## CONTACT DETAILS

### IN AN EMERGENCY CALL:

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|---|---|
| **Lead:** | **Primary Contact:** |
| **Participants:** | |

## SERVICE/ACTIVITY DETAILS

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|---|---|
| **Purpose:** | **Date:** |

**Benefit:** Contributes to local food security by supporting healthy crop production. | Educates participants on the importance of bees and their role in the environment. | Encourages responsible beekeeping practices to maintain healthy colonies. | Promotes outdoor activity and connection with nature through hands-on experience. | Provides a sustainable source of honey, wax, and other bee-related products. | Supports pollination and biodiversity, benefiting local ecosystems and agriculture.

## HAZARDS

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Aggressive bee behavior | Increased sting incidents, difficulty handling hives, risk of colony loss | Encourages the development of healthier, more self-sustaining colonies that require minimal human intervention. | Select and maintain docile bee strains known for gentler behavior. Requeen hives with queens from gentle stock if aggression increases. Schedule hive inspections during optimal weather conditions to reduce irritability. Limit hive disturbances to necessary activities only. **(ALL)** | Beekeepers, visitors | Before Measure: **High** After Measure: **Med** |
| Allergic reactions to bee products | Skin irritation, respiratory issues, anaphylaxis | Enables people to gain experience with natural products and their medicinal and nutritional benefits. | Inform participants about potential allergens present in bee products, such as propolis or pollen. Provide appropriate PPE to minimize skin contact. Have protocols in place to manage allergic reactions, including access to first aid and emergency medical services. **(ALL)** | Beekeepers, visitors | Before Measure: **High** After Measure: **Med** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
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| Anaphylactic shock from stings | Life-threatening allergic reactions, airway obstruction, cardiovascular collapse | Encourages responsible participation in beekeeping, ensuring that those with allergies take necessary precautions while still benefiting from working with bees. | Identify individuals with known allergies to bee stings and ensure they carry prescribed emergency medication, such as EpiPens. Train all participants to recognize symptoms of anaphylaxis and establish emergency protocols, including immediate medical assistance. Display emergency contact information prominently in the apiary. **(ALL)** | Beekeepers, visitors | Before Measure: **High** After Measure: **Med** |
| Bee colony collapse | Loss of pollination services, economic impact, decline in biodiversity | Encourages research and conservation efforts to protect pollinators and biodiversity. | Regularly inspect hives for signs of stress, pests, or disease. Diversify foraging sources by planting a variety of nectar- and pollen-rich plants. Follow best management practices to reduce chemical exposure and limit overharvesting of honey. Monitor environmental factors that may contribute to colony collapse. **(ALL)** | Beekeepers, environment | Before Measure: **High** After Measure: **Med** |
| Bee stings | Pain, swelling, allergic reactions, multiple stings leading to severe medical issues | Beekeeping provides essential pollination services that support global food production and biodiversity. | Ensure all participants wear appropriate protective clothing, including bee suits, gloves, and veils. Conduct regular equipment checks to maintain integrity. Provide training on calm hive handling techniques to minimize bee agitation. Keep first aid kits accessible and train staff in sting response procedures. **(ALL)** | Beekeepers, visitors | Before Measure: **High** After Measure: **Med** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Chemical exposure during hive treatments | Skin irritation, respiratory issues, contamination of honey | Enables better disease and pest management, improving hive survival rates and honey production. | Use chemical treatments strictly according to manufacturer guidelines and only when necessary. Wear appropriate personal protective equipment (PPE), such as gloves and masks, during application. Store chemicals securely in labeled containers away from living areas and food storage. **(ALL)** | Beekeepers, bees | Before Measure: **High** After Measure: **Med** |
| Contamination of honey | Health risks, reduced product quality, regulatory non-compliance | Supports the production of high-quality, natural, and sustainable food products. | Adhere to strict hygiene practices during honey extraction and processing. Use food-grade equipment and ensure all tools are thoroughly cleaned and sanitized. Regularly test honey for contaminants to ensure it meets safety standards. **(ALL)** | Consumers, beekeepers | Before Measure: **High** After Measure: **Med** |
| Exposure to bee diseases | Spread of infections, weakened colonies, increased mortality rates | Beekeeping helps monitor and manage disease outbreaks, which protects both managed and wild bee populations. | Conduct regular health assessments of colonies, looking for signs of diseases such as Varroa mites or American foulbrood. Follow biosecurity measures, including sterilizing equipment and avoiding the transfer of hive components between colonies. Report any notifiable diseases to relevant authorities promptly. **(ALL)** | Beekeepers, bees | Before Measure: **High** After Measure: **Med** |
| Fire hazards from smokers | Burn injuries, accidental fires, damage to apiary | Allows for more effective hive management by keeping bees calm and reducing sting risks. | Use smokers cautiously, especially during dry conditions. Ignite smokers in open areas away from flammable materials. Ensure smokers are placed on non-combustible surfaces when not in use and fully extinguished after operations. Keep firefighting equipment, like extinguishers or water sources, readily available in the apiary. **(ALL)** | Beekeepers, environment | Before Measure: **High** After Measure: **Med** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Inadequate beekeeper training | Improper hive management, increased sting risk, ineffective disease control | Enhances knowledge-sharing and the development of skilled beekeepers. | Implement structured training programs covering hive management, disease control, safety protocols, and handling techniques. Encourage mentorship with experienced beekeepers. Provide updated educational materials and hands-on workshops to improve competency. **(ALL)** | Beekeepers | Before Measure: **High** After Measure: **Med** |
| Lifting heavy hive components | Back strain, musculoskeletal injuries, dropped hives | Supports hands-on learning and physical engagement in beekeeping, fostering a greater understanding of hive management. | Train beekeepers in proper lifting techniques to prevent musculoskeletal injuries. Use mechanical aids, such as trolleys or hive lifters, for transporting heavy equipment. Encourage team lifting for particularly heavy or awkward items. **(ALL)** | Beekeepers | Before Measure: **High** After Measure: **Med** |
| Pesticide exposure from nearby farms | Bee deaths, colony collapse, contamination of honey | Supports greater awareness and advocacy for pollinator-friendly farming practices. | Establish communication with local farmers to coordinate pesticide application times to avoid peak bee activity. Monitor hive health regularly for signs of pesticide poisoning. Consider relocating hives if pesticide exposure remains a persistent issue. Educate beekeepers on identifying and responding to pesticide-related bee deaths. **(ALL)** | Beekeepers, bees | Before Measure: **High** After Measure: **Med** |
| Swarming bees | Increased sting risk, difficulty controlling hives, potential harm to bystanders | Allows for natural colony reproduction and strengthens genetic diversity within bee populations. | Implement regular hive inspections during swarming seasons to monitor colony health and behavior. Apply swarm prevention techniques, such as providing adequate space and managing queen cells. Establish a clear plan for swarm retrieval, including contact information for experienced beekeepers. **(ALL)** | Beekeepers, bystanders | Before Measure: **High** After Measure: **Med** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Animal intrusions into the apiary | Damage to hives, loss of colonies, injuries to animals | Encourages coexistence with wildlife, promoting ecosystem balance. | Erect barriers or fencing to prevent access by livestock or wildlife. Regularly inspect the apiary for signs of damage or intrusion. Remove food sources that may attract pests. **(ALL)** | Beekeepers, animals | Before Measure: **Med** After Measure: **Low** |
| Difficulty accessing veterinary care for bees | Delayed treatment, increased mortality, disease spread | Strengthens the scientific and veterinary understanding of pollinator health. | Establish connections with veterinarians specializing in honeybee health. Train beekeepers to recognize early signs of illness and implement disease prevention strategies. Advocate for increased research and veterinary support for honeybee care. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |
| Exposure to extreme weather conditions | Heat exhaustion, cold stress, reduced hive productivity | Strengthens resilience and adaptability, key skills for working in environmental and agricultural settings. | Monitor weather forecasts and plan hive inspections accordingly. Provide appropriate clothing and hydration for beekeepers during extreme temperatures. Ensure hives are adequately ventilated and insulated to protect bees from temperature extremes. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |
| Exposure to pathogens from hive-sharing | Disease transmission, weakened colonies, reduced productivity | Helps prevent disease transmission, benefiting both managed and wild bee populations. | Avoid sharing frames, tools, or hive components between colonies unless they have been properly sterilized. Quarantine new colonies before introducing them to an established apiary. Follow recommended disinfection protocols for all beekeeping equipment. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |
| Exposure to smoke during hive management | Respiratory irritation, eye discomfort, allergic reactions | Helps manage hive inspections effectively, ensuring beekeepers can work efficiently and safely. | Use smokers in well-ventilated areas to minimize inhalation of smoke. Position yourself upwind of the smoker when in use. Limit the duration of smoke exposure and take breaks as needed. **(ALL)** | Beekeepers | Before Measure: **Med** After Measure: **Low** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Hive overcrowding | Increased stress, reduced productivity, higher risk of swarming | Promotes sustainable colony growth, ensuring strong pollination services for local flora. | Conduct frequent hive inspections and provide additional hive boxes when necessary. Manage queen production by monitoring brood chamber space and preventing excessive swarming. Rotate frames to promote even colony growth and prevent congestion. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |
| Hive theft or tampering | Loss of colonies, financial loss, disruption of beekeeping operations | Encourages responsibility and stewardship of natural resources. | Use security measures such as locked gates, motion-sensitive lighting, and hidden tracking devices on hives. Establish good relationships with neighbors and local beekeepers for increased vigilance. **(ALL)** | Beekeepers | Before Measure: **Med** After Measure: **Low** |
| Injury from hive collapse | Crushed colonies, damage to equipment, injuries to beekeepers | Strengthens beekeepers' problem-solving and equipment maintenance skills. | Securely position hives on stable, level ground and reinforce hive stands to prevent tipping. Inspect hive supports regularly for signs of wear, particularly after severe weather. Train beekeepers in proper hive handling to reduce accidental hive toppling. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |
| Legal and compliance risks | Fines, operational shutdown, liability issues | Contributes to sustainable and ethical beekeeping practices. | Stay updated on local and national beekeeping regulations. Register hives where required and follow disease control and honey processing standards. Maintain accurate records of hive inspections and treatments. **(ALL)** | Beekeepers, regulatory bodies | Before Measure: **Med** After Measure: **Low** |
| Limited availability of nectar sources | Reduced honey production, poor bee nutrition, colony decline | Supports habitat restoration and environmental stewardship. | Encourage the planting of native wildflowers and nectar-rich plants around the apiary. Avoid overstocking hives in areas with insufficient floral resources. Provide supplementary feeding during times of scarcity, ensuring a balanced diet for bees. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Public fear of bees leading to conflicts | Negative perception of beekeeping, complaints, hive removal requests | Builds public awareness and acceptance of bees, promoting coexistence and conservation efforts. | Educate the public about the importance of bees and proper behavior around hives. Clearly mark apiaries with warning signs and maintain safe distances from public areas. Offer outreach programs, school visits, and demonstrations to foster appreciation for beekeeping. **(ALL)** | Public, beekeepers | Before Measure: **Med** After Measure: **Low** |
| Slips, trips, and falls in the apiary | Sprains, fractures, head injuries | Provides an opportunity to work in natural environments, fostering a deeper appreciation for outdoor spaces. | Maintain clear and even pathways around the apiary, removing obstacles and debris regularly. Ensure grass and vegetation are trimmed to prevent concealment of hazards. Use slip-resistant materials for walking surfaces where possible. **(ALL)** | Beekeepers, visitors | Before Measure: **Med** After Measure: **Low** |
| Spread of invasive species | Threat to native bees, ecosystem disruption, competition for resources | Helps maintain native bee populations and ecosystem balance. | Prevent the introduction of invasive pests, such as the Asian hornet, by maintaining hive hygiene and monitoring for signs of infestation. Report sightings of invasive species to local authorities. Avoid transporting bees or equipment between regions without proper screening. **(ALL)** | Beekeepers, environment | Before Measure: **Med** After Measure: **Low** |
| Stress and fatigue from beekeeping | Decreased focus, increased risk of accidents, burnout | Builds patience, problem-solving skills, and mindfulness. | Encourage regular breaks during hive inspections and lifting tasks. Promote mindfulness and observation techniques when working with bees. Educate beekeepers on the importance of self-care and proper workload management. **(ALL)** | Beekeepers | Before Measure: **Med** After Measure: **Low** |
| Use of sharp tools | Cuts, puncture wounds, infections | Teaches valuable practical skills in handling tools and equipment safely. | Ensure all tools, such as hive tools and knives, are maintained in good condition and stored safely when not in use. Provide training on the correct use of tools to prevent injuries. Use cut-resistant gloves where appropriate. **(ALL)** | Beekeepers | Before Measure: **Med** After Measure: **Low** |

| HAZARD | RISK | RISK BENEFIT | MEASURE | RISK TO | RISK LEVEL |
|---|---|---|---|---|---|
| Vandalism or theft of hives | Loss of colonies, financial impact, disruption of pollination services | Encourages community involvement and awareness in protecting valuable pollinators. | Secure the apiary with fencing and lockable gates to deter unauthorized access. Install signage indicating the presence of bees and potential dangers. Consider using surveillance systems or trail cameras to monitor the area. **(ALL)** | Beekeepers | Before Measure: **Med** After Measure: **Low** |
| Zoonotic disease transmission | Spread of infections, compromised hive health, biosecurity risks | Strengthens disease monitoring and control in agricultural and environmental sectors. | Follow biosecurity protocols to minimize disease transmission. Regularly disinfect equipment and avoid introducing foreign materials into the apiary. Isolate and treat sick bees promptly. **(ALL)** | Beekeepers, bees | Before Measure: **Med** After Measure: **Low** |
| Unpredicted risks | Illness, injury, death | | Continuous risk monitoring conducted by all staff. Any unforeseen hazards must be reported promptly to supervisors or management, with immediate corrective action taken as necessary. **(ALL)** | All | **N/A** |

## NOTES

**Extra notes & activity evaluation:**

| Completed by | Reviewed/Approved by | Risk Assessment Date | Review Required Date |
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