

**DRAFT
ENVIRONMENTAL ASSESSMENT**

for the

**RENOVATION OF HOUSING FOR VICTIMS
OF DOMESTIC VIOLENCE**

**A Program under Recovery Grants to Indian
Tribal Governments**

**PREPARED FOR
THE OFFICE ON VIOLENCE AGAINST WOMEN
BY THE
MANGI ENVIRONMENTAL GROUP, INC.
MCLEAN, VIRGINIA**

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Executive Summary

This Environmental Assessment (EA) has been prepared to address the effects of renovating ten housing units for victims of domestic violence on tribal lands funded by the Office on Violence Against Women's (OVW) grant program under the American Recovery and Reinvestment Act Grants to Indian Tribal Governments (ARRA GTTG). The EA has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) regulations for implementing the procedural provisions of NEPA, 40 CFR Parts 1500 1508, and the National Institute of Justice Draft Guidance for Preparing Environmental Assessments.

PURPOSE AND NEED OF THE PROPOSED ACTION

The purpose of this project is to renovate housing/shelters for Native American women who are victims of domestic violence. The project is needed so that tribal governments can respond to violence committed against Indian women and improve services available to help Indian women who are victims of violence.

PROPOSED ACTION

The proposed action would be that ten structures that would be used as shelters, safe homes, or transitional living units would be renovated for recipients of the ARRA GTTG funding. All tribes may use funds for minor renovations that do not change the basic prior use of the facility or the size. Examples of such renovations include painting, replacing carpet, hanging window treatments, and making needed repairs such as electrical or plumbing repairs. If tribes want to use funds for more serious renovations, such as renovations that change the size of the facility, the tribe needs to prepare an environmental assessment for OVW approval. Ten larger renovation projects are addressed in this EA. Projects are funded for the Confederated Salish and Kootenai Tribes, Houlton Band of Maliseet, Keweenaw Bay, Mississippi Band of Choctaw, Osage Nation, Sault Ste. Marie, Seminole Nation of Oklahoma, Tulalip Tribe, Turtle Mountain Band of Chippewa, Wiconi Wawokiya, Inc. (Crow Creek Sioux Tribe).

ALTERNATIVES

The No Action Alternative is included as required by NEPA regulations to identify baseline conditions against which potential impacts of implementation alternatives are evaluated. The No Action Alternative represents the benchmark condition of the environment if the proposed action is not implemented. Under the No Action Alternative, no funds would be disbursed via grants to tribes for renovation of housing for victims of domestic violence. No other alternatives are analyzed.

ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES

Environmental resources may be affected by implementing the Proposed Action and these impacts are analyzed in this EA. The environmental analysis is based upon the impacts of

renovation activities. In the course of renovating housing, there would be some impacts to environmental resources, but overall the impacts are considered less than significant. Most of the impacts are expected to be minimal, largely due to mitigation measures and federal, state and local requirements that would preemptively avoid potentially significant impacts. Mitigation measures are provided where applicable.

CONCLUSION

This EA analyzes the environmental impacts of housing renovation for victims of domestic violence on tribal lands funded by OVW grants. The proposed action is not expected to result in significant adverse impacts on the environment; therefore, an Environmental Impact Statement is not required and a Finding of No Significant Impact (FONSI) is appropriate.

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
ARRA	American Recovery and Reinvestment Act
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibel
dBA	a-weighted decibel
DNL	day-night sound level
DOJ	Department of Justice
EA	Environmental Assessment
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
FWS	Fish and Wildlife Service
GTTG	Recovery Grants to Indian Tribal Governments
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO _x	nitrous oxides
NRHP	National Register of Historic Places
Hz	hertz
O ₃	ozone
OVW	Office on Violence Against Women
Pb	lead
PM _{2.5}	particulate matter
PM ₁₀	particulate matter
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
T&E	Threatened and Endangered
USACE	United States Army Corps of Engineers
USC	United States Code
VAWA	Violence Against Women Act

1.0 INTRODUCTION

The Office on Violence Against Women (OVW), a component of the U.S. Department of Justice (DOJ), provides national leadership in developing the nation's capacity to reduce violence against women through the implementation of the Violence Against Women Act (VAWA). Created in 1995, OVW administers financial and technical assistance to communities across the country that are developing programs, policies, and practices aimed at ending domestic violence, dating violence, sexual assault, and stalking. Currently, OVW administers two formula grant program and 17 discretionary grant programs, which were established under VAWA and subsequent legislation. Since its inception, OVW has awarded nearly \$4 billion in grants and cooperative agreements, and has launched a multifaceted approach to implementing VAWA. By forging state, local, and tribal partnerships among police, prosecutors, victim advocates, health care providers, faith leaders, and others, OVW grant programs help provide victims with the protection and services they need to pursue safe and healthy lives, while simultaneously enabling communities to hold offenders accountable for their violence.

In addition to overseeing 19 federal grant programs, OVW often undertakes a number of special initiatives in response to areas of special need, dedicating resources to develop enhancements in areas requiring particular attention or in communities facing particularly acute challenges. OVW special initiatives include, but are not limited to, the Judicial Oversight Demonstration Initiative, the President's Family Justice Center Initiative, the Safety for Indian Women from Sexual Assault Offenders Demonstration Initiative, and the National Protocol for Sexual Assault Forensic Exams. These special initiatives allow OVW to explore different innovations in the violence against women field and share knowledge that can be replicated nationwide.

1.1 Background

According to a December 2004 study by the Bureau of Justice Statistics, American Indians are twice as likely to experience sexual assault crimes compared to all other races (USDOJ, 2010). In 2000, the National Institute of Justice published a report on the findings of the National Violence Against Women Survey which revealed that one in three Indian women reported having been raped during her lifetime.

The Grants to Indian Tribal Governments Program (Tribal Governments Program) was created in Title IX of VAWA. The Tribal Governments Program is designed to fulfill the three goals of Title IX: (1) to decrease the number of violent crimes committed against Indian women; (2) to help Indian tribes use their independent authority to respond to crimes of violence against Indian women; and (3) to make sure that people who commit violent crimes against Indian women are held responsible for their actions. The Recovery Act Tribal Governments Program can help fulfill the goals of the Recovery Act by funding grantees to hire new personnel, develop databases, renovate of housing, and help victims achieve economic independence.

Under the American Recovery and Reinvestment Act of 2009, one of OVW's grant programs was the Recovery Grants to Indian Tribal Governments (ARRA GTTG) (USDOJ, 2009). Under

the ARRA GTTG, one of the permissible activities is for tribes to renovate housing and shelters for victims of domestic violence. Eligible applicants for the Recovery Act Grants to Indian Tribal Governments are limited to federally recognized Indian Tribes and authorized designees of Tribes. Of the 35 tribes and designees funded under the ARRA GTTG, 13 were funded specifically for these renovations.

For purposes of the Recovery Act Tribal Governments Program, funding may be used for renovations. All tribes may use funds for minor renovations that do not change the basic prior use of the facility or the size. Examples of such renovations include painting, replacing carpet, hanging window treatments, and making needed repairs such as electrical or plumbing repairs. If tribes want to use funds for more serious renovations, such as renovations that change the size of the facility, the tribe will need to prepare an environmental assessment for OVW approval. Ten larger renovation projects are addressed in this Environmental Assessment (EA).

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code (USC) 4321 et seq.) and the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations (CFR) 1500 through 1508) for implementing NEPA.

1.2 Purpose and Need for Action

The purpose of this project is to renovate housing/shelters for Native American women who are victims of domestic violence. The project is needed so that tribal governments can respond to violence committed against Indian women and improve services available to help Indian women who are victims of violence.

1.3 Funded Projects

Table 1-1 lists the projects funded for housing/shelter renovation through ARRA GTTG.

Table 1-1. Funded projects under ARRA GTTG.

Award Number	Application Number	Name	State
2009-EG-S6-0015	2009-X3570-MT-EG	Confederated Salish and Kootenai Tribes	MT
2009-EG-S6-0019	2009-X3287-ME-EG	Houlton Band of Maliseet	ME
2009-EG-S6-0033	2009-X3466-MI-EG	Keweenaw Bay	MI
2009-EG-S6-0026	2009-X3336-MS-EG	Mississippi Band of Choctaw	MS
2009-EG-S6-0029	2009-X3472-OK-EG	Osage Nation	OK
2009-EG-S6-0035	2009-X2789-MI-EG	Sault Ste. Marie	MI
2009-EG-S6-0032	2009-X3553-OK-EG	Seminole Nation of Oklahoma	OK
2009-EG-S6-0007	2009-X3123-WA-EG	Tulalip Tribe	WA
2009-EG-S6-0020	2009-X3633-ND-EG	Turtle Mountain Band of Chippewa	ND
2009-EG-S6-0031	2009-X3412-SD-EG	Wiconi Wawokiya, Inc. (Crow Creek Sioux Tribe)	SD

2.0 PROPOSED ACTION AND ALTERNATIVES

This chapter describes the Proposed Action and the No Action Alternative, as required by Council on Environmental Quality regulations implementing the National Environmental Policy Act. Alternatives that were considered and dismissed from further analysis are identified as well.

2.1 No Action Alternative

The No Action Alternative is included as required by NEPA regulations to identify baseline conditions against which potential impacts of implementation alternatives are evaluated. The No Action Alternative represents the benchmark condition of the environment if the proposed action is not implemented.

The no action would be that housing for ten victims of domestic violence would not be renovated.

2.2 Proposed Action

The proposed action would be that ten structures that would be used as shelters, safe homes, or transitional living units would be renovated for recipients of the ARRA GTTG funding. Each renovation project is described below.

Confederated Salish and Kootenai Tribes

The proposed renovation would change the size but not the current use of the Transitional Living Center building, which was constructed in 1980 and renovated in 1998. The building is located on the campus of Salish Kootenai College.

- Add a laundry & bathroom facility (156ft square feet) off of common area of center. It will have asphalt roofing, frame construction, energy efficient doors, windows, insulation, electric heat, and a venting system. It will be accessible for victims with disabilities.

Houlton Band of Maliseet Indians

The Maliseet Domestic Violence and Sexual Assault Program operates an emergency shelter for women (and their children) who have been abused, sexually assaulted, and stalked. The shelter is a three bedroom mobile home that has ten single beds and two baby beds. The building is a 1008 sq ft mobile home trailer installed on a concrete slab built in 2005. The renovations, which would not change the size or prior use of the building, include:

- Install 6' vinyl fencing around the perimeter of the shelter property
- Build a roof over the handicap ramp and front entry (7' x 25') and another over the back deck and back entry (10' x 10'). They will be of wood construction with metal roofing.

- Increase the electrical supply into the building which will require additional wiring inside and outside.
- Replace the kitchen sink; kitchen faucet and plumbing; bathroom sink faucet; and bathroom shower faucet.
- Install a central air conditioning condenser.
- Replace all the windows with double glazed energy efficient windows.
- Replace the two exit doors with energy efficient solid core exterior doors.
- Replace the three interior bedroom doors.
- Replace all the flooring with a good quality vinyl product.
- Have an outdoor faucet installed.

Keweenaw Bay

A donated house would be renovated to be used as transitional housing for survivors and allow accommodations for up to four families.

- Repair foundation.
- Install subfloor and underlayment.
- Rebuild porch.
- Replace interior doors and trim.
- Replace windows and exterior doors.
- Install insulation.
- Replace kitchen cabinets and countertops.
- Replace bathroom cabinets and light fixtures.
- Refinish interior walls.

Mississippi Band of Choctaw Indians

A building that is currently vacant would be renovated. It was previously used as the headquarters for tribal law enforcement and court services as well as a detention facility for adults and juveniles. It would be turned into a shelter for up to 15 women and 10 children. It is 5,355 sq ft and was constructed in 1973.

- Refinish flooring or replace carpet with vinyl.
- Replace outer doors.
- Replace lighting fixtures.
- Remove interior panel wall to expand the kitchen area
- Install a new wall in the dining room to separate the dining area from what will become a single living space, bath, and laundry.
- Some existing doors and windows will be removed and will be filled in with wood studs and sheetrock.
- Strip and paint walls.
- Replace the HVAC (central heating and cooling system) units and ductwork with a new system.
- Replace roof.
- Install power outlets (GFI, Single Pole and three way switches, Amp oven, and dryer), switchgear, along with a new fire alarm system and data/voice system.

- Plumbing will include all new fixtures and installation for kitchen, lavatories, floor sinks, and connections.

Osage Nation

Renovate shelter to make needed repairs. The current shelter requires substantial renovation to return it to adequate condition to support future services.

- Replace/repair inside staircase.
- Install lighting.
- Install new roof.
- Replace outside steps and covered porch to make safer.
- Painting the outside.
- Upgrade the bathrooms.
- Fix and put insulation in the upstairs ceiling.
- Widen doorways for wheelchairs downstairs.
- Replace outside fire escape stairs.

Sault Ste. Marie

A building that has been out of service for two years would be renovated. Previously it was office space, so the use of the building would change.

- Electrical systems will be tested, upgraded and repaired as needed
- Replace heating/cooling systems
- Plumbing: interior plumbing will be upgraded and replaces as needed. Two half baths will be upgraded and a third one will be installed into an area that previously did not have a bathroom
- Water access will be extended to the new kitchen and laundry areas
- Replace ceiling tiles
- Replace carpet with linoleum or tiles
- Replace and paint interior walls as needed
- Install commercial appliances
- Replace exterior doorways and framing
- Replace missing siding on exterior
- Install new telephone system
- Add a new 6 ft tall privacy fence around the building.

Seminole Nation of Oklahoma

Renovate shelter to make needed repairs. A safe room was built in the shelter due to the changing weather of Oklahoma and for purposes of other emergency situations where the residents may need a secure location to go to quickly without having to exit the shelter. The safe room also will serve as a conference room where residents can go meet with caseworkers, legal representatives, attend group sessions, or learn life/job skills.

- Install a privacy fence around the entire back portion of the safe house to provide a more secure area for the children residing in shelter a place for recreation as well as the women.
- Install a vent hood.
- Install a fire suppression system.
- Upgrade electrical system, including outlets on the walls, phone for the crisis line, and hook-ups for televisions.

Tulalip Tribe

The renovation would be done to a wood-sided modular unit built in 1982. The renovations would change the prior use of the building, which is not currently in use. It previously was the Tribal Language Department building. The renovations would not change the facility size.

Renovations would include:

- Install new chain-link fencing with interwoven slats for privacy around the shelter
- Install security system
- Install motion flood lights
- Renovate bathrooms (plumbing, install shower and bathtub)
- Tear out old carpet and replace vinyl flooring in side entry way, kitchen, dining and living areas, children's play room, and bathrooms.
- Replace doors
- Paint interior of entire building, living room, group room, residential aids office area, hallways, bedrooms, kitchen, playroom and bathrooms
- Change room and ceiling lights

Turtle Mountain Band of Chippewa Indians

The building is 2,712 square foot wood frame on foundation. It was delivered to the Turtle Mountain Reservation from one of the US Airbases in January of 1997. At that time the building was set on new foundation and renovated to meet home guidelines at the time. Renovations would include:

- Replace the roof that is currently in place at the shelter. The roof currently has asphalt shingles and we will be replacing it with 3 tab shingles.
- Replace the linoleum floors with laminate.
- Build a new privacy/security fence all the way around the building.
- Add new doors and rain gutters to the shelter.

Wiconi Wawakiya, Inc. (for the Crow Creek Sioux Tribe)

The shelter is 2,000 square feet on the main floor and 2,000 square feet in the basement. It was constructed in the early 1900's and renovated into the shelter in 1995. The building is a wooden structure with a full basement. There would be no renovation inside of the shelter.

- Install a ten-foot security fence made of cedar with a gate for vehicles.
- Repair the entrances and driveway to the shelter with concrete and/or gravel.

- Add a security screen door. Grille on the exterior of the door in steel and impossible to break through the mesh.

2.3 Alternatives Considered and Dismissed

There are no alternatives that have been considered and dismissed.

2.4 Comparison of Alternatives

Table 2-1 illustrates a summary of the impacts resulting from each of the alternatives.

Table 2-1. Comparison of Environmental Impacts of Alternatives.

Impact Topic	Proposed Action	No Action Alternative
Air Quality	Direct, temporary, local, adverse and negligible impacts on air quality due to emissions generated during renovation	No impacts on air quality
Geology, Topography, Soils	Direct, long-term, local, adverse and negligible to minor impacts from disturbing and compacting soils during renovation activities	No impacts on geology, topography, and soils
Water Resources	Direct, long-term, local, adverse and negligible impacts on water resources from possible erosion, sedimentation and stormwater runoff during renovation.	No impacts on water resources
Natural Environment	Direct, short-term, local, adverse and negligible impacts on the natural environment due to clearing of vegetation, introduction of non-native plants, and displacement and disturbance of wildlife during renovation.	No impacts on the natural environment
Endangered Species	Direct, short-term, local, adverse and negligible impacts due to possible disturbance and displacement of listed species.	No impacts on endangered species
Historic Preservation	Direct, long-term, local, adverse and negligible ground disturbance at previously disturbed renovation sites.	No impacts on historic preservation

Impact Topic	Proposed Action	No Action Alternative
Human Population	Direct, short- and long-term, local, beneficial and minor due to possible creation of new jobs and availability of new housing for low-income and minority populations.	No impacts on the human population
Noise	Direct, short-term, local, adverse and minor impacts due to noise generated by machinery and human activities during renovation.	No noise impacts
Energy	Direct and indirect, short- and long-term, local, adverse and negligible impacts as renovation activities would consume energy.	No impacts on energy

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Methodology

This section describes the affected environment and environmental effects associated with the alternatives. The descriptions of the environment in this chapter provide a broad overview of the natural and human environments of projects participating in the ARRA GTTG grant program. In general, all renovations would occur on existing buildings which are located in developed and previously disturbed areas.

Following the overview of the affected environment, this section presents analysis of the direct, indirect, and cumulative environmental and socioeconomic effects that may occur as a result of the Proposed Action and the No Action Alternative. Potential impacts are described in terms of type (beneficial or adverse), context, duration, and significance. The following general definitions were used to evaluate impacts associated with project alternatives.

3.1.1 Direct versus Indirect Effects

The terms “effect” and “impact” are synonymous as used in this EA. Direct effects are impacts caused by the alternative at the same time and in the same location as the action. Indirect effects are impacts caused by the alternative that occur later in time or farther in distance than the action, but still reasonably foreseeable. An indirect impact could occur because of a change to another resource or impact topic.

3.1.2 Duration of Impact

Impacts are also expressed in terms of duration. Temporary impacts would occur only during the time that project activities are being conducted. In the interim between these activities, resource conditions would return to pre-activity conditions. Short-term impacts would extend beyond the time of project activities, but would not last more than one year. Long-term impacts would likely last more than one year and can potentially continue indefinitely, in which case they could also be described as permanent.

3.1.3 Context

Context is the setting within which an impact is analyzed. Context is the setting within which an impact is analyzed, such as local, reservation-wide, or regional. Localized impacts are those that affect the resource area only on the project site or its immediate surroundings, and would not extend reservation-wide or into the region.

3.1.4 Intensity of Impact

Impact intensity is the degree to which a resource would be beneficially or adversely affected by an action. Impact intensities are quantified as negligible, minor, moderate, or major as defined in Table 3-1.

Table 3-1. Summary of Impact Levels

Negligible	Minor	Moderate	Major
Minimal impact on the resource would occur; any change that might occur would be barely perceptible and not be easily measurable.	Change in a resource would occur, but no substantial resource impact would result; the change in the resource would be detectable but would not alter the condition or appearance of the resource.	Noticeable change in a resource would occur and this change would alter the condition or appearance of the resource, but the integrity of the resource would remain intact.	Substantial impact or change in a resource area would occur that is easily defined and highly noticeable and that measurably alters the condition or appearance of the resource; the integrity of the resource may not remain intact.

3.1.5 Significance

Significance, as used in NEPA, requires that both context and intensity be considered. For example, an otherwise minor action may become major when undertaken in the context of an endangered species’ critical habitat or in the context of a low-income or minority community. In each of these contexts, the intensity of the potential effect must be considered.

A Major Federal Action is defined as follows: “Major Federal action” includes actions with effects that may be major and which are potentially subject to Federal control and responsibility. Major reinforces but does not have a meaning independent of significantly.

The word “major” “does not have a meaning independent of significantly.” This means that a Federal action is “major” if it has the potential for significant environmental impact.

3.2 Air Quality

3.2.1 Affected Environment

The Clean Air Act (42 USC 7401-7671q), as amended, gives the Environmental Protection Agency (EPA) the responsibility to establish the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) that set acceptable concentration levels for seven criteria pollutants: particulate matter with a diameter less than or equal to a nominal 10 micrometers (PM₁₀), particulate matter with a diameter less than or equal to a nominal 2.5 micrometers (PM_{2.5}), sulfur dioxide (SO₂), carbon monoxide (CO), nitrous oxides (NO_x), ozone (O₃), and lead (Pb) (EPA, 2010a). Primary standards set limits to protect public health, including

the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. Short-term NAAQS (1-, 8-, and 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. Each state has the authority to adopt standards stricter than those established under the federal program; however, many states accept the federal standards.

Federal regulations designate regions in violation of the NAAQS as non-attainment areas. Federal regulations designate regions with levels below the NAAQS as attainment areas. Maintenance regions are areas that have previously been designated non-attainment and have been re-designated to attainment for a probationary period through the implementation of maintenance plans.

For this Proposed Action, the relevant regulatory requirement is that federal agencies (or projects funded with federal money, as is the case here) are not allowed to take any action that would interfere with a state's implementation plan to maintain or to achieve compliance with those air quality standards. Federal action must be "in conformity" with whatever restrictions or limitations the state has established for air emissions necessary to attain compliance with NAAQS.

Since the Proposed Action does not fall within the categories of an advisory, emergency, or excluded activity, screening techniques are used to evaluate a project. EPA has established the protocols for a screening process to verify whether a conformity determination is necessary for both attainment and non-attainment areas.

The Clean Air Act contains the legislation that mandates the general conformity rule to ensure that federal actions in non-attainment and maintenance areas do not interfere with a state's timely attainment of the NAAQS. The general conformity process requires a determination of whether an action would increase emissions of criteria pollutants above preset threshold levels (40 CFR 93.153). The thresholds are referred to as *de minimis* criteria, and vary depending upon the pollutant. The term *de minimis* means "so small as to be negligible or insignificant." If an action is below the *de minimis* emission threshold, then a conformity determination is not required. The thresholds established are 100 tons per year or less for each pollutant in order to qualify for *de minimis*. If the *de minimis* criteria are exceeded, then a conformity determination must be made. In addition, the general conformity rule applies if the emissions are *regionally significant*. *Regionally significant* emissions are defined as the total direct and indirect emissions of a federal action that represents 10 percent or more of an area's total emissions for a criteria pollutant.

3.2.2 Environmental Consequences

Proposed Action Alternative

Each state has different ambient air quality standards for the various air pollutants, and EPA has determined the attainment or non-attainment designation for all areas in the United States.

Outdoor renovation activities may involve heavy or power equipment use and a certain level of air emissions. Emissions generated during renovation would be short-term only for the duration of each project. It is highly unlikely, however, that housing renovation would approach *de minimis* levels, thus resulting in minimal impacts to air quality. Indoor and outdoor use of paint, varnish, glue and other substances that contain hazardous compounds that can evaporate would also temporarily degrade air quality at the project site. However, these substances would dissipate quickly and ambient air quality would be restored.

The Proposed Action would have direct, temporary, local, adverse and negligible impacts on air quality at each site; thus impacts would not be significant.

No Action Alternative

There would be no new impacts on air quality under the No Action Alternative as none of the housing renovation would occur.

3.2.3 Mitigation Measures

All state, local, and tribal regulations pertaining to emissions would be followed, thus minimizing impacts to air quality. Additionally, no person shall handle, transport, or store any material in a manner that could allow unnecessary amounts of air contaminants to become airborne. During construction, reasonable measures may be required to prevent unnecessary amounts of particulate matter from becoming airborne. Such precautions may include the following:

- Using water to control dust during renovation
- Covering open equipment for conveying or transporting material likely to create objectionable air pollution when airborne
- Promptly removing spilled or tracked dirt or other materials from paved streets

3.3 Geology and Soils (includes Farmland Protection)

3.3.1 Affected Environment

Site geology and soils will vary among project locations. Geology, the structure of a specific region of the earth's crust, is often described or mapped by geologic formations. Geologic materials consist of rock (there are three major types of rock: igneous, sedimentary, and metamorphic) and unconsolidated material (such as sediments and soils).

Soil is a collective term for the inorganic and organic substrate covering bedrock in which vegetation grows and a multitude of organisms reside. Soils are surveyed nationwide by county. Soil resources provide a foundation for both plant and animal communities by establishing a substrate for plant growth and vegetative cover for animal habitat and feeding. These resources are equally important in both terrestrial and aquatic environments. Soils can be degraded through three processes: (1) physical degradation, such as wind and water erosion, and compaction; (2) chemical degradation such as toxification, salinization, and acidification; and (3)

biological degradation, which includes declines in organic matter, carbon, and the activity and diversity of soil fauna. While there are few applicable regulations regarding soils, proper conservation principles can reduce erosion, decrease turbidity, and generally improve water quality.

In August 1980, the CEQ directed that Federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture's Natural Resources Conservation Service as prime or unique. Prime or unique farmland, as stated in Title 7, Chapter 73, Section 4201 (c)(1) of the Farmland Protection Policy Act, is defined as soil that particularly produces general crops, such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops, such as fruits, vegetables, and nuts.

The project sites are located in areas that have been developed where the soils have been previously disturbed. It is not likely that any of the project locations occur in prime or unique farmland.

3.3.2 Environmental Consequences

Proposed Action Alternative

Indoor renovation activities would not result in any impacts to soils as they would occur inside existing buildings. Outdoor renovation activities, such as installation of new fencing, foundation repair, and the addition of another room, would likely involve heavy equipment use and would entail disturbing and compacting soils from activities such as grading, excavating, and filling. Impacts to soils from erosion and compaction would vary among sites dependent largely upon the types of soils and rainfall amounts. Some locations are more susceptible to erosion due to soils with high clay content and large amounts of rain. Impacts can be reduced through such mitigation measures listed below. Additionally, all project locations occur in developed areas where soils have in general been previously disturbed.

It is possible that some previously undisturbed soils may be disturbed by compaction from heavy equipment, soil removal, or soil erosion. If any natural soil horizons exist, they would likely be lost during the earthwork. Construction would compact and destroy the structure and function of the organic soil horizon and mineral soils, potentially resulting in increased runoff and erosion. However, as the majority of disturbance would occur in previously disturbed areas, adverse soil impacts would be minimized.

Long-term impacts would be associated with soil compaction from heavy equipment and loss of soil function if soils are covered with man-made surfaces. These impacts would generally be minor due to the disturbed nature of the soils at the sites and existing soil compaction.

No impacts to geology are expected because geological features would not be disturbed from activities associated with this alternative.

The Proposed Action would have direct, long-term, local, adverse and negligible to minor impacts on soils from renovation activities; thus impacts would not be significant.

No Action Alternative

Impacts on geology and soils under the No Action Alternative would not occur as no housing renovation would be implemented.

3.3.3 Mitigation Measures

Adhering to federal, state, and local regulations, ordinances, and permitting systems is one way to minimize impacts to geology and soils using site-specific guidelines. Erosion prevention practices could include using silt screening around any disturbed areas, mulching all exposed slopes, placing staked hay bales in drainages, and sprinkling exposed soil to prevent wind erosion. In addition, limiting the area of disturbance, revegetating disturbed soils upon completion of construction, restoring areas to natural contours, and avoiding construction during periods of high erosion can reduce impacts.

3.4 Water Resources (Water Quality, Surface Water, Wetlands, Floodplains)

3.4.1 Affected Environment

Water is a central component of any community for both the natural and human inhabitants. The availability of water, including surface water and groundwater, and the quality of those waters, play a critical role in determining the natural community structure and in supporting human activity. There are numerous laws and regulations that protect both hydrology and water quality on the Federal level and on the State and regional levels. On the Federal level, the primary law protecting the "chemical, physical, and biological integrity of the nation's waters" is the Clean Water Act (CWA). State-issued 401 Certifications under the CWA protect water quality, and the U.S. Army Corps of Engineers (USACE) issued Section 404 Permit under the CWA protects waters and wetlands of the United States. The Safe Drinking Water Act protects the quality of the nation's drinking water and provides limited protection of groundwater resources. The River and Harbor Act and the Water Resources Development Act assign to the USACE the responsibility for ensuring the navigability of the nation's rivers and harbors and providing flood protection. The Water Resources Development Act also provides funding for various water resource development projects that meet those objectives as well as for coastal erosion and levee construction projects. The Resource Conservation and Recovery Act (RCRA), the Superfund Amendments and Reauthorization Act (SARA), the Coastal Zone Management Act (CZMA), and numerous fish and wildlife protection, federal land management, and energy laws, also protect water resources. Though the above mentioned laws and regulations are by no means exhaustive, they are some of the more commonly cited regulations protecting water resources. Projects that require consideration and/or permitting under any of the above mentioned laws and regulations could result in impacts to water resources.

Executive Order (E.O.) 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative (EPA, 2009a). In accomplishing this objective, "each agency shall provide

leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements;
- conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

E.O. 11990 directs federal agencies to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands" (EPA, 2009b). To meet these objectives, federal agencies, in planning their actions, must consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The Order applies to:

- acquisition, management, and disposition of federal lands and facilities construction and improvement projects which are undertaken, financed or assisted by federal agencies;
- federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

3.4.2 Environmental Consequences

Proposed Action Alternative

Some renovation activities could involve earthmoving, digging, and other construction activities possibly leading to erosion, as natural vegetation and soil structure is disturbed. This may lead to a decrease in stormwater runoff quality and impairment of receiving waters without proper precautions. Best management practices (BMPs) that include stormwater runoff control and erosion control to ensure that quality of runoff water is maintained at a high level. Gutters and downspouts can direct rainfall away from erodable areas. Design and construction should include measures to properly handle excessive rainfall and stormwater flows.

Mitigations should contain provisions for preserving water quality. Clearing and vegetation removal makes soils more vulnerable to erosion, potentially affecting sediment levels in nearby water. Soil compaction from the use of heavy equipment reduces the rate of infiltration of rainwater, creating greater overland flows and increasing erosion. Generally, following mitigation measures as described below should minimize impacts to water quality.

Heavy equipment used in renovation work often use materials that are classified as hazardous, such as petroleum, oils, and lubricants. Incidental spills during refueling or simple mechanical leaks may introduce hazardous materials to nearby water sources. Additional sources of hazardous materials may include portable restrooms and personal vehicles. Spill containment and cleanup procedures should be established to minimize these impacts. Readily available materials for cleanup and recovery would further minimize impacts.

Most, if not all, of the housing renovation projects are located outside of floodplain and wetland limits, suggesting that there are no floodplain or wetland impacts.

For these reasons, housing renovation would have direct, long-term, local, adverse and negligible impacts on water resources from renovation activities. The overall impact of the alternative is therefore not significant.

No Action Alternative

As no housing renovation would take place, there would be no impacts on water resources under the No Action Alternative.

3.4.3 Mitigation Measures

Avoidance of impacts to water resources should always be the chief goal of any project. When avoidance is not possible, mitigation measures should always be implemented in order to reduce impacts. Several standard mitigation measures that would be effective in avoiding or reducing impacts to water resources include strict adherence to all permit requirements for the project and implementation of Best Management Practices. BMPs at construction sites typically consist of various erosion and sediment control measures. Silt fences, straw bales, and other temporary measures should be placed in ditches and along portions of site perimeters to control erosion during construction activities. These temporary erosion prevention measures should be maintained in place until the site vegetation is firmly established and soil has stabilized.

Any land disturbance should be planned according to seasonal and climactic characteristics of the region where the project is located in order to minimize impacts; for instance, whenever possible, disturbance should be planned during dry (low precipitation) seasons. Vegetation removal during land disturbance activities should be minimized and all disturbed areas should be stabilized and revegetated with native plant vegetation immediately following commencement of land disturbance to reduce site outflows of stormwater. Pollution prevention and waste minimization should also be incorporated.

3.5 Natural Environment (Wildlife, Wildlife Habitat, and Vegetation)

3.5.1 Affected Environment

Vegetation and wildlife communities are an integral part of any ecosystem and vary greatly among project locations across the country. There can be numerous regulatory requirements involved when a proposed action has impacts upon vegetation, wildlife, and habitat including the

Endangered Species Act (see Section 3.6 below), the Fishery Conservation and Management Act, the Marine Mammal Protection Act, and the Migratory Bird Treaty Act. These laws and others provide a framework for conservation of vegetation and wildlife resources and can be supplemented with sound conservation principles to minimize impacts to these communities.

3.5.2 Environmental Consequences

Proposed Action Alternative

Renovation projects involve noise, fugitive dust, waste materials, and impacts to water and air quality which may affect vegetation and wildlife at or near the site. Construction activities often necessitate removal of plants located at the project site, including possible removal of trees and ground cover for site preparation. Repeated disturbance of vegetation (i.e., due to vehicle passes or foot traffic) during construction in areas where plants are not cleared would cause damage to plants and destruction of the vegetation mat. Impacts on native vegetation would not likely occur as the renovation sites are located in developed or previously disturbed areas. If native vegetation occurs on a project site, impacts would likely be limited to a small area. The overall impact on vegetation would be reduced by concentrating the area of disturbance to the smallest area necessary to complete the project. Additionally, impacts would be minimal as vegetation on all the sites has been previously disturbed.

Non-native plants or seeds could be brought to a site with fill material or on heavy equipment or vehicles. New introductions could allow for exotic plants to become established and spread, especially in areas where the ground is disturbed by construction activities. Exotic plants currently growing in the area can also become established and spread on newly disturbed substrates. However, mitigation to ensure that imported material does not contain exotic plant material should be implemented to reduce this impact.

Construction activities and human presence could cause temporary displacement and disturbance of resident wildlife for the duration of construction. Species, however, often return to the area after construction is completed. Some species may be prevented from using the resources on the project site due to habitat alteration or destruction. These impacts are expected to be localized and limited to the immediate area of the project site. Activities that affect wildlife habitat often impact component resources such as vegetation, soil, and water.

Renovations projects would be expected to have direct, short-term, local, adverse and negligible impacts on the natural environment. The overall impact of the alternative is therefore not significant.

No Action Alternative

Impacts on vegetation and wildlife would not occur under the No Action Alternative as renovation of housing would not occur.

3.5.3 Mitigation Measures

The area of vegetation disturbance should be limited. For example, heavy equipment should be kept on road surfaces to the extent possible. Construction areas should be identified by and fenced with construction tape, snow fencing, or some similar material prior to any construction activity. The fencing defines the construction zone and confines activity to the minimum area required for construction. Construction materials should be stored in previously disturbed areas. Disturbed areas should be restored to natural contours to the extent possible to reduce the potential for erosion and revegetated with native plant species, or with plants previously removed from the construction area whenever possible. Gravel and fill for construction or maintenance should be obtained from certified noxious weed-free sources. Subsequent to project completion, monitor for non-native plants and remove any invasive species observed.

Where wildlife habitat is lost, habitat enhancement or replacement measures should be taken. Trees and other native vegetation could be planted to improve wildlife habitat and restore functionality. Measures could be developed to minimize any noise disturbance by heavy machinery during construction or, when possible, construction should be conducted to avoid sensitive periods for wildlife, such as during breeding season.

3.6 Endangered Species

3.6.1 Affected Environment

The Endangered Species Act (ESA) establishes a national program for the conservation of threatened and endangered species (T&E species) of fish, wildlife, and plants, and the ecosystems upon which they depend (EPA, 2010b). It is administered by the Interior Department's U.S. Fish and Wildlife Service (FWS) and the Commerce Department's National Marine Fisheries Service (NMFS). The FWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine species such as salmon and whales.

Under the ESA, species may be listed as either "endangered" or "threatened." Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." The term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." Listed plants are not protected from take, although it is illegal to collect or maliciously harm them on federal lands.

Section 7 of the ESA requires federal agencies to consult with the FWS or NMFS to ensure that actions they authorize, fund, or carry out will not jeopardize listed species or destroy or adversely modify the critical habitat of a listed species. Critical habitat includes geographic areas that contain the physical or biological features essential to the conservation of the species and that may need special management or protection. Critical habitat designations affect only federal

agency actions or federally funded or permitted activities. Critical habitat may include areas not occupied by the species at the time of listing but that are essential to its conservation.

Most consultations are conducted informally with the Federal agency or a designated non-Federal representative. Informal consultations determine: (1) whether listed species and critical habitat are in the area, (2) whether they may be affected and, if so, how the action could be modified to avoid adverse effects, and (3) whether a formal consultation is required. As part of a formal consultation, FWS or NMFS provide a threshold examination and a biological opinion on the likelihood that the proposed activity will or will not jeopardize the continued existence of the resource and on the effect of the proposed activity on the endangered species. The biological opinion may include recommendations for modification of the proposed activity. The FWS or NMFS may require the Federal agency to provide additional information or conduct appropriate biological studies if there is insufficient information to conclude that the proposed activity is not likely to jeopardize the species or its habitat. In the relatively few cases where the FWS or NMFS determines that the proposed action will jeopardize the species, they must offer “reasonable and prudent alternatives” about how the proposed action could be modified to avoid jeopardy.

In addition to the ESA, individual states maintain their own lists of threatened and endangered species. Federal agencies are responsible for ensuring no adverse impacts to these species as well.

3.6.2 Environmental Consequences

Proposed Action Alternative

Renovation projects could involve noise, fugitive dust, waste materials, and impacts to water and air quality which may affect endangered species at or near the site. Threatened and endangered species would be subject to the same temporary displacement and disturbance as other wildlife species from activities associated with a proposed action, as discussed in Section 3.5. It is unlikely that federal or state listed species would be found at the project sites as the locations are all in developed areas. Listed plants are not likely to be found at the sites as the habitat has been disturbed, nor are most species of wildlife. If any species occur, it would probably be birds or other transient animals that fly over or pass by the site; such species would likely avoid the area during renovation activities. If any listed species are actually found in the vicinity of the project area, mitigation measures would be in place to minimize such disturbance. Therefore, adverse impacts on threatened or endangered species could occur, but would be minimized. Impacts on endangered species would be direct, short-term, local, adverse and negligible and would not be significant.

No Action Alternative

There would be no impacts on endangered species under the No Action Alternative as there would be no housing restoration.

3.6.3 Mitigation Measures

Mitigation measures would be similar to those described for vegetation and wildlife in Section 3.5. Consultation with FWS and NMFS could also reveal mitigation or avoidance recommendations for specific plants or animals in the project area. Additionally, field reconnaissance surveys for protected species could be conducted in those areas where there is a reasonable probability of the occurrence of federal or state listed endangered and threatened species.

3.7 Historic Preservation

3.7.1 Affected Environment

Historic preservation of cultural resources includes archeological resources, paleontological resources, historic resources, and cultural landscapes. An archeological resource refers to any material remains or physical evidence of past human life or activities that are of archeological interest, including the record of the effects of human activities on the environment. An archeological resource is capable of revealing scientific or humanistic information through archeological research. A historic resource is a district, site, building, structure, or object significant in the history of American archeology, architecture, culture, engineering, or politics at the national, state, or local level. Historic resources may be included in or eligible for inclusion on the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource. Paleontological resources are fossilized plants, animals, or their traces, including both organic and mineralized remains in body or trace form. A cultural landscape is a geographic area, including cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or esthetic values.

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and as implemented in 36 CFR 800, requires federal agencies to: (1) consider the effects of federally funded, regulated, or licensed undertakings on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (NRHP); (2) consult with the State Historic Preservation Officer (SHPO) and other interested parties; and (3) afford the Advisory Council on Historic Preservation (ACHP) the opportunity to comment (ACHP, 2009). For the purposes of this EA, cultural resources are defined as either recorded or potential historic archaeological sites, prehistoric sites, and standing architectural structures or historic districts.

3.7.2 Environmental Consequences

Proposed Action Alternative

Renovation involving ground disturbance would occur at previously disturbed sites where the structures were originally constructed. Thus, there should be minimal if any impacts on historic preservation as disturbed ground conditions already occur. Renovation will not occur in previously undisturbed areas, thus there is little if any potential that buried cultural artifacts would be found. Mitigation measures and contingency plans for halting activities in the event a

cultural artifact is discovered would result in less than significant impacts on historic preservation. Impacts on historic preservation would be direct, long-term, local, adverse and negligible.

No Action Alternative

As no renovation of housing would take place, there would be no impacts on historic preservation.

3.7.3 Mitigation Measures

Common mitigation measures for all projects involving land disturbance include archaeological monitoring during initial excavation activities and implementation of a contingency plan in the event that any culturally or historically significant materials are unearthed, which would include such steps as halting all activities immediately upon discovery of the resource and initiating immediate consultation with the applicable SHPO office.

3.8 Human Population (Socioeconomics and Environmental Justice)

3.8.1 Affected Environment

Socioeconomics encompasses the areas of demographics, economic development, and housing. Demographics are the physical characteristics of a population such as age, sex, marital status, family size, education, geographic location, and occupation. Economic development encompasses the economic well-being and quality of life for a community, including employment, local spending, and economic sectors.

On 11 February 1994, President Clinton issued EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EPA, 2010c). EO 12898 directs agencies to address environmental and human health conditions in minority and low-income communities so as to avoid the disproportionate placement of any adverse effects from federal policies and actions on these populations. The general purposes of this EO are as follows:

- To focus the attention of federal agencies on human health and environmental conditions in minority communities and low-income communities with the goal of achieving environmental justice.
- To foster nondiscrimination in federal programs that substantially affect human health or the environment.
- To give minority communities and low-income communities greater opportunities for public participation in, and access to, public information on matters relating to human health and the environment.

As defined by the “Environmental Justice Guidance Under NEPA” (CEQ, 1997), “minority populations” includes persons who identify themselves as Asian or Pacific Islander, Native American or Alaskan Native, black (not of Hispanic origin), or Hispanic. Race refers to Census

respondents' self-identification of racial background. Hispanic origin refers to ethnicity and language, not race, and may include persons whose heritage is Puerto Rican, Cuban, Mexican, and Central or South American.

A minority population exists where the percentage of minorities in an affected area either exceed 50 percent or is meaningfully greater than in the general population. Low-income populations are identified using the Census Bureau's statistical poverty threshold, which is based on income and family size. The Census Bureau defines a "poverty area" as a census tract with 20 percent or more of its residents below the poverty threshold and an "extreme poverty area" as one with 40 percent or more below the poverty level.

3.8.2 Environmental Consequences

Proposed Action Alternative

Housing renovation could provide temporary new jobs for the duration of the project. These jobs would likely be filled by local citizens, thus there would not be any effects on demographics, local spending, or housing. Operation of newly renovated shelters may involve job opportunities for local or out-of-area employees. However, it is also possible that the new facilities would be operated by an existing workforce. Overall, there may be temporary to long-term changes in employment, but this change would be expected to be insignificant. There would be beneficial impacts on housing for victims of domestic violence as they would be provided with a safe place to live temporarily or over the long-term, but there would be no effects on other members of the population. Impacts on demographics would be minimal or non-existent.

Although renovation activities would occur in low-income or minority neighborhood, it would be implemented and mitigated in such a way as not to have any adverse environmental justice impacts. Victims of domestic violence who would receive housing would be minorities (Native American) and likely to be low-income, thus there would be beneficial effects on environmental justice.

Impacts on human population would be direct, short- and long-term, local, beneficial and minor, and would not be significant.

No Action Alternative

Under the No Action Alternative there would be no human population impacts as no new housing renovation would take place.

3.8.3 Mitigation Measures

Mitigation for human population impacts such as those described above could include the following:

- Public outreach and education: a project communications strategy that aims to generate awareness and support for the action, understanding of the nature and timing of its impacts, and strategies for avoiding, minimizing or mitigating them.
- Direct compensation: funds to directly compensate individual entities who endure social and economic impacts that rise above a certain pre-defined level. Indirect compensation: programs that allow businesses or individuals to avoid, absorb or adapt to impacts. Examples would include providing alternate transportation routes to alleviate traffic disruptions, supporting temporary housing sites if appropriate, and low or no-interest loans.
- Project design that addresses:
 - Fairness – by spreading the impacts as fairly as possible, with any disproportionate impacts being unavoidable (and perceived as such).
 - Limiting impacts – by building-in efforts to limit the magnitude, duration, intensity, and likelihood of impacts.

3.9 Noise

3.9.1 Affected Environment

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise, the distance between the noise source and the receptor, receptor sensitivity, and time of day.

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz (Hz) are used to quantify sound frequency. The human ear responds differently to different frequencies. A-weighting, described in a-weighted decibels (dBA), approximates this frequency response to express accurately the perception of sound by humans. Sounds encountered in daily life and their approximate levels in dBA are provided in Table 3-2.

Table 3-2. Common sounds and their levels.

Outdoor	Sound level (dBA)	Indoor
Snowmobile	100	Subway train
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Ringling telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet residential area	40	Library

The dBA noise metric describes steady noise levels. Very few noises are in fact constant, so a noise metric, day-night sound level (DNL) has been developed. DNL is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to nighttime levels (10 p.m. to 7 a.m.). DNL is a useful descriptor for noise because it averages ongoing yet intermittent noise, and it measures total sound energy over a 24-hour period.

The Noise Control Act of 1972 (Public Law 92-574) directs federal agencies to comply with applicable federal, state, interstate, and local noise control regulations (EPA, 2007). In 1974, the EPA provided information suggesting that continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals. Other “sensitive receptors” include retirement homes, campgrounds, wilderness areas, hiking trails, and certain species of threatened or endangered wildlife.

3.9.2 Environmental Consequences

Proposed Action Alternative

Machinery and activities during renovation can generate noise. Individual pieces of heavy equipment typically generate noise levels of 80 to 90 dBA at a distance of 50 feet. The zone of relatively high construction noise levels typically extends to distances of 400 to 800 feet from the site of equipment operations. Locations more than 1,000 feet from construction sites seldom experience appreciable levels of construction noise. Such elevated noise levels would be likely to be of short duration. Heavy equipment use tends to be the noisiest phase of construction, but lasts only a short time. If there are sensitive receptors within several hundred feet of the construction site, construction noise would be clearly audible and they could be adversely affected temporarily during construction activities.

Zoning and land use plans may dictate what types of activities may be allowable in certain sites, indirectly controlling the noise generation levels. Similarly, state, local, and tribal regulations would be likely to govern noise levels for normal, day-to-day operations.

Given the temporary nature of proposed renovation activities, noise impacts would be direct, short-term, local, adverse and minor, and would not be significant. Although renovation-related noise impacts would be minor, the mitigation measures listed below would be performed to further reduce any noise impacts.

No Action Alternative

Noise impacts under the No Action Alternative would not occur as there would be no renovation of housing.

3.9.3 Mitigation Measures

Renovation activities should be limited to occur only during normal weekday business hours. Noise restrictions are generally more stringent at night and on weekends. Properly maintain

equipment mufflers. Noise effects on workers could be limited by ensuring that all personnel wear adequate personal hearing protection to limit exposure and ensuring compliance with federal health and safety regulations. Comply with state, local, and tribal noise regulations.

3.10 Energy Impacts

3.10.1 Affected Environment

Federal and state agencies regulate energy consumption through various policies and programs. Federal guidelines such as The Energy Policy and Conservation Act of 1975 and the Energy Independence and Security Act of 2007 require minimum fuels consumption efficiency standards for new automobiles sold in the United States. The Corporate Average Fuel Economy Program was created to help manufacturers adhere to the efficiency standards. The Safe, Accountable, Flexible, and Efficient Transportation Act: A Legacy for Users was passed in 2005 and promotes the reduction of traffic congestion, improving safety, and protecting air quality and the environment. The 1980 Energy Conservation by Recipients of Federal Financial Assistance sets forth the general policy requirements for energy analysis and conservation that are to be incorporated by the Federal Aid Highway System.

The CEQ has issued regulations implementing NEPA which specifically require the consideration of direct and indirect energy requirements of various projects and mitigation measures to conserve energy. Direct energy impacts refer to the impacts of operating a facility after it is constructed, and include the energy consumed by vehicles using the facility. Indirect energy impacts include the energy required to construct and maintain the facility, changes in energy consumption likely to result from project-induced land use changes, and any substantial changes associated with vehicle operation, manufacturing, or maintenance due to increased or decreased automobile use.

3.10.2 Environmental Consequences

Proposed Action Alternative

Renovation activities would consume energy during the production of construction materials, by operating and maintaining construction equipment, and when transporting materials to the site. The incremental increase in the use of energy bound in construction materials such as asphalt, steel, concrete, pipes and manufactured or processed materials such as lumber and gas would not substantially increase demand for energy compared to overall local and regional demand for construction materials. Construction materials would not be used in a wasteful manner. Construction equipment and construction worker vehicles operated during renovation would use fossil fuels. Fuel energy consumed by vehicles during renovation or transporting materials would not be wasted through unnecessary idling or through the operation of poorly maintained equipment. Increases in fuel consumption would be temporary, would cease at the end of the construction activity, and would not have a residual requirement for additional energy input. The marginal increases in fossil fuel use resulting from renovation are not expected to have appreciable impacts on energy resources.

Energy used during operation of housing or a shelter would have ongoing energy required for such functions as interior and exterior lighting, heating/ventilating/air conditioning, computers, and security systems. However, it is not likely that these energy requirements would substantially increase the level of demand for energy supplies, especially when compared to overall local and regional demand.

Impacts on energy would be direct and indirect, short- and long-term, local, adverse and negligible, and would not be significant.

No Action Alternative

There would be no new energy impacts under the No Action alternative as renovation of housing would not occur.

3.10.3 Mitigation Measures

Design renovated buildings to meet or exceed the requirements of energy codes. Provide heating and cooling in an energy efficient manner and so that they conform to local and state energy codes. Reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, and maintenance.

3.11 Cumulative Impacts

The CEQ regulations (40 CFR 1500-1508) implementing the procedural provisions of NEPA of 1969, as amended (42 USC 4321) defines cumulative effects as:

“the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other action (40 CFR 1508.7)”

This section goes on to note “such impacts can result from individually minor but collectively significant actions taking place over a period of time.”

No Action Alternative

Implementation of the No Action Alternative would not have any new impacts on resources at project locations. Therefore, there would be no contribution to cumulative impacts from this alternative.

Proposed Action

Air Quality

The states where projects would be located take into account the effects of all past, present, and reasonably foreseeable emissions during the development of State Implementation Plans that target the elimination or reduction of the severity and number of violations of the NAAQS. The states account for all significant stationary, area, and mobile emission sources. Estimated

emissions generated by the proposed action would be *de minimis* and would not be regionally significant. Therefore, the proposed action would not contribute significantly to adverse cumulative effects to air quality.

Soils

Soils in the project areas have been damaged, compacted and eroded by residential, commercial, and other activities. The proposed project would cause further soil disturbance; however, this would occur predominantly in previously disturbed areas. Cumulative impacts from the proposed project would be adverse and negligible.

Water Resources

Surface and ground water quality in the project areas may be already be diminished due to past activities such as surrounding development or other upstream activities. Water quality may also be excellent in places. Renovation activities would not contribute substantial if any inputs to water quality as BMPs would be in place to minimize impacts. Cumulative impacts from the proposed project would be adverse and negligible.

Natural Environment

Vegetation and wildlife habitat in the project areas has been previously cleared and/or disturbed for residential, commercial, and other purposes. These activities have involved removal, trampling, or destruction of vegetation and disturbance of ground cover. Any vegetation disturbance associated with the Proposed Action would occur in previously disturbed areas or areas devoid of any vegetation. Wildlife in the project areas has been, and continues to be, subject to disturbance from residential, commercial, and other development and activities. Overall, cumulative impacts from the proposed project would be adverse and negligible.

Endangered Species

Endangered species that may occur in the project areas have been subject to disturbance and displacement due to past and ongoing human activities and development. Thus, cumulative impacts from the proposed project would be adverse and negligible.

Historic Preservation

There are no foreseen cumulative impacts to cultural resources if the proposed renovation is implemented. No additional development, demolition, or impacts to any identified cultural resources should result from implementation of the Proposed Action.

Human Population

The project has the potential to contribute to the local employment and does not pose a significant, adverse cumulative impact. Cumulative impacts from the proposed project would be minor and beneficial as it would help low income and minority populations.

Noise

Existing noise on tribal lands could come from sources such as traffic, human voices, other construction projects, overhead aircraft, etc. The proposed action would introduce short-term incremental increases to the noise environment. These changes would have negligible cumulative effects.

Energy

Energy use on tribal lands already currently exists. The energy used for renovation projects would be very small in comparison to other current energy uses, thus cumulative impacts would be adverse and negligible.

3.12 Conclusion

This EA analyzes the environmental impacts of renovating housing at ten locations on tribal lands. The implementation of the projects is not expected to result in significant adverse impacts on the environment; therefore, an Environmental Impact Statement is not required and a Finding of No Significant Impact (FONSI) is appropriate.

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5.0 LIST OF PREPARERS

Mangi Environmental Group

Eveline Martin, Project Manager

Office on Violence Against Women

Marnie Shiels, Attorney Advisor