

# **Unstaffed Public Shooting Ranges**

**Survey of Existing Unstaffed Ranges**

**Site Selection Criteria**

**Passive Safety Criteria**

**Range Management**

**Presented by**

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# My Background

- **Life-long Competitive Shooter**
- **Albuquerque Shooting Range Park**
  - **Design Committee Chair - 1977 thru mid 1980s**
    - **Master Plan Revision, Phase 1 Construction Drawings**
    - **Important Design Suggestions For 100 Point PPC Range**
- **DOE Training Range on KAFB**
  - **Design Reviews**
- **Hillsdale College**
  - **Preliminary Layout Review and Design Suggestions**

# States With Unstaffed Ranges

- **Iowa**
- **Missouri (~75 Unstaffed, 5 Staffed)**
- **West Virginia (>30 Unstaffed)**
  - **Goal - Range Within 30-45 Minutes Of Every Citizen**
- **Wisconsin**
- **New Mexico - NRA Whittington Center**
  - **30 Plus Years - Public Daily Operation -**
  - **No Staff For Public Visitors On Rifle/Pistol Ranges**

# IOWA

- **11 Public Ranges - 2 With Full Time Staffing**
  - 1 - DNR Staff, 1 - Concession --- Range Fee
  - All On DNR Owned And Managed Land
- **2 Busiest, Unstaffed Ranges**
  - Have Range Safety Officers (DNR) On Fri, Sat, Sun
  - 1 Range Has ~500 Shooters Each Weekend
- **7 Unstaffed Ranges**
  - 1- Shotgun Only, Some Berms Only, Some Both

# IOWA

- **Purpose: Reduce Indiscriminate Shooting At Public and Wildlife Areas**
  - On Public Hunting Lands, Keep Shooting On Ranges
  - Some Public Areas Posted: "No Target Shooting"
  - Unstaffed Ranges Work Well In Less Populated Areas
- **Original Unstaffed Range Near Des Moines**
  - Converted to Staffed Range - Too Busy
- **Have Not Used Conservation Easements**

# IOWA



# IOWA





Capitan, NM - High Power Rifle Range - 1000 yards



# Site Selection Criteria

- **Shoot North**
- **Mountain or Mesa Cliff Immediately North**
- **Small Area For Range - Junk Land For Safety Zone**
- **No Permanent Occupancy Downrange-3 miles**
- **No Potential For Noise Problems - Long Term**
- **Good Site Drainage**
- **Good All Weather Public Access**
- **Community Support, Volunteer Potential**

# Potential Lands

- **Game Department Owned Land**
- **Game Department Leased Land**
- **Other State Land - Recreational**
- **NM State Trust Land - Recreational**
- **Small Site On Very Large Ranch**
- **Conservation Easements**
- **Federal Lands - BLM, Forest Service, Even DOD**

# Land Issues

- **Liability Protection**
- **Public Closure Of Safety Zones**
- **Ability To Close For Downrange Activities**
  - **Fencing, Construction, Power Line Maintenance, Pipelines, Moving Cattle, Etc.**

# Range Options

- **General Shooting - Both Rifle And Pistol**
  - 3 Berm Range - 100 To 200 Yards Deep
- **Alley Ranges**
  - Row Of Side Berms Using 1 Impact Berm
  - 25 To 50 Yards Deep, 10 To 15 Yards Wide
  - For Classes, Individual Practice, Draw & Shoot, Etc.
- **Long Range - Rifle And Silhouette**
  - Impact Berms At 300, 500 Yards And Beyond
  - Independent Operation, Non Interference W/ Other
  - Rotate Line Of Fire - Downrange Separation

# Alley Ranges

At Albuquerque Shooting Range Park



# More Range Options

- **Smallbore Range**
  - **Firing Lines Suitable For Prone - Concrete/Use Of Mats**
  - **Focus On Junior Shooter Development**
  - **Outdoor Version Of Indoor Gallery**
- **Shotgun Area**
  - **Adjacent To Bermed Range - But Angled Away**
  - **Limits Clay Birds To Known Area**

# Passive Safety Criteria

- **Downrange Safety Zone**
  - DOD Standard - 3 Mile Downrange Fan
  - For ALL Rifle & Pistol Ranges- No Short Zones (Pistol)
  - Prefer - Mountain or Mesa Immediately Downrange
- **NO Buildings or Structures Downrange**
  - Can't Have Bullet Holes in Witness Plates
- **3 Sided Bermed Firing Areas**
  - Impact Berm - Lead Capture (See Lead Plan)
  - Side Berms - Keep Accidental Discharges On Site

# Range Signs

- **Keep them SIMPLE**
- **SAFETY RULES Signs**
  - No More than 3 Lines, NO Sentences, Crisp Wording
  - At Least 2 Safety Rule Signs
- **RANGE OPERATION Signs**
  - Common Sense Directives - Efficient Range Operation
  - Again - Simple, Crisp
  - All People Obey, Period
  - Help All Shooters Have Fun
  - Warn About Rattlesnakes



# Berms

- **2:1 Side Slope (W:H) (NM soils)**
- **10' Top Width - For Grading Tractor**
- **Height - Based on:**
  - **Longest Diagonal Distance Across Both/All Bermed Ranges**
  - **Design Basis: Low Velocity, Heavy Bullet Target Loads (.38 Special, 200 Grain Bullet, 2" Barrel)**
  - **Must Go Over Both Separating Berm & Far Corner Berm**
  - **Base Width - 50' for 10' High, 70' for 15' High**
- **Provides Ballistic Shadow - Close-In Protection**

# Shot Across 2 Bermed Ranges

Red - Hits First Berm ---- Green - Goes Over 2nd Berm



# Moving Dirt

- **Folks Who Have Heavy Equipment-Nearby!**
  - **County/Municipal Landfills**
  - **Highway Departments - State, County, Etc.**
  - **Large Construction Projects**
- **Also Have Expertise & Surveying Equipment**

# Contained Range Options

- **Purpose - Shooter/Gun Can't See Sky!**
- **Baffled Range**
  - **Overhead Baffles - Stop - Deflect - Contain Projectiles**
  - **Located Within 3-Sided Berm**
  - **Variation - Heavy Wooden Roof In 4-Sided Berm**
- **Tube Range**
  - **Firing Line - Dirt/Wood Wall With Multiple Long Tubes**
  - **All Shooting Thru Tubes - Concrete or Steel**
  - **High Impact Berm**

# Baffled Range



# Tube Range



# Open Ranges

- **No Side Berms**
- **Existing Terrain For Impact Berm**
- **Existing Terrain For Safety Zones**
- **Requires Large Land Area**
- **Still Applicable:**
  - **Safety Principals**
  - **Safety Zone Control**

# Range Management

- **Regular Site Visits**
  - Trash, Sign Integrity, Weeds, Berm Erosion, Etc.
- **Lead Management Plan - MANDATORY**
  - Adopt, Then FOLLOW Explicitly!
  - NSSF Master Plan - Simple To Implement
- **Enlist Local Volunteers**
  - Individuals, Clubs (Shooting, Scouts, 4-H, etc.)
  - Local Businesses For Simple Improvements
    - Concrete Shooting Benches, Simple Target Holders (for sale)



# Range Resources

- **National Rifle Assn. - Range Dept.**
  - Range Manuals, Public Range Grant Program
- **National Shooting Sports Foundation**
  - "Range Report" Magazine
  - Lead Management Plan