

Snohomish County

(P) Kevin Teague, Snohomish County

Consultants

( ) Bruce Dees, Bruce Dees & Associates

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(P) Lorin Kramer, Kramer One

**PURPOSE**

Gather any new needs and concerns, review and refine the preliminary program and design criteria, and present spatial diagrams of program elements.

**DISCUSSION**

**Introduction**

Kevin Teague welcomed everyone and gave a brief summary of the origin and purpose of the project. Derrick then recapped the overall project process and schedule. He then introduced the full design team using a chart.

Following introductions, Derrick then requested that each committee member share their specific needs and concerns, beginning with the newest members of the committee. The following are their comments:

**COMMENTS**

General

- The name "Sky Valley Sportsman's Park" is gender specific
  - Consider a gender neutral name such as Sky Valley Target Park
- The Lake Bronson gate is approximately 1 ¼ mile from the Sky Valley gate
- The Hunter Safety Course currently occurs at the VOA
- The intent of the pro shop is to make money for the range
- It is envisioned that the range would be offered by a private or private non-profit group

Sound Comments

- Barriers between source (sound) and receptors (neighbors) may be needed – either walls or berms
- Consider sound affecting other nearby sites besides neighbors, such as Diversion Dam located to the southwest
- Lorin explained that a general rule of thumb for sound is ¼ mile to ½ mile, sounds can be a problem, ½ mile to 1 mile, sound creates some problems, over 1 mile, generally sound does not create a problem.
- Discussion on whether baffles were required - It was clarified that the point of baffles is for safety
  - For sound mitigation, acoustical treatment could be added
  - Baffles will add a significant cost to the project
- Curtains are used to capture shot, not deaden the sound

Pistols

- The program for pistols should include a separate range for individual bays and a range for paper targets

Rifles

- The program for the rifle range should consider a range that is 600+ yards long
- Provide space for public and competition to shoot at same time
- A competition and separate site-in range is preferred
- Steel gongs can be used for targets beyond 100 yds on the rifle range
- Add Air Rifle to the program for kid involvement

Shotguns

- Three shotgun traps have been donated and could be used for the new facility
- Consider fewer stations for shotgun trap and possibly eliminating skeet due to sight constraints, but confirm prior to amending program.

Archery

- FITA shooting should be able to occur at the same time as practice
- Consider a portable cover for archery
  - Ability to move back during competitions
  - Lorin will check rule book
- Consider removing broadheads from the program
- The archery interest has mentioned that they would have competitions starting as soon as the park opens.

**CLOSING**

The next ad hoc committee meeting is scheduled for Tuesday, August 19 from 3:30 to 5:30 PM at the Sultan City Council Chambers.

*These are the minutes, as we understand them. If there are any additions or corrections, contact Bruce Dees & Associates immediately.*

Sky Valley Sportsman's Park

**Design Criteria**

July 8, 2014

NEIGHBORHOOD

- Minimize sound heard by neighbors to the west
- Serve all users while having least possible impact on neighbors

ENVIRONMENTAL

- Eliminate lead contamination of wetlands and groundwater
  - Address Current lead issues on-site
  - Contain future lead

SAFETY

- Confine shooting and bullets to shooting range area
- Incorporate CPTED design standards

DESIGN

- Incorporate sustainable design strategies
- Accommodate ADA in range design
- Plan for event parking to be off-site with shuttles
- Consider phasing in sport uses, such as archery first
- Design to not shut down facility to public for competitions
- Shotgun events can fit within the pistol range
- Design facilities with expansion potential for future growth
  - Consider future uses in planned facility (ie hatchet throwing on the archery range)

OPERATION

- Consider projects that could be completed by volunteers
- Archery range can be used by other groups when not in use
- Accommodate high school rifle teams

Sky Valley Sportsman's Park  
**Preliminary Program**  
July 8, 2014

**FITA Regulation Archery Range**

SUPPLEMENTAL

- 90 meter range
- Competition and practice range
- Covered shooting area (protection from elements)
- Include a moveable structure
- Storage for targets

CRITERIA

- Accommodate FITA (World Archery Association) regulations

**3D Archery Range**

SUPPLEMENTAL

- 40 acres ideal, larger than 10 acres desired
- 30 targets
  - Include target storage area
- Broadhead Slash Pit

CRITERIA

- Accommodate IBO ASA (International Bow Hunting – Archery Shooters Association) regulations
- Northern orientation
- Varied topography

**Pistol Range**

SUPPLEMENTAL

- Set targets at 25, 50, and 100 yards
- 8-10 bays are ideal
- Covered or partially covered outdoor structure

CRITERIA

- Accommodate IPSC (International Practical Shooting Conferderation) Events (range with doorways, windows, etc.), Cowboy Shooting, and Three Gun
- Provide separation between shooters
- Adjustable counters at shooting bays

**Rifle Range**

SUPPLEMENTAL

- 400 yard range
  -
- 40 benches
- Steel gongs for targets
- Open Table changing targets
- Site-in lanes
- Clearing Station
- Cleaning Stations or Designated Cleaning Area

CRITERIA

- Baffle must withstand blast back
- Change targets without shutting down
  - Pits with downwardly adjusting targets
- Consider golf carts for ranges over 100 yards

## **Shotgun Skeet Range**

### CRITERIA

- Towers on rails could allow skeet to occur on same range as trap

## **Shotgun Trap Range**

### SUPPLEMENTAL

- 10 traps

### CRITERIA

- Can be built in phases
- Oriented to the north
- Layout to minimize cleanup

## **Black Powder Range**

### SUPPLEMENTAL

- 50-100 yards

### CRITERIA

- Can be located on rifle sight-in range or possible shotgun range when either are not in use
- Provide adequate ventilation

## **Hunter Safety Course / Facility**

- Firearms and Bows

## **Parking**

- Parking for everyday use
- Shuttle/bus drop-off/parking for large events
- 5-6 RV spaces with hookup

## **Restroom Structure**

- Permanent facility
- Include space for chemical toilets for larger events

## **Pro Shop**

## **Kitchen**

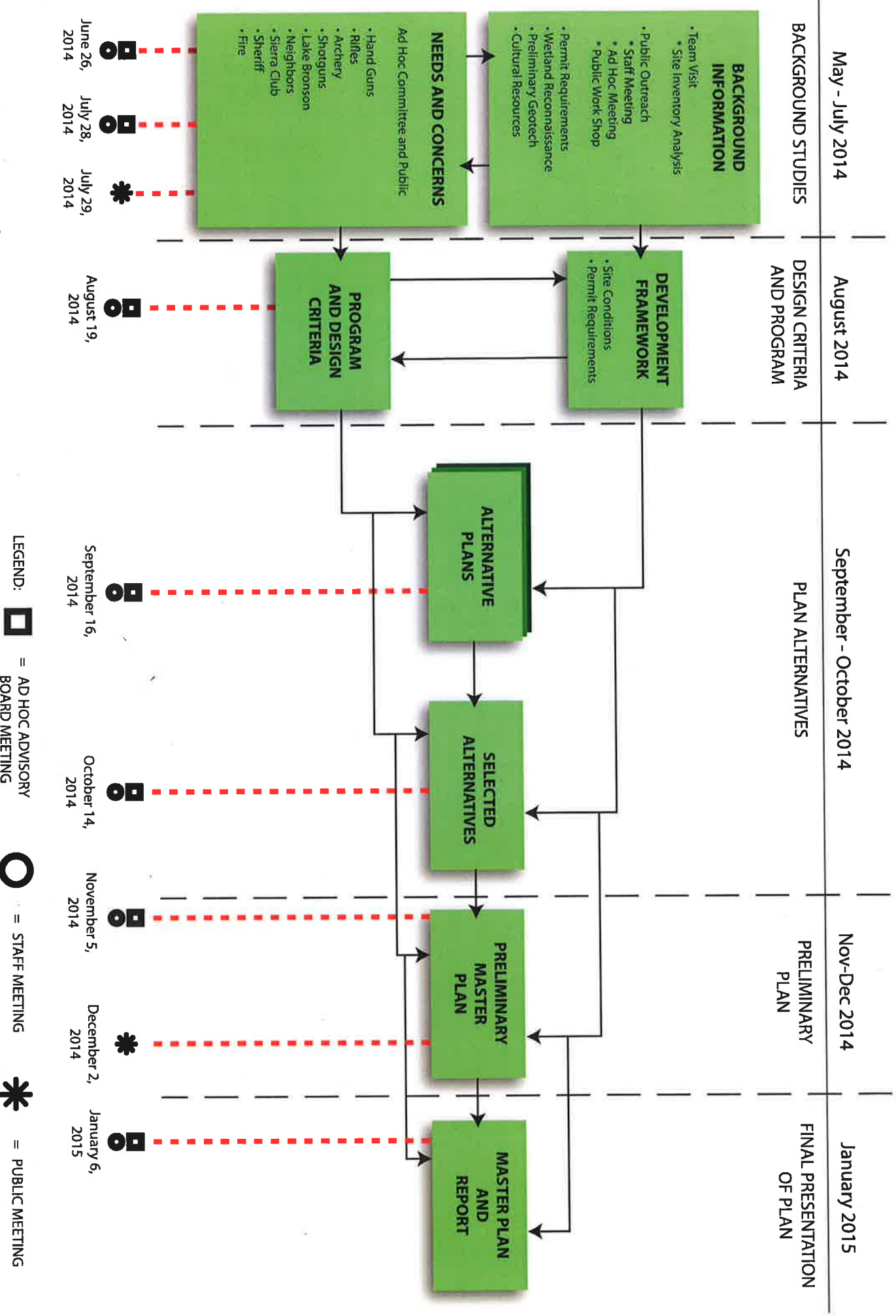
- Small structure for event food service
- Range PA System

## **Caretaker Residence**

## **Flexible Spaces**

- Plan for events (weddings, food trucks)

Snohomish County Parks & Recreation  
 Sky Valley Sportsman's Park  
**Master Plan Process and Schedule**  
 June 26, 2014



**Legend**

Label	Description	Notes
Zone A	Safety (Shotfall) Zone	1,4
Zone B	Minimum Clear Area	1
Zone C	Theoretical Shotfall Zone	2,4
Zone D	Area of Maximum Shotfall	2
Point 1	Intersection of Base Chord and Center Line	3
Point 2	Target Crossing	3
Point 3	Boundary Stake	3

**Zone "A" Reduction for Existing Fields**

The maximum trajectory of shot is not well understood. Various proposed escape routes have been suggested, but no standard has been established for Zone A. However, some fields that are currently in operation without any shot escape route compliance do not have sufficient property to accommodate Zone A. Following are sources of data that may be used to justify a reduced Zone A for existing fields. Both American Steel and International Steel rule books permit shot sizes up to No. 7 1/2. Specific ballistics may fall short of either No. 8 or No. 9 shot.

Publication #1 "Ordinance Technical Manual" 5-1-1990  
 620 feet for No. 7 1/2 shot, 594 feet for No. 8 shot, 528 feet for No. 9 shot. This publication provides a formula to calculate theoretical maximum range of lead spheres.

Publication #2 "NSA Firearms Fact Book," Second Edition, 1988, National Rifle Association.  
 740 feet for No. 7 1/2 shot, 720 feet for No. 8 shot, 670 feet for No. 9 shot. This publication recommends adding a 20% safety factor to these distances for planning purposes.

Publication #3 "Spring Arms and Ammunition Manufacturer's Institute Technical Data Sheet"  
 800 feet for No. 7 1/2 shot, 740 feet for No. 8 shot, 680 feet for No. 9 shot.

**Zone A**

This area is a required safety area. Any wall fall within the property boundary. Personnel shall be excluded from this area during shooting activities.

Area notes: 500 yard (150 feet) radius measured from "Point 1" and "Point 2". Existing fields may employ various shotfall reduction methods to avoid clearance. See "Zone A" Reduction for Existing Fields".

**Zone B**

This area shall be free of tall vegetation.

Area notes: 100 yard (300 feet) radius measured from "Point 1".

**Zone C**

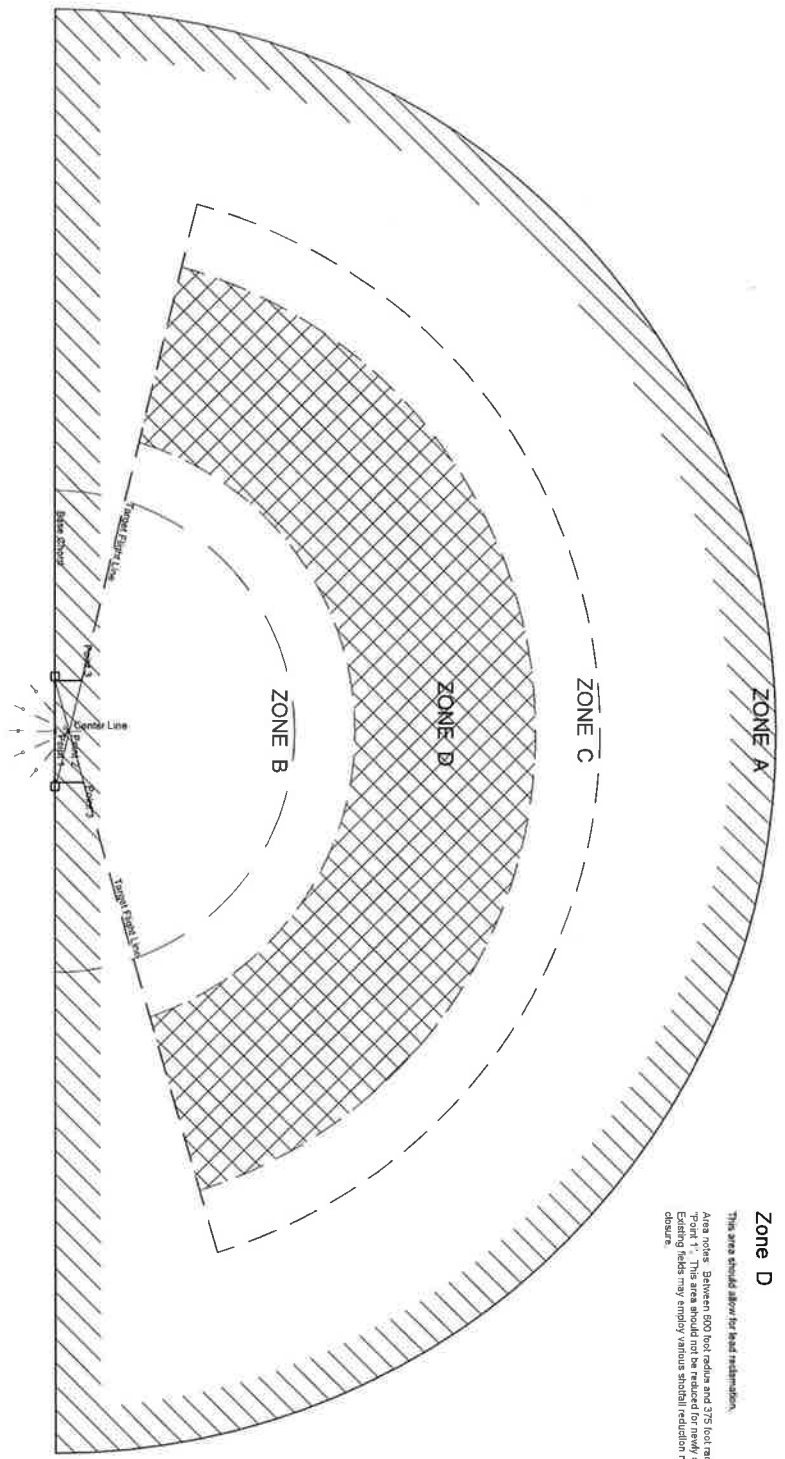
This area should be properly managed for the environmental impact of lead. Area shall not encroach on jurisdictional waters of the United States.

Area notes: 680 foot radius measured from "Point 1". Extends to "Target Flight Lines". This area should not be reduced for newly constructed fields. Existing fields may employ various shotfall reduction methods to avoid clearance.

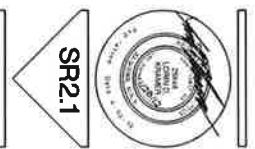
**Zone D**

This area should allow for best reclamation.

Area notes: Between 500 foot radius and 375 foot radius measured from "Point 1". This area should not be reduced for newly constructed fields. Existing fields may employ various shotfall reduction methods to avoid clearance.



This Drawing is applicable to both American and International Skeet fields constructed in the U.S.A.



**Legend**

Label	Description	Notes
Zone A	Safety (Shotfall) Zone	1,4
Zone B	Minimum Clear Area	1
Zone C	Theoretical Shotfall Zone	2,4,5
Zone D	Area of Maximum Shotfall	2
Point B	Intersection of "Baseline" and "Centerline"	3
3	16 yard line at Station 3	3
D	Limit of Area of Legitimate Target	3,5
E	Limit of Most Desirable Target Area	3,5
F	Point on Centerline	3
G	Limit of Most Desirable Target Area	3,5
H	Limit of Area of Legitimate Target	3,5

**Zone "A" Reduction for Existing Fields**

- Notes**
- "The NRA Range Source Book," National Rifle Association, Section IV Drawings, Drawing C32. Date of publication differs between printed and electronic versions. Both versions retain the same drawing reference.
  - "Environmental Aspects of Construction and Management of Outdoor Shooting Ranges", 1997, National Shooting Sports Foundation, Figure 4-2
  - "American Trapshooting Association Official Rules for the conduct of Regular, Trapshoots," Latest Edition, American Trapshooting Association, Diagram II.
  - NRA and NSSF both use the term "Shotfall Zone", but for different purposes. "Shotfall Zone" for the NRA reference and "Theoretical Shotfall Zone" for the NSSF reference.
  - Target angles detected by NRA and ATR conflict. ATR is the sports governing body and their target angles govern.

The maximum trajectory of shot is not well established. Various respected sources disagree. Newly constructed fields should follow the established standard for Zone A. However, some fields that are currently in operation without any field equipment or safety barriers may be able to reduce the shotfall area. The following is a summary of data that may be used to justify a reduced Zone A for existing fields. All referenced sources base their data on a barrel angle that would result in the maximum range of shot. The actual barrel angles that occur in trapshooting events are significantly less, and result in shorter maximum distances. We are aware of no publication that quantifies the actual range of shot in trapshooting events.

Publication #1: "Ordinance Technical Manual" 94-1590  
 527 feet for No. 7 1/2 shot. This military publication uses Jaume's Formula to calculate theoretical maximum range of lead spheres.  
 Publication #2: "NRA Firearms Field Book," Second Edition, 1988, National Rifle Association.  
 740 feet for No. 7 1/2 shot.  
 Publication #3: "Sporting Arms and Ammunition Manufacturers' Institute Technical Data Sheet"  
 800 feet for No. 7 1/2 shot.

**Zone A**

This area is a required safety area. Area shall fall within the property boundary. Personnel shall be excluded from this area during shooting activities.  
 Area notes: 300 yard (900 feet) radius measured from "Point B". 100 yard (300 feet) width at "Baseline". 400 yard (1200 foot) maximum width. This area should not be reduced for newly constructed fields. Existing fields may be reduced for existing fields. See Zone X Reduction for Existing Fields.

**Zone B**

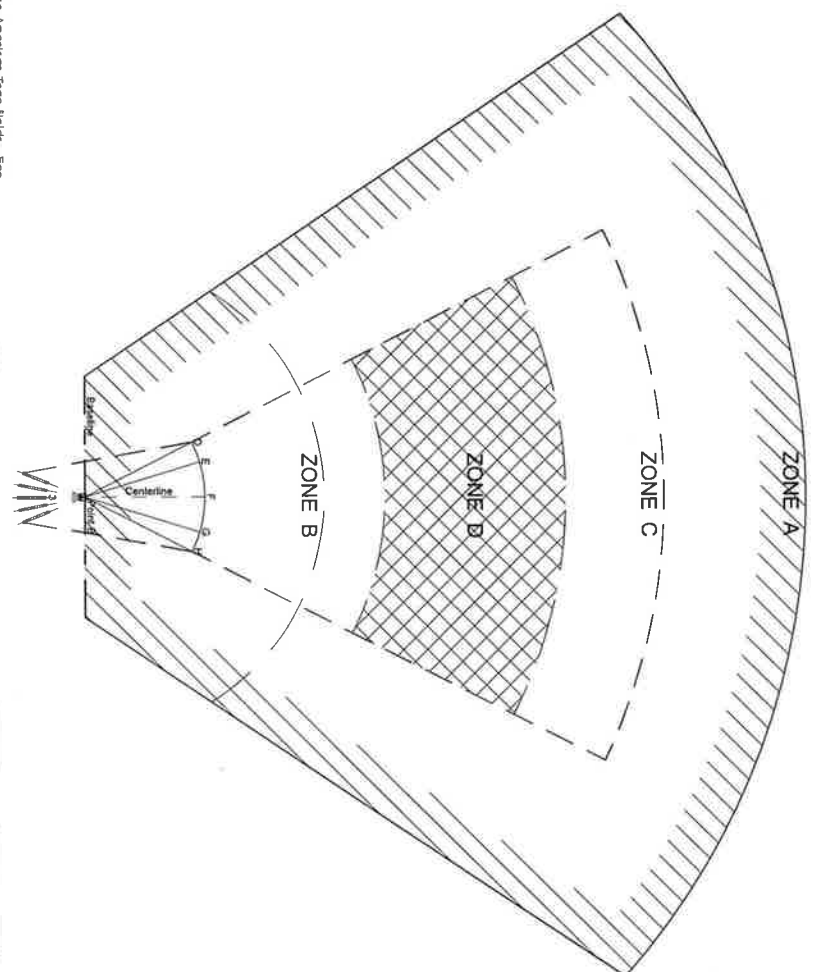
This area shall be free of tall vegetation.  
 Area notes: 100 yard (300 feet) radius measured from "Point B".

**Zone C**

This area should be properly managed for the environmental impact of lead. Area shall not encroach on "Additional Waters of the United States".  
 Area notes: 770 foot radius measured from "3". Extends 27" each side of "Centerline". This area should not be reduced for newly constructed fields. Existing fields may employ various shotfall reduction methods to avoid closure.

**Zone D**

This area should allow for lead reclamation.  
 Area notes: Between 500 foot radius and 375 foot radius measured from "3". This area should not be reduced for newly constructed fields. Existing fields may employ various shotfall reduction methods to avoid closure.



**1 American Trap Shotfall Zones**

