



Natural Resources Conservation Service  
WASHINGTON

**ANM38 – Retrofit watering facility for wildlife escape and to enhance access for bats and bird species**  
CSP Enhancement Washington State Supplement

**Land Use Applicability:** Cropland, Pastureland, Rangeland, Forestland

January 2014

Client/Operating Unit:

Tract Number:

Farm/Ranch Location:

Farm Number:

Specifications Date:

Field Number(s):

Planned Installation Date:

Proposed Treatment Acres:

**Enhancement Description:**

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Retrofit all existing watering facilities (troughs, tanks, etc.) to allow for the escape of wildlife that become trapped while trying to drink and to remove obstructions above the watering facility such as boards and wires. **Selection of this enhancement requires the activity to be planned concurrently on all eligible land use acres.**

**Benefits**

This activity provides wildlife with a definitive means of escape while utilizing a livestock water facility as a water source. Concurrently, livestock performance is improved by supplying a cleaner water supply. Dead wildlife in water facilities impair the water quality which results in decreased water consumption by livestock and reduced rates of weight gain. In addition, obstructions (e.g., boards and wires) located above the watering facility reduces the availability of water to wildlife that need open sources of water in order for them to swoop and drink while in flight. Removal of these obstructions will make many previously unavailable water sources available while reducing the injury or death potential to bats and birds as they fly in to scoop water from the watering facility. This enhancement will eliminate this threat.

**Conditions Where Enhancement Applies**

This enhancement applies to **all** open watering facilities in the crop, pasture, range, or forest land use area. This enhancement does not apply to earth stock ponds, ball type, energy-free waters or similar.

**Criteria for retrofitting a watering facility for wildlife escape**

This enhancement applies to **ALL** watering facilities located in the land use acres. Both criteria, A and B below must be met.

A. Wildlife escape structures for watering facilities must met the following requirements:

1. Extend into the water and meet the inside wall of the watering facility,
2. Reach to the bottom of the watering facility,
3. Be firmly secured to the rim of the watering facility so as not to be displaced by livestock
4. Be built of graspable, long-lasting materials, such as painted or coated metal grating, roughened fiberglass, concrete, rock and mortar, or high-strength plastic composites,
5. Have a slope no steeper than 45 degrees,
6. Be located to cause minimal interference with livestock drinking, and
7. One structure for every 30 linear feet of watering facility edge.

B. Obstruction removal above the watering facility's water surface.

1. Fencing material such as wire strands and boards shall not be within a 36" zone above the highest planned water surface (e.g., if a trough is bisected by fencing to provide water between two pastures, remove the lower strands of wires; or if wood bracing is present across the top of the trough, re-brace the tank to create an unobstructed space above the water's surface), or
2. Rearrange the fence line to create an adjustable pivot point thereby removing any obstructions above the water surface while allowing full access to a single trough from two different grazing areas.

**Layout Sketch & Drawing** (Provide sketch, drawings, maps, and/or aerial photographs.)

- Geo-referenced field map with all delineated treatment areas where CSP Enhancement ANM38 is to be applied.

**Adoption Requirements**

This enhancement is considered adopted when the watering facility has the wildlife escape structure installed and obstructions above the water surface, if present, meet either Criteria B(1) or B(2)

**Documentation Requirements**

Photograph showing a properly installed escape device for each watering facility. The photograph must also show that there are no obstructions suspended within 36" above the watering facility's water surface.

**References\*:**

Arizona Game and Fish Department. 2008. Wildlife Water Construction Standards. Arizona Game and Fish Department, Phoenix, Arizona.

[http://search.yahoo.com/search;\\_ylt=AjUr.Wil\\_cHhoqwZ7dIX0kWbvZx4?p=wildlife+water+constuction+standards+&toggle=1&cop=mss&ei=UTF-8&fr=yfp-t-701](http://search.yahoo.com/search;_ylt=AjUr.Wil_cHhoqwZ7dIX0kWbvZx4?p=wildlife+water+constuction+standards+&toggle=1&cop=mss&ei=UTF-8&fr=yfp-t-701).

Kie, J.G., V.C. Bleich, A.L. Medina, J.D. Yoakum, and J.W. Thomas. 1994. Managing rangelands for wildlife. Pages 663-688 in Research and management techniques for wildlife and habitats, 5th Edition (T.A. Bookhout, ed.). The Wildlife Society, Bethesda, MD. 740pp.

Kiryuchuk, B. 2000. Effect of Water Quality on Cattle Weight Gain. Canada-Saskatchewan Agri-Food Innovation Fund. AFIF Coagulation File: 6672-1-12-1-4.

Krausman, P., R. Rosenstock, S. Steven and James W. Cain III. 2006. Developed Waters for Wildlife: Science, Perception, Values, and Controversy. Water and Wildlife Special Section. The Wildlife Society Bulletin 34:563-569.

McCollum, T. 2010. Some points to consider about cattle water. AgriLIFE Extension. Texas A&M. Amarillo, TX.

<http://amarillo.tamu.edu/files/2010/10/Some-points-to-consider-about-cattle-water.pdf>

Taylor, D.A.R. and M.D. Tuttle 2012. Water for Wildlife: A handbook for ranchers and ranch managers. Bat Conservation International, Austin, TX. <http://www.batcon.org/pdfs/water/bciwaterforwildlife.pdf>

Tuttle, S.R., C.L. Chambers and T.C. Theimer. 2006. Potential effects of livestock, water trough modifications on bats in northern Arizona. Wildlife Society Bulletin 34:602-608.

**Field Office Technical Guide:**

[eFOTG, http://www.nrcs.usda.gov/technical/efotg/](http://www.nrcs.usda.gov/technical/efotg/)

\* Some online documents may take several minutes to download.

## State Supplemental Information

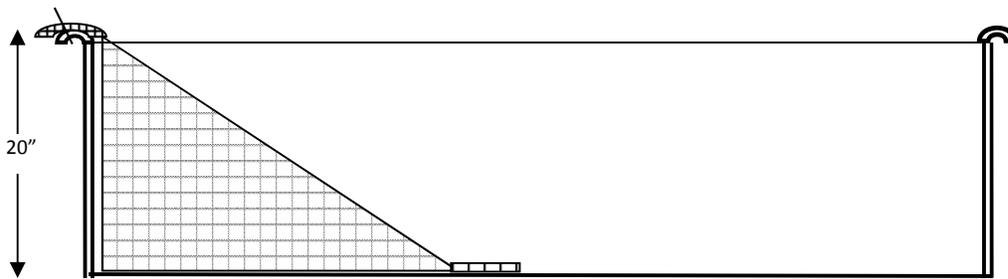
### Design & Drawings for Watering Facility Wildlife Escape Ramp (drawings and construction method)

The ramp is constructed of 14 gauge expanded metal x 3/4" holes for the ladder effect. They can be cut out with a cutting torch, hand grinder or have the supplier pre-cut with a shear. Shearing often leaves a very sharp edge that needs to be dulled prior to bending into a ramp shape. One 4'x8' sheet of expanded metal will yield eight (8) ladders that fit 20" deep troughs.

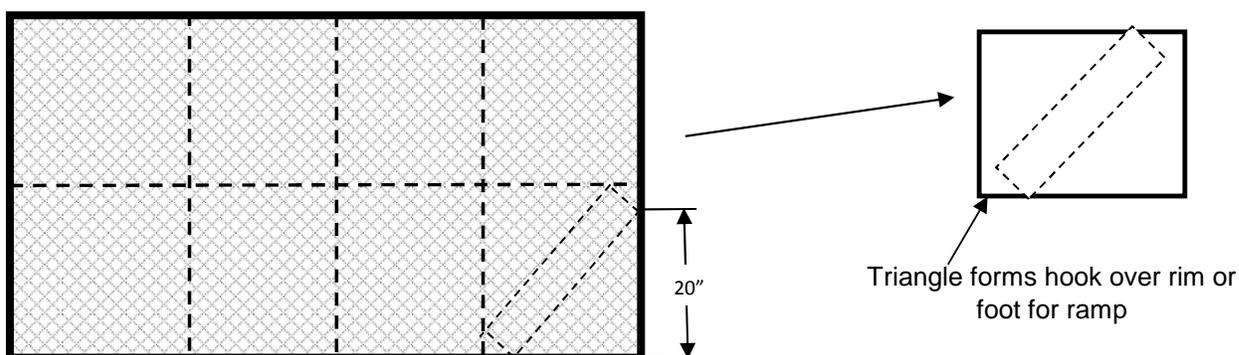
After cutting the design out, the metal is bent with a metal brake or clamping to a sturdy bench to make the sloped side or "wings" for the ramp. Be sure to keep the wing slope somewhat consistent as varying angles will make the ladders difficult to stack and transport. A 3/16" rod can be used to form the hangers for round rim and rimless tanks or use a bolt, washer and nut to secure them to the tank.

Another option for hanging is to use the triangle shaped end of the ramp as a hanger (see diagram below). After bending the wings, bend the triangle in a half-circle to fit the trough rim. The other triangle is bent in the opposite direction to rest flat on the bottom of the trough.

The ladders can be painted or dipped with a neutral color farm implement paint to prevent rusting. Be sure that paint is non-toxic after drying. The design can also be modified for rubber tire tanks by rounding the outer edge of the "wings". For easier transport and storage, stack ladders and zip-tie in bundles of five.



Side View: escape ramp in trough showing upper triangle bent over rim and lower triangle bent to form a foot to contact the trough floor.



**Dotted line = bends**

Cutting Example Diagram: an 8'x 4' sheet of expanded metal can be cut into 8 - 2'x 2' squares and bent along dotted lines as indicated in lower right square to form the ramp for a trough 20 inches deep.

### Documentation Form

Producer:

Date:

Tracts:

County:

Photograph showing a properly installed escape device for each watering facility. The photograph must also show that there are no obstructions suspended within 36" above the watering facility's water surface.

**Client's Acknowledgement** (To be signed before the Enhancement is applied.)

By signing below, I acknowledge that I:

- have reviewed and understand the site specific design, installation specifications and operation/maintenance requirements in this State Supplemental Sheet and have an understanding of the purpose(s) of this Enhancement;
- will install, operate, and maintain this Enhancement in accordance with the National Sheet, the Washington State Supplemental Sheet and the site specific specifications.
- will make no changes to the planned design and installation without prior written approval of the Natural Resources Conservation Service.
- will obtain all necessary permits and/or rights, and comply with all ordinances and laws pertaining to the installation, operation, and maintenance of this Enhancement, prior to the start of installation; and
- will assume responsibility for notifying all Utilities affected by the installation, operation and maintenance of this Enhancement.

Signature

Date