Proposal for Erosion Control Measures on BMGR-East

56th Range Management Office

LUKE AIR FORCE BASE, Ariz. – SUMMARY: The 56th Range Management Office, Environmental Science Management, is proposing erosion control measures within the Barry M. Goldwater Range East (BMGR-E). RMO will complete a programmatic level analysis to look at these alternatives, given the similarities in habitat and military infrastructure across the range. RMO will also conduct an analysis to address broad impacts with follow-up site-specific analysis. If you have any comments on alternatives to consider for evaluation, relevant information/research/analyses that should be included and/or other comments, please email them to erin.mathews.1@us.af.mil by May 12, 2022.

BACKGROUND: The BMGR-E is a military training range on approximately one million acres of relatively unfragmented Sonoran Desert Land, managed by the United States Air Force (USAF). There are both tactical and manned ranges as well as constructed airfields that provide pilots a variety of different types of ground based targets and areas for their training exercises. These targets and airfields are constructed and accessed by utilizing existing access roads, which are often two-track dirt roads, or single lane asphalt roads.

The purpose of the proposed action is to protect military infrastructure from future storm events by allowing waterflow to be directed into natural drainages. There is a significant need to protect this infrastructure to ensure that the range can be fully accessed and utilized, to allow necessary training activities to continue.

Impacts of rainfall-caused soil erosion and flooding have the potential to interfere with military training operations through structural damage to military infrastructure and/or through limiting access to needed parts of the range. Although the range has an average rainfall of less than 5 inches a year, intensive storms can cause flash flooding and severe erosive flows which can impact ground based military infrastructure and Range access. Infrastructure on the BMGR-E typically exists on flat, wide alluvial fans, which are subject to large erosive sheetflow from storm events. Various measures have been implemented to both protect the infrastructure from waterflow and to maintain the hydrologic function of the watershed, however some need to be reworked and other additional measures are needed.

The proposed action and any alternatives considered need to meet the following objectives:

1) Need to maintain existing types of use and access.

2) Need to maintain historic watershed flows.

Alternatives that would meet these objectives include improving the existing water diverting structures at the military infrastructures by repairing existing structures and/or adding additional diversions. Diversion controls can entail berms, culverts, ditches, waterbars and/or notches/dips in existing roads. Existing velocity reduction controls can also be improved or installed, including check dams, gabion walls, mulching, planting or energy dissipaters such as riprap.

Under the no action alternative, none of the existing water diverting or controlling structures, protecting the military infrastructures, will be repaired or improved.