<table>
<thead>
<tr>
<th>Appalachian National Scenic Trail</th>
<th>1. WORK PROJECT/ACTIVITY</th>
<th>2. LOCATION</th>
<th>5. DATE PREPARED</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAND TRAIL TOOL MAINTENANCE IN SHOP</td>
<td>Trail Wide</td>
<td>Includes work performed on lands of National Park Service, and various states' park and lands</td>
<td></td>
</tr>
<tr>
<td>JOB HAZARD ANALYSIS (JHA) References-FSH 5709.11 and -12 OSHA (Instructions on Reverse)</td>
<td>3. NAME(S) OF ANALYST(S)</td>
<td>4. Work Supervisor</td>
<td>Various</td>
</tr>
<tr>
<td></td>
<td>Keith Stegall</td>
<td></td>
<td>05/31/2019</td>
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</tbody>
</table>

**Required Standards and General Notes:**
Knowledge of cutting tool edge angles. Appropriate sharpening and repair procedures

**Required Personal Protective Equipment:**
Gloves, long sleeves, Eye protection (certain tasks), Ear protection (certain tasks), dust protection (certain tasks)

**Tools and Equipment:**
Vise, files, grinder, sandpaper, first aid kit, fire extinguisher

**Available Training:**
Tool care & reconditioning; Crosscut Saw Sharpening; USFS Video: An Axe to Grind

### 7. TASKS/PROCEDURES

**Sharpening cutting edge of tools**
(using bastard mill file or grinder)

- **Cutting hands or arms with tool**
  - Wear cut resistant or leather gloves and long sleeves.
  - Use handle on file.

- **Grinder throws sparks and metal filings**
  - Wear eye and ear protection.
  - Set up disk guard on grinder.
  - Wear work apron.
  - Know your facilities evacuation plan, including a meetup location.
  - Ensure appropriate fire extinguisher is present, has been inspected, and is properly located.
  - Ensure smoke detectors are in working condition.
  - Ensure that the appropriate means of ingress/egress are available and sufficiently marked and lighted at all times.

- **Tool moves during sharpening**
  - Secure tool firmly held in vise or jig.

- **Eye, back, or neck strain**
  - Wear eye protection and/or face shield.
  - Secure tool at a comfortable angle for sharpening.
  - Ensure adequate lighting intensity and angle for observing sharpened edge.
  - Consider stool and/or fatigue mat for work space

**Rehandling tools**

- **Injury from loose or suddenly dislodge tool head**
  - Wear sturdy boots.
  - Stay constantly aware of tool head stability.

- **Crushed fingers**
  - Keep fingers out of vise where they could be crushed.
<table>
<thead>
<tr>
<th>Risk Area</th>
<th>Precautions</th>
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</table>
| Smashed fingers or flying debris from setting wedge                      | • Wear eye protection.  
• Pay close attention to mallet or hammer swing.                                                                                                                                 |
| Cuts from wood rasp or hacksaw in shaping handle                          | • Wear long-sleeves and leather gloves.                                                                                                    |
| Dust and noise from shaping/sanding handles or tool heads                 | • Wear eye protection  
• Wear appropriate dust mask  
• Wear hearing protection                                                                                                                    |
| Reconditioning or marking handles                                         |                                                                                                                                              |
| Combustion of linseed oil soaked rags                                     | • Secure rags in marked and appropriately rated metal airtight can after use.  
• Empty can and properly dispose of rags regularly.                                                                                     |
| Exposure to aerosol contents of spray paint; paint in eyes or on skin     | • Paint tools outside or in a well ventilated area.  
• Wear eye protection.  
• Wear appropriate gloves                                                                                                                  |
| Storing, cleaning, and testing tools and equipment                        |                                                                                                                                              |
| Injury from unsheathed tools                                              | • Ensure tools are stored with appropriate guards on sharp edges.  
• Rather than store heavy or sharp objects in high places, store lighter equipment on upper shelves.  
• Use appropriately rated step ladders to access overhead items.  
• Store tools and equipment in balanced position where they are not precarious or prone to become imbalanced.  
• When possible, store hand tools in racks with handle hanging down.  
• Do not lean equipment against walls.                                                                                                      |
| Injury from objects falling due to improper storage                       | • Keep floor clear of tools, waste, or materials.  
• Clean up spills.                                                                                                                           |
| Injury from items stored carelessly                                       | • Tag tools needing repair with a "DO NOT USE" tag.  
• Store in a separate location if possible.                                                                                                    |
| Injury from slips, trips, falls                                           | • Refer to manufacturer’s handling and storage instructions.  
• Be aware chemicals can catch fire.  
• Store flammable liquids in original containers or approved and well marked containers.  
• Store containers in appropriately rated flammables cabinet.  
• Ensure shop is equipped with appropriate type, size of fire extinguisher and that it is inspected annually by a competent person.  
• Wear splash-proof eye protection and appropriate gloves when handling liquids.                                                                 |
| Exposure to cleaning or conditioning chemicals                            | • Check on/off switch for proper function  
• Perform maintenance at manufacturer’s recommended intervals.  
• Keep bits, files, and knives sharp.                                                                                                          |
| Injury from poorly maintained tool                                        |                                                                                                                                              |
- Do not modify tools.
- Ensure all manufacturer safety components of tool are in working condition.
- Tag-out tools not in safe working condition. Add to Lockout Tag-out program.

<table>
<thead>
<tr>
<th>10. OFFICIAL SIGNATURE</th>
<th>11. TITLE</th>
<th>12. DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Signature)</td>
<td>Acting Chief Ranger - Safety Officer</td>
<td>6/28/19</td>
</tr>
</tbody>
</table>

Previous edition is obsolete (over)