DM/HCD	Revolver	27/02/2007
301.	KHARAT LAL S/o THAKUR DASS R/o KAKKON	2044/A/MISC/DM/HSP	.38 Bore Revolver	27/03/2006
	IVUIXAKKON	<u> </u>	IXC VOI VEI	İ

HEERA SINGH S/o TARLOK SINGH R/o BASSI KASSO TARLOK SINGH S/o GANDA SINGH R/o BASSI KASSO	13792/rev/ps harianadm/hsp 3632/GUN/DM/HSP	.12 Bore DBBL .12 Bore	23/05/2016
TARLOK SINGH S/o GANDA SINGH	3632/GUN/DM/HSP		17/03/2006
	3032/GUN/DM/1131		
		DBBL	17/03/2000
AMANPREET SINGH S/o SATNAM	14980/rev/ps hariana/dm/hsp	.12 Bore	25/11/2015
	14700/16 v/ps harrana/dn/hsp	DBBL	23/11/2013
	14980/rev/ns hariana/dm/hsn		25/11/2015
	11500/10 Wps Harrana and hop		23/11/2013
	3632/GUN/DM/HSP		17/03/2006
			177 007 2000
	1697/A/MISC/DM/HSP	.30 Cal. US	2/4/2008
	2290/GUN/DM/HSP	12 Bore	2/4/2008
		SBBL	
DARSHAN SINGH S/o KHERA	2199/guns/dm/hsp	.12 Bore	6/7/2016
SINGH R/o BASSI KASSO	1	DBBL	
RACHHPAL SINGH S/o RAGHBIR	110/ Gun/PS Hariana/DM/HSP	12Bore	-
SINGH R/o PATIAL		DBBL	
PAWAN KUMAR S/o SAROOP	878/GUN/DM/HSP	12 Bore	7/1/2008
SINGH R/o PATIAL		SBBL	
RAGHBIR SINGH S/o RAM SARAN	1818/A/MISC/DM/HSP	12Bore	-
R/o PATIAL		DBBL	
MOHINDER SINGH S/o CHUNI RAM	586/GUNS/DM/HSP	12 Bore	-
R/o PATIAL		SBBL	
	3171/gun/dm/hsp	12 Bore	-
		SBBL	
	596/GUN/DM/HSP	12Bore	-
	197/Gun/PS Hariana/DM/HSP		14/03/2013
	516/GUN/DM/HSP		21/05/2007
	692/GUN/DM/HSP		-
	795/GUN/DM/HSP		18/12/2007
			.=
	229/gun/dm/hsp		17/08/2016
	55/0171/00 HADIANA /DA/HOD		1/0/2005
	77/GUN/PS HARIANA/DM/HSP		1/8/2007
	77/OLDI/DG HADIANA/DA/HGD		1/0/2007
	///GUN/PS HARIANA/DM/HSP		1/8/2007
	420/A/MICC/DM/HCD		20/10/2007
	429/A/MISC/DM/HSP		29/10/2007
	570/CLING/DM/LIGD		20/00/2010
	3/0/GUNS/DIVI/HSP		29/09/2010
KULDIP SINGH S/o SOM NATH R/o	429/A/MISC/DM/HSP	.32 Bore	29/10/2007
MULDIF SINGE 5/0 SOM NATH K/0	427/A/MISC/DM/NSY	.52 Bore	29/10/2007
DATIAI		Revolver	
PATIAL VATTAN SINGH S/o BALDEV	1120/GUN/DM/HSP	Revolver	18/04/2006
	SINGH R/o BASSI KASSO RACHHPAL SINGH S/o RAGHBIR SINGH R/o PATIAL PAWAN KUMAR S/o SAROOP SINGH R/o PATIAL RAGHBIR SINGH S/o RAM SARAN R/o PATIAL MOHINDER SINGH S/o CHUNI RAM	AMANPREET SINGH S/o SATNAM SINGH R/o BASSI KASSO  TARLOK SINGH S/o GANDA SINGH R/o BASSI KASSO  INDERJIT SINGH BOPARAI S/o DR.SOHAN SINGH R/o BASSI KASSO  JAGDEEP SINGH BOPARAI S/o INDERJIT SINGH BOPARAI S/o INDERJIT SINGH BOPARAI S/o INDERJIT SINGH BOPARAI R/o BASSI KASSO  JAGDEEP SINGH BOPARAI R/o BASSI KASSO  JARSHAN SINGH S/o KHERA SINGH R/o BASSI KASSO  RACHHPAL SINGH S/o RAGHBIR SINGH R/o PATIAL PAWAN KUMAR S/o SAROOP SINGH R/o PATIAL RAGHBIR SINGH S/o RAM SARAN R/o PATIAL NARINDER SINGH S/o CHUNI RAM R/o PATIAL NARINDER KUMAR S/o VIJAY SINGH R/o PATIAL SHANTI NATH S/O RASILA RAM R/O PATIAL BRIJ KISHORE S/o SOM NATH R/O PATIAL BRAHM DASS S/O HARI SINGH R/O PATIAL BRAHM DASS S/O HARI SINGH R/O PATIAL BRAHM DASS S/O BHIKHAM SINGH R/O PATIAL RAM KISHAN S/O BHIKHAM SINGH R/O PATIAL RAJINDER KUMAR S/O BHAGWAN SINGH R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O SOM NATH R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O SOM NATH R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O SOM NATH R/O PATIAL RAVINDER KUMAR S/O BALAK RAM R/O PATIAL RAVINDER KUMAR S/O SOM NATH R/O PATIAL RAVINDER S/O SHINU RAM S/O	AMANPREET SINGH S/o SATNAM SINGH R/o BASSI KASSO         14980/rev/ps hariana/dm/hsp         .32 Bore Revolver           RARLOK SINGH S/o GANDA SINGH R/o BASSI KASSO         3632/GUN/DM/HSP         .32 Bore Revolver           INDERJIT SINGH BOPARAI S/O DAR. SOHAN SINGH R/o BASSI KASSO         1697/A/MISC/DM/HSP         .30 Cal, US RIFLE           JACDEEP SINGH BOPARAI S/O INDERJIT SINGH BOPARAI R/O BASSI KASSO         2290/GUN/DM/HSP         12 Bore SBBL           JACDEEP SINGH BOPARAI R/O BASSI KASSO         2290/GUN/DM/HSP         12 Bore SBBL           JACDEEP SINGH BOPARAI R/O BASSI KASSO         2290/GUN/DM/HSP         12 Bore SBBL           JACDEEP SINGH BOPARAI R/O BASSI KASSO         DARSHAN SINGH S/O KHERA         110/ Gun/PS Hariana/DM/HSP         12 Bore DBBL           JISORO BASSI KASSO         DBBL         110/ Gun/PS Hariana/DM/HSP         12 Bore DBBL           RACHHPAL SINGH S/O RAGHBIR SINGH S/O RAGHBIR SINGH S/O SAROOP         878/GUN/DM/HSP         12 Bore SBBL           RAGHBIR SINGH S/O RAM SARAN R/O PATIAL         878/GUN/DM/HSP         12 Bore SBBL           MOHINDER SINGH S/O CHUNI RAM R/O PATIAL         586/GUNS/DM/HSP         12 Bore SBBL           NARINDER KUMAR S/O VIJAY SINGH R/O PATIAL         596/GUN/DM/HSP         12 Bore DBBL           SHANTI NATH S/O RASILA RAM R/O PATIAL         197/Gun/PS Hariana/DM/HSP         12 Bore DBBL           BRAIM DASS S/O HARI SINGH R/O PATIAL

### **ANNEXURE XII**

### **Existing Pattern of Staff**

Sr. No.	Name	Designation	Pay Scale
1.	Ram Das	Dy Ranger	10300-34800
2.	Rajpal Singh	Forester	10300-34800
3.	Charanjit Singh	Guard	10300-34800

 ${\bf ANNEXURE~XIII}$  Rainfall Data recorded at Hoshiarpur for the Ten years (2008- 2017 )

	(Monthly Rainfall data in mm)									
Month	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
January	15.2	12.6	4.3	4.1	98.2	9.3	41.4	14.7	6.49	19.0
February	7.7	20.7	14.8	47.0	3.8	65.5	46.2	66.4	11.6	23.0
March	00	15.4	2.8	9.	9.0	12.7	29.8	94.2	75.2	6.0
April	26.7	23.9	1.4	12.7	21.6	6.8	24.2	30.7	10.21	8.0
May	7.8	3.5	19.3	10.7	00	1.2	23.2	18.4	63.72	29.0
June	182.7	9.0	35.5	143.4	3.2	166.4	48.9	50.5	32.89	135.0
July	94.0	321.5	226.8	153.9	92.8	135.3	144.4	221.5	185.0	124.0
August	425.4	198.9	165.2	177.6	89.5	194.2	98.2	148.4	175.24	108.0
September	42.2	67.1	109.4	124.0	121.2	45.2	66.9	132.7	8.17	26.0
October	29.3	4.5	33.1	00	00	805	00	13.1	00	00
November	00	19.4	00	00	00	4.7	00	00	0.4	00
December	00	00	26.4	5.9	9.4	25.4	11.7	1.0	2.4	00
Total	831.2	668.6	679.0	688.3	448.7	1471.7	535.0	791.6	571.32	478.0

### **ANNEXURE XIV**

## List of Villages Falling within 10 Kms of Sanctuary

Sr. No.	Name of Village	Sr. No.	Name of Village
1.	Takhni	21.	Bhagowal
2.	Dhakki	22.	Mehngrowal
3.	Chak-Gujjran	23.	Malot
4.	Kantian	24.	Janouri
5.	Arniala	25.	Kort
6.	Hariana	26.	Mustapur
7.	Bassi Punj Bhai	27.	Khepran
8.	Bhaliala	28.	Neela Naloa
9.	Pattiari	29.	Bassi Kale Khan
10.	Arwarapur	30.	Bassi Bahad
11.	Bassi Bazid	31.	Nur Talaian
12.	Bassi Umar Khan	32.	Sarain
13.	Bassi Maroof	33.	Rehmapur
14.	Bassi Ballo	34.	Ajjowal
15.	Bhikhowal	35.	Sainchan
16.	Tajpur	36.	Kakkon
17.	Baroti	37.	Chohal
18.	Bhagpur	38.	Bassi Kasso
19.	Kapahat	39.	Patial
20.	Dandoh	40.	Hussanpur

### ANNEXURE XV

## Detail of GPS Co-ordinates of Water Holes and Watch Tower in Takhani-Rehmapur Sanctuary is as follows:

Sr. No.	Particulars	Latitude	Longitude
1.	Watch Tower No1 (Big)	30°39′14.51221″	E 75°55′29.39668″
2.	Watch Tower No2 (Small)	N 31°39′22.46915″	E 75°55′35.1399″
3.	Kacha Water Hole No1	N 31°38′53.62595″	E 75°55′22.14793″
4.	Kacha Water Hole No2	N 31°39′4.55479″	E 75°55′33.02162″
5.	Kacha Water Hole No3	N 31°39′2.54822″	E 75°55′31.4882″
6.	Kacha Water Hole No4	N 31°39′15.49735″	E 75°55′35.8437″
7.	Pacca Water Hole No5	N 31°39′23.28728″	E 75°55′37.75055″
8.	Tubewell	N 31°39′24.08472″	E 75°50′12.74064″

### **ANNEXURE XVI**

### **ANNEXURE XVII**

### **ANNEXURE XVIII**

# ANNEXURE XIX MAP OF SANCTUARY

