

Boise District Office
Morley Nelson Snake River Birds of Prey National Conservation Area (NCA) and
the Idaho Army National Guard's Orchard Combat Training Center (OCTC)

Standard Operating Process (SOP): Standardized Enhancement Protocol for the authorization of all rights-of-way (ROW) issued to the Idaho Army National Guard on Bureau of Land Management (BLM) Lands within the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA) after 1 January 2016.

Introduction:

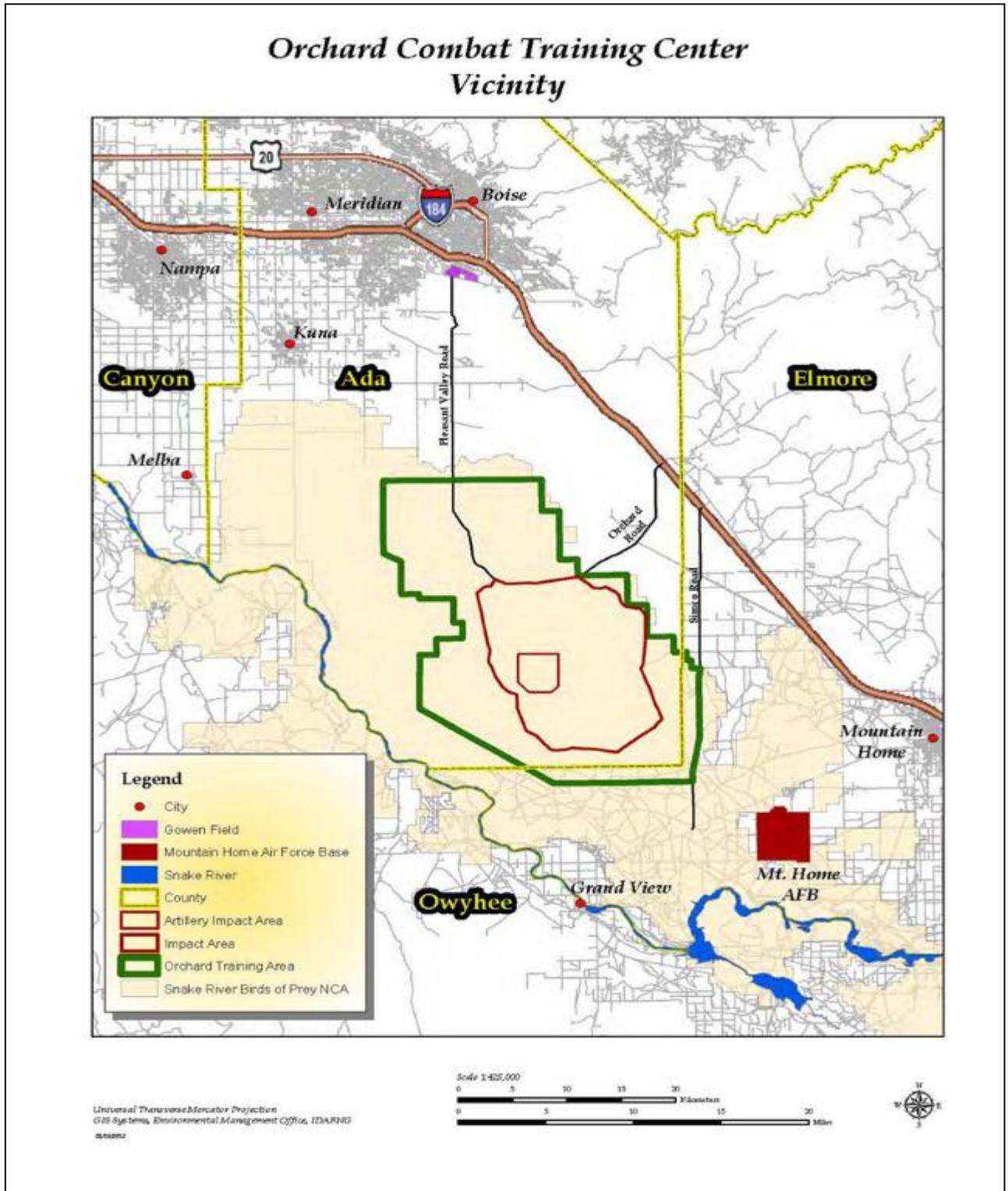
The Army National Guard (ARNG), as a participant in the Total Army Force, has a federal mission to provide trained units that are available for active duty in time of war or national emergency. The Idaho Army National Guard (IDARNG) has a state mission to provide military units that are organized, equipped, and trained to function when necessary to protect life and property, and to preserve peace, order, and public safety, under competent orders from authorities of the State of Idaho.

The IDARNG has conducted their military training operations in the area associated with the Orchard Combat Training Center (OCTC), formerly known as the Orchard Training Area (OTA), for more than 70 years (Map 1). Currently, the OCTC is designated as a Brigade-level training center and mobilization site for the National Guard (NG), and is found completely within the boundaries of the Morley Nelson Snake River Birds of Prey National Conservation Area (NCA) (Map 1).

In 1971, the Snake River Birds of Prey Natural Area was established by Public Land Order 5133 to protect one of the densest known nesting populations of raptors in North America. As a result of Public Land Order 5133, the OCTC training boundary at the time was considerably reduced. During the following years, the Bureau of Land Management (BLM) conducted a research program to study habitat needs of raptors and determined the importance of foraging habitat on bench lands north of the Snake River Canyon. Based on this research, the Snake River Birds of Prey Area was established by Public Land Order 5777 in 1980. On August 4, 1993, Congress enacted Public Law 103-64, which provided permanent protection to the area, now known as the NCA. However, section 1(B) of the Act specifically provides for "continued military use, consistent with the requirements of section 4(e) of this Act, of the OTA by reserve components of the Armed Forces".

Management responsibility for the NCA resides with the BLM, Boise District Office and Four Rivers Field Office (NCA Management Area). However, under PL 103-64, use of the OCTC by the IDARNG as a military training center is authorized under a Memorandum of Understanding (MOU) between the BLM and the Idaho Military Division. The current OCTC Training MOU was signed in 2017. Continued authorization of military training within the OCTC is managed under the BLM's 2008 Resource Management Plan (RMP), and the impacts associated with this training were assessed in an Environmental Impact Statement (EIS) (DOI 2008). The IDARNG

manages the natural resources of OCTC under the 2013 Integrated Natural Resource Management Plan (INRMP).



Map 1. OCTC Vicinity Map and NCA Boundary.

Enhancement- Background

Based on the NCA's designating legislation, the BLM identified that authorization of rights-of-way (ROW) within the NCA require a net benefit be achieved for the resources (natural or cultural) of the area (i.e., enhancement). As the IDARNG's mission is dynamic in nature, changes in infrastructure components are critical for the long-term success of the mission, which require the ability to amend existing ROW and authorization of new ROW. Per the 2017 Training MOU Section VII.(A)(16), the IDARNG is required to,

Obtain appropriate BLM authorization prior to construction of facilities, structures, or roads on public lands in the OCTC. Conduct compensatory mitigation and enhancement associated with each new ROW approval per a mutually agreed process.

In order to address these requirements, the BLM and IDARNG resource staffs have developed a standardized, quantitative process (see below) to delineate the area of effect and determine the required enhancement acreage needed to off-set permanent impacts and achieve a net benefit for resources within the NCA. This quantitative process would be used as the foundation for the development of project-specific enhancement plans (CEP) (see below) to address all new IDARNG ROW's authorized after January 1, 2016.

The use of enhancement as a means to mitigate construction and other similar impacts to the SRBOP's resources, objectives, and values, is consistent with the BLM's management responsibilities under the Federal Land Policy and Management Act (FLPMA), 2008 RMP, and P.L. 103-64. The BLM's policy manual on the management of National Conservation Areas (NCA; Manual Section 6220) also requires mitigation for impacts from rights-of-way (ROW). This mitigation standard of net benefit would comply with P.L. 103-64's requirement to enhance the resources, objects, and values of the.

Enhancement- Impact and Enhancement Calculation Process

All new ROW applications submitted by the IDARNG within the NCA will utilize the following Impact and Enhancement Calculation Process (IECP) to quantify impacts to raptor habitat in the NCA. Raptor habitat is assumed to be a suitable surrogate for quantifying adverse impacts (i.e., debits) and beneficial effects (i.e., credits) to raptor populations. The IDARNG will use the process below to calculate debits and credits for any ROW authorization that impacts raptor habitat in the NCA.

Site/community delineations and associated calculations will use the best available. Currently, the 2017 NCA Vegetation Map developed by Boise State University's Geospatial Lab will be used as the primary site reference. As the vegetation map is a model-based resource, site-specific ground-based mapping may also be used to amend the accuracy of the map.

The following steps will be taken to calculate the project debit or site impact score (SIS):

- The project footprint (permanent loss of habitat) would be overlaid on the vegetation map. The project overlay would identify the amount and type of each condition class (Table 1) affected by the proposed action.
- For each delineated condition class present, the habitat value (Table 1) would be multiplied by the number of acres permanently affected by soil disturbing activities.
- The calculated individual condition classes, based on the habitat value, are summed to determine the SIS.

Once an enhancement site or sites have been identified, the same calculation process used for the SIS would be used to determine the current enhancement site score (ESS-Baseline) for the site. The amount of enhancement credit received for the site is based on the change in condition classes (Table 1) for a specified area, e.g., conversion of one acre from SX to NSG would result in a 0.2 enhancement credit per acre. The proposed change in condition class would be identified and quantified, using the same process as the SIS to determine the proposed enhancement site score (ESS-Proposed). The difference between the ESS-Baseline and ESS-Proposed is the Net Enhancement Score (NES). In order to achieve a net benefit for the NCA, the NES must be greater than the SIS, i.e. exceeding baseline conditions requires a habitat restoration ratio greater than 1:1.

Site Impact Score (SIS) = (CC1 (acres)+ CC2 (acres)+ CC3 (acres)...)

Enhancement Site Score (ESS-Proposed) = CC1(acres)+ CC2(acres)+ CC3(acres)...
-Enhancement Site Score (ESS-Baseline) = CC1(acres)+ CC2(acres)+ CC3(acres)...
Net Enhancement Score (NES)

NCA Net Benefit = NES > SIS

Table 1. IECP Condition Class Conversion Factors

Condition Class (CC)		Canopy Cover of Primary Components (%)			
		Sagebrush	Invasive Annual Grasses	Other	Habitat Value
1	Ecological Potential (EP) Shrub- Veg Map	≥15	< 50	native perennial grass > seeding	1.0
2	Early-seral Native Shrubland /Grassland (NSG) Native Grasslands- Veg Map	< 15	< 50	native perennial grass > seeding	0.8
3	Shrubland/Invasive Annual Grasses (SX) Shrub (site data)- Veg map	≥ 5	≥50	NA	0.6
4	Non-native Seeding (NNS)	< 15	< 50	seeding > native perennial grass	0.4
5	Invasive Annual Grassland /Forbs (X)	< 5	≥50	NA	0.2
6	Facility/Developed Sites BG- Veg Map	0	0	NA	0.0

Gateway West Final SEIS and Proposed Land Use Plan Amendments for Segments 8 and 9, Idaho: Appendix K – Compensatory Mitigation Framework for the SRBOP

The IECP establishes a logical and transparent approach to assessing baseline conditions as they apply to raptor habitat within a defined area of the NCA and provides a simple method for calculating the enhancement required to achieve a return to or exceedance of baseline raptor habitat conditions in the NCA. An example of the process is outlined below.

The process assumes all short term impacts are successfully mitigated within the project footprint, and all permanent impacts are successfully addressed through habitat restoration treatments (see below) at a defined location outside the project footprint. All aspects of the treatment, monitoring, and success criteria for both on-site and off-site actions would be outlined in a project-specific CEP (see below).

Per BLM requirements, the proposed enhancement action(s) outlined in the CEP must meet the defined success criteria, or trending toward it, within a defined timeframe. In the event that the action is unsuccessful, a mutually-agreed upon alternative action will be developed and implemented using the same planning process used to develop the original CEP. Enhancement actions are expected to be maintained for an amount of time equal to the life of the proposed action, or until such time the BLM deems the impact successfully mitigated/enhanced. If success thresholds are not being met due to natural disturbances or phenomena such as drought, infestations of native (or trespass?) herbivores, or wildfire

with an ignition not attributable to IDARNG activities, BLM and IDARNG will assess conditions and re-set success criteria to reflect enhancement goals that can reasonably be met within 5 to 10 years under the new/disturbed conditions.

Example: Impact and Enhancement Calculation Process

The following is an example of the Impact and Enhancement Calculation Process (IECP). Figure 1 is the proposed action area and delineates the amount of area affected but the proposed action, including the 5 meter buffer. Figure 2 is the proposed enhancement site, with the area delineated by existing condition classes. The calculations for the SIS, ESS-B, ESS-P, and NES are found below. The overall net project is (15.97:17.03), which exceeds the 1:1 required ratio; therefore, there is a net benefit to the NCA.

$$\text{SIS:} \quad 0.33(0) + 12.63(0.2) + 11.06(0.8) + 4.65(1.0) = 15.97$$

$$\text{ESS-B:} \quad 0.00(0) + 92.80(0.2) + 15.40(0.8) + 52.40(1.0) = 83.28$$

Based on the SIS and ESS-B, the proposed site enhancement (difference between ESS-P and ESS-B) must exceed 15.97 to result in a net enhancement for the NCA. For this example, we propose to convert 50 acres of X to NSG and 15 acres of NSG to PE. The associated ESS-P and NES score is:

$$\text{ESS-P:} \quad 0.00(0) + 42.8(.2) + 65.40(.8) + 52.40(1.) = 113.28$$

$$\text{Corrected: ESS-P:} \quad 0.00(0) + 42.8(.2) + 50.40(.8) + 67.40(1.) = 116.28$$

$$\text{NES:} \quad 116.28 - 83.28 = 33.00$$

$$\text{Net Enhancement Score:} \quad 33 - 15.97 = 17.03$$

NES > SIS (ratio exceeds 1:1)

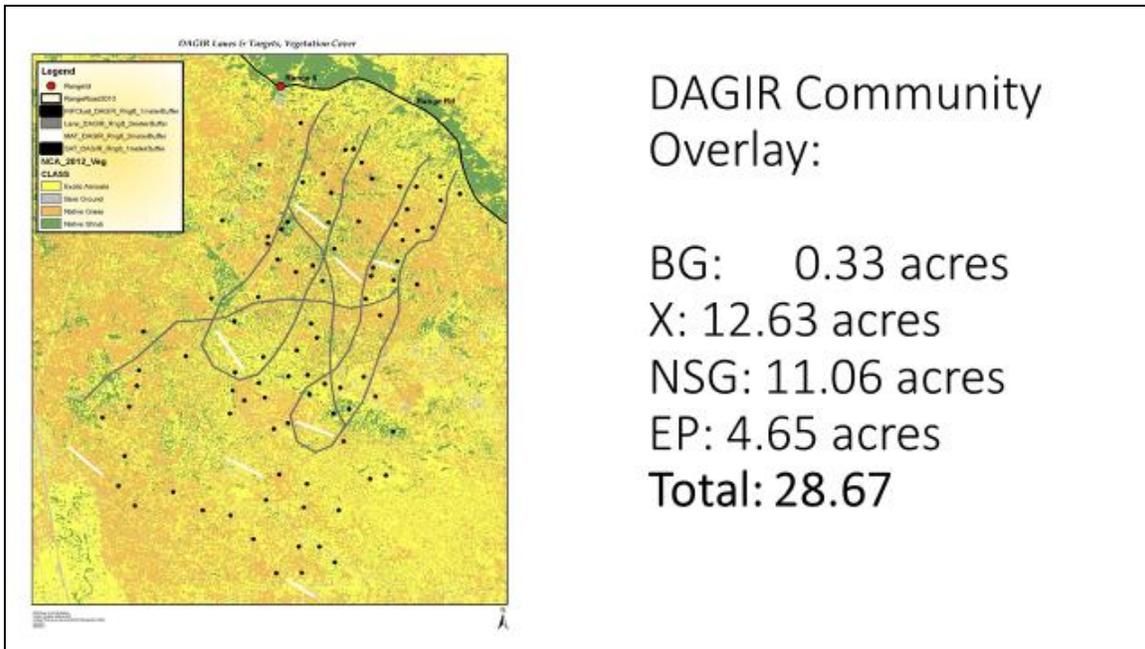


Figure 1: Proposed Action Overlaid on Vegetation Map.

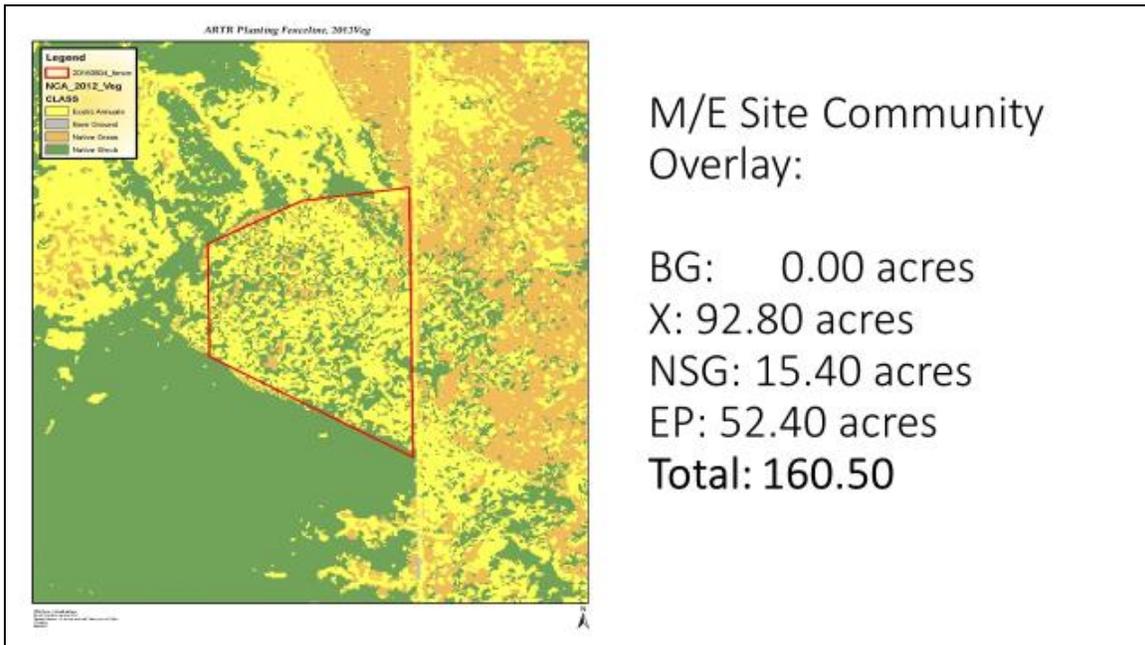


Figure 2: Proposed Enhancement Site with Vegetation Map.

Enhancement Plans

Enhancement plans will be developed through a collaborative process between IDARNG and the BLM staff. All enhancement plans will summarize the proposed action (including the purpose and need) in sufficient detail to give the reader “big picture” of the project, i.e. not a detailed plan. The priority of the enhancement plan is to identify and define the proposed action to off-set impacts and result in a net enhancement to the NCA. The enhancement plan will follow the following format:

- 1.0 Introduction
- 2.0 Proposed Action Summary
- 2.1 Purpose and Need
- 2.2 Location (TRS) with Summary Maps
- 2.3 Site Summary (Natural and Cultural Resources)
- 2.4 Impact Summary (Quantitative)-Vegetation Map Overlay
- 3.0 Proposed Enhancement Plan
- 3.1 Location (TRS) with Summary Maps
- 3.2 Site Summary (Natural and Cultural Resources)
- 3.3 Baseline Summary (Quantitative)-Vegetation Map Overlay
- 3.4 Proposed Site-specific Enhancement Action
 - Tools and Methods
 - Timeline
 - Maintenance Actions
 - Monitoring Protocol (Baseline and After-Action)
 - Defined Success Threshold
 - Adaptive Management Actions/Process
 - Others As Needed
- 3.5 Enhancement Summary – IECP
- 4.0 References

Habitat Restoration Treatments

Habitat restoration treatments would primarily be conducted within MA 1 because the 2008 RMP identifies this area as having the highest probability of restoration success. Treatment sites should include, to the extent possible, fuel control or wildland fire suppression measures, and fencing to provide durability for treatment sites.

Prioritization of restoration treatments within MA 1 should be in areas where:

- Treatments would provide the best connectivity between existing shrub communities,
- Treatments would increase the resistance/resilience of *Lepidium papilliferum* (LEPA) habitat,
- Equipment and personnel can reasonably access the site;
- Perennial native and non-native vegetation (seeding) exist and provide stable ecological conditions that facilitate restoration success,
- Existing ongoing restoration and research demonstration projects can continue to be leveraged or new, easily accessible projects can be developed, and
- Sites have the ability to achieve EP or NSG (i.e., the desired future condition (DFC) for raptor habitat).

It should be noted that, depending on initial condition class, it may take multiple treatments to achieve the DCF for raptor habitat. All enhancement measures should be well defined and resilient to disturbance, to the extent possible, for the duration of the proposed project impacts.

Habitat Restoration Treatment (BLM/IDARNG Enhancement Action Plan 2018)

In 2018 BLM and IDARNG staff defined the first habitat restoration treatment location and developed a site plan to meet the requirements set forth in the process outlined above. The IDARNG, in coordination with the BLM will conduct a native species restoration project on approximately 170 acres (Map 2 and 3) of BLM lands adjacent to the Bravo-4 training lands of the orchard Combat Training Center (OCTC). Fence construction and site preparation activities (mowing or chemical application) will begin the third or fourth quarter of 2018 with follow up treatments as needed. Seeding and live planting is scheduled for the fall of 2019.

The proposed action is located adjacent to the east fence of the OCTC in B4 Maneuver Area (Map 2 and 3). The proposed restoration project would be located in Township-01S, Range-03E, and Section 21.

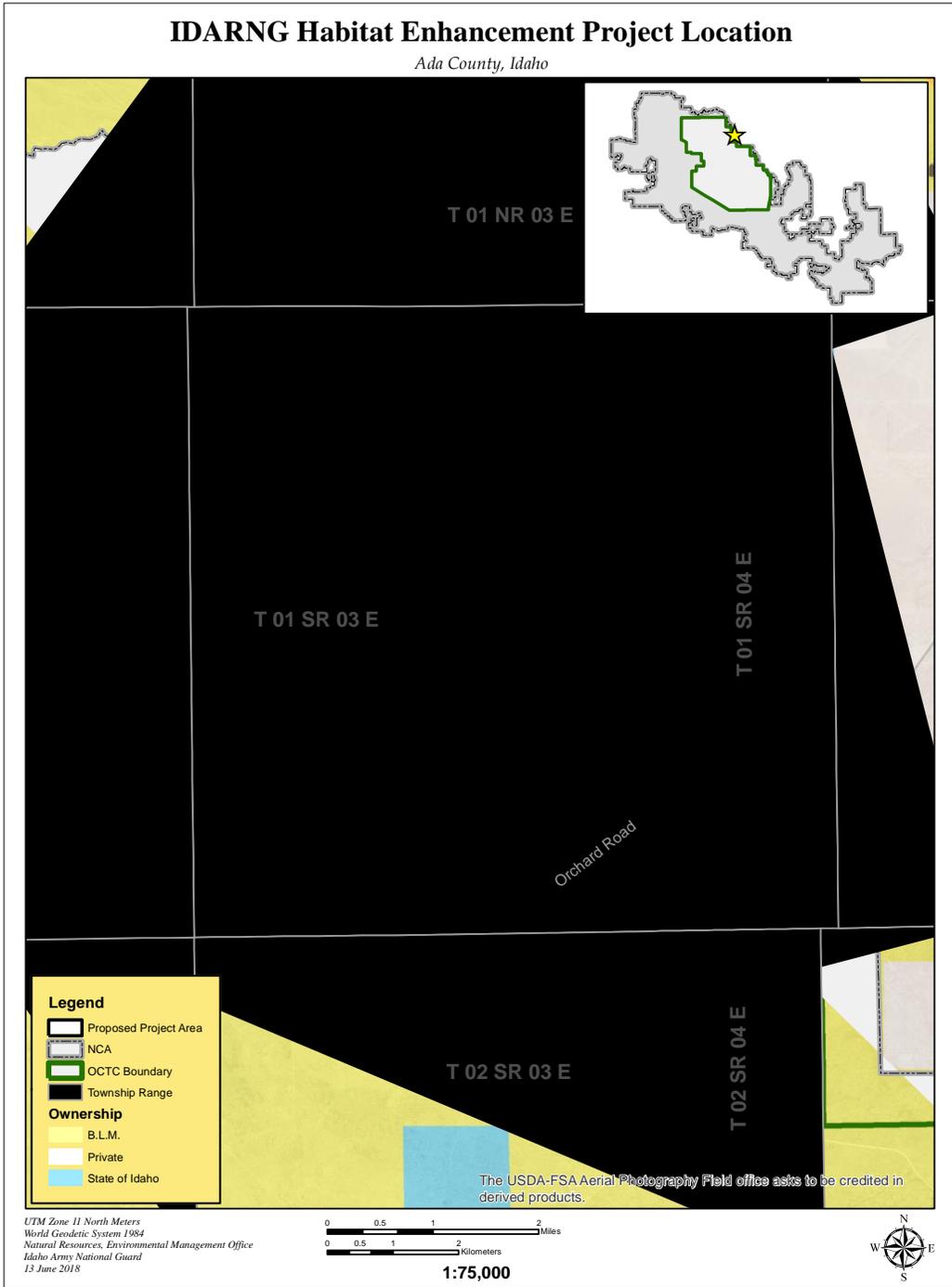
Site Selection and Description

The proposed enhancement site is currently dominated by cheatgrass (*Bromus tectorum*) interspersed with annual mustards (*Brassica* spp.), Russian thistle (*Salsola tragus*) and sparse pockets of native Sandberg bluegrass (*Poa secunda*) and squirrel tail (*Elumus elmoides*). Soils within the area are primarily Chilcott-Catchell complex of shallow silty loam with 8-10 inches of precipitation (Web Soil Survey 2016). The historic plant community was Wyoming big sagebrush (*Atremesia tridentata*) with an understory dominated by bluebunch wheatgrass (*Pseudoroegneria spicata*) and Thurber's needlegrass (*Achnatherum thurberianum*) as the subdominant grass. Other significant species include Sandberg bluegrass (*Poa secunda*), bottlebrush squirreltail (*Elymus elymoides*), and arrowleaf balsamroot (*Balsamorhiza sagittata*). The natural fire frequency is 50-70 years (Web Soil Survey 2016).

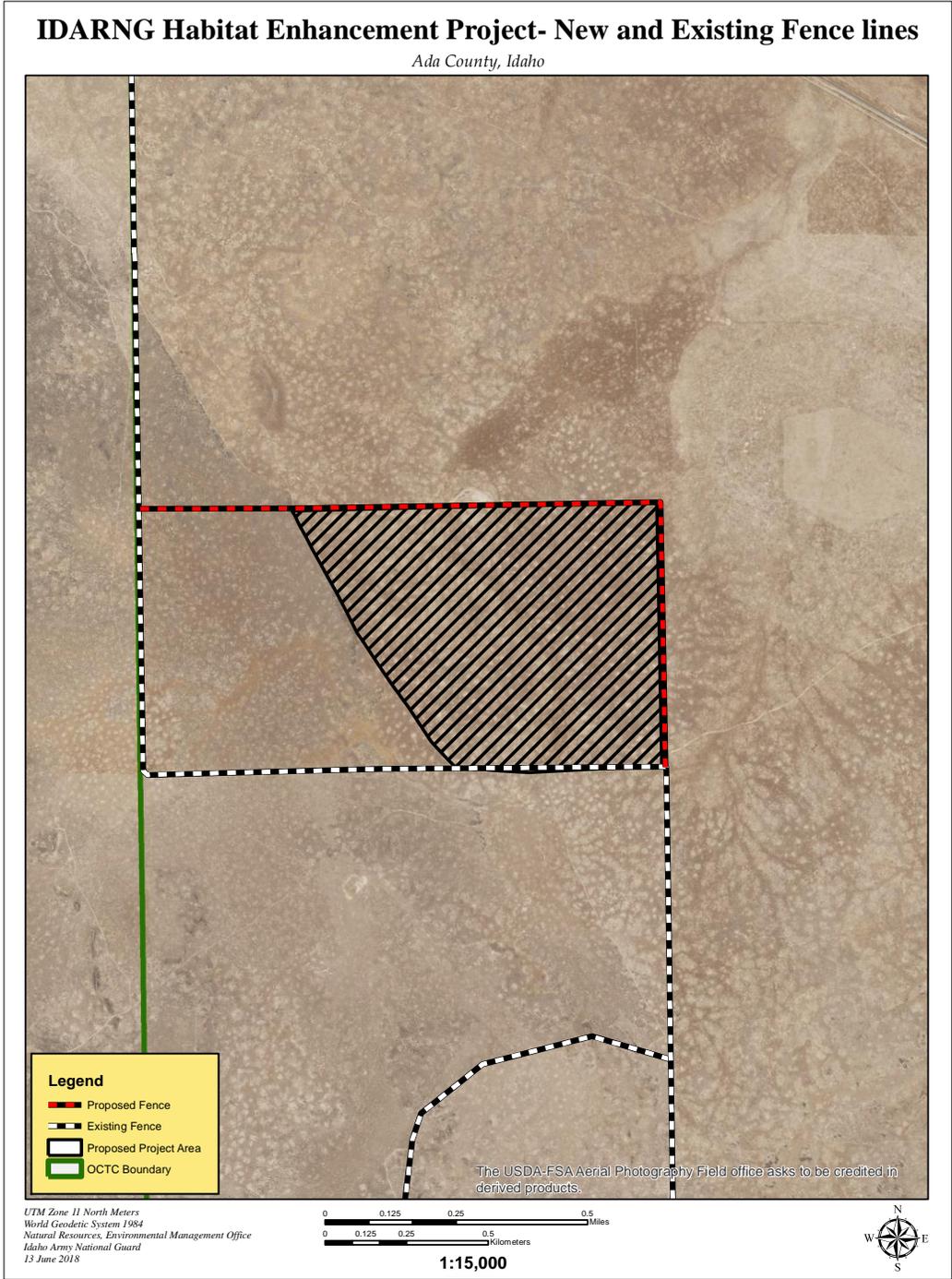
The proposed site is located within the NCA management area 1 (USDI BLM 2008) and had large contiguous stand of late seral sagebrush, including the presence of occupied *Lepidium papilliferum* (LEPA), which has been re-listed as a threatened species under the Endangered Species Act. However, the site currently provides very limited habitat value for prey/forage, cover, or nesting and has created a connected fuel load that jeopardizes adjacent in-tact shrub stands and occupied LEPA habitat (EO27). Restoration of native grass, forb, and shrub species would provide habitat for multiple species, including raptors and their prey base, provide sustainable conditions for LEPA, and reduce the risk from wildfire. In contrast, the proposed DAGIR project is located within management area 3 (USDI BLM 2008). As such, enhancement of the proposed site in management area 1 would have a much greater benefit for raptors, their prey species, and LEPA relative to restoration or enhancement actions associated with the proposed DAGIR site.

The proposed site is also advantageous because of the proximity to established access points and presence of existing infrastructure (roads, fuel breaks, and fence). This will save time and money which can be used to increase restoration intensity, i.e. increase resources per area. In addition to implementing and monitoring the overall success of this

project over time, we can also conduct long-term fuels treatments on adjacent lands in coordination with the BLM, Idaho Department of Lands, US Fish and Wildlife Service, and the local livestock permittee. The location is also in close relative proximity to a major metropolitan area (Boise), which lends itself well to public education and outreach, and can be used as a standard for future mitigation and enhancement projects associated with the NCA.



Map 2. BLM/IDARNG Enhancement Project Area 1- Vicinity Map



Map 3. BLM/IDARNG Enhancement Project Area 1- Site Map.