



DRAFT Environmental Assessment
Popple Dungeon Road Realignment
Town of Chester, Windsor County, Vermont
HMGP
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FEMA

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ACRONYMS USED IN THIS DOCUMENT

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effect
ANR	VT Agency of Natural Resources
ATV	All-Terrain Vehicle
BMP	Best Management Practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
EA	Environmental Assessment
EPA	Environmental Protection Act
ESA	Endangered Species Act
ESF	Essential Fish Habitat
EO	Executive Order
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HHS	Department of Health & Human Services
HMGP	Hazard Mitigation Grant Program
MBTA	Migratory Bird Treaty Act
MSA	Magnuson-Stevens Fishery Conservation & Management Act
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resource Conservation Services
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PAH	Polycyclic Aromatic Hydrocarbon
RCRA	Resource Conservation & Recovery Act
SHPO	State Historic Preservation Officer
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USFWS	US Fish and Wildlife Service
VOC	Volatile Organic Compound

SECTION I: INTRODUCTION

The Town of Chester (the applicant) located in Windsor County, Vermont applied to the US Department of Homeland Security's Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) for assistance with a road relocation project and drainage improvement for Popple Dungeon Rd. This project was identified in the June 2011 updated *All Hazard Mitigation Plan, Chester*. On August, 28, 2011, as a result of Tropical Storm Irene, a 990 foot section of Popple Dungeon Rd suffered serious erosion which made the embankment down to the South Branch of the Williams River unstable. Elevation on the south side of the road within the drainage system ranges from 390 feet to 360 feet above sea level. This causes high velocity runoff that creates an unstable roadbed prone to washouts. The applicant explored three alternative options: taking no action; repairing the road in the preexisting footprint while using rip/rap to stabilize the embankment down to the South Branch of the Williams River; or relocating 990 feet of the roadway 39 feet to the south and upgrading/installing several drainage crossings.

The National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Part 1500 through 1508) direct FEMA and other federal agencies to fully understand and take into consideration environmental consequences of proposed federally funded projects. Under NEPA, Congress authorizes and directs federal agencies to carry out their regulations, policies, and programs as fully as possible in accordance with the statute's policies on environmental protection. NEPA requires federal agencies to make a series of evaluations and decisions that anticipate significant effects on environmental resources. This requirement must be fulfilled whenever a federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect the human environment. In compliance with NEPA and its implementing regulations, FEMA prepared this Environmental Assessment (EA) to analyze the potential environmental impacts of alternatives.

SECTION II: PURPOSE AND NEED FOR ACTION

The FEMA Hazard Mitigation Grant Program provides grants to states and local governments to implement long-term hazard mitigation measures after a Federal disaster declaration. The purpose of this action is to provide HMGP funding to Town of Chester, Vermont for mitigating their natural hazard risks.

This section of Popple Dungeon Rd is located between two embankments. The embankment on the south side (upper embankment) of the road is a steep slope that ranges in elevation from 360 feet to 390 feet. The embankment on the north side of the road (lower embankment) ends at the banks of the South Branch of the Williams River. The drainage from the upper embankment tends to travel under the road which has historically eroded the roadbed and surface causing the asphalt to crack and separate. This effect causes the road surface to washout over the lower embankment. Records indicate that the Town has been making regular repairs to this section of the road as far back as the mid 1970's.

Tropical Storm Irene caused severe erosion making the road and lower embankment unstable. During the recovery phase for Tropical Storm Irene, the road was so badly damaged that it was closed for 3 days. Provisions that would typically be available in the downtown Chester area, approximately 3 miles away were cut off to many residents living on Popple Dungeon Rd. During the 3 day period, residents were forced to travel west though Andover which added an additional 10 miles in order to get adequate provisions in case of emergency. Emergency provisions could be brought to residents via four-wheelers only. Police, Fire and Rescue teams were barely able to access these isolated properties and not in a timely manner.

Though the road is now passable again, the damage from Tropical Storm Irene has added to the severity of the existing problem and the stability and drainage for this section of the road needs to be improved any more instances of isolation to residents occur.

SECTION III: ALTERNATIVES ANALYSIS

This section discusses actions considered for this site. This includes the following options: Alternative 1: taking no action; Alternatives 2: The proposed action of realigning the road and adding drainage crossings; and Alternative 3: Stabilizing the lower embankment with rip/rap.

3.1 NO ACTION ALTERNATIVE

ALTERNATIVE 1 - Under the No Action Alternative, FEMA would not provide funding to realign Popple Dungeon Rd and upgrade/install drainage crossings to protect the road from erosion due to high velocity/volume runoff. This section of the road has suffered erosion and repetitive washouts, the road base has been undermined and cracks are forming in the remaining section of the roadway, which is still being used by residents, school buses, and emergency services to gain access to residents on the west side of the Town of Chester. Portions of the road material often wash down the lower embankment and restrict the flow of the South Branch of the Williams River. Risks associated with this erosion include further road instability and potential for future washouts that will cost the town more money and isolate residents from emergency services and provisions.

3.2 PROPOSED ACTION ALTERNATIVE

ALTERNATIVE 2 - THE PROPOSED ACTION would involve the following components: realigning 990 feet of the existing road (from N43.24386 W-72.61847 to N43.24283 W-72.62074) 39 feet to the south, upgrading/installing five HDPE culverts, installing stone check dams and 413 feet of 6 inch under drain pipe in the new ditch system, removing birch, pine and various hardwood trees to allow for site preparation and grading, removing stone walls that will be reconstructed in coordination with private homeowners, installing silt fencing during construction, installing filter fabric into the drainage ditch, re-seeding and mulching disturbed areas and rebuilding and repaving the road to current codes and standards. The culverts to be installed include; two 15 in. x 30 ft. driveway culverts, two 18 in. x 50 ft. roadway drainage culverts. The culvert that will be upgraded is a 30 in. x 55 ft. culvert for an intermittent stream (at N43.24289 W-72.61989) will be increased to a 36 in. x 55 ft. culvert.

3.3 OTHER ALTERNATIVES

ALTERNATIVE 3 – STABILIZING THE EMBANKMENT - Repairing the roadway in its current location and adding rip/rap to the lower embankment would temporarily stabilize the lower embankment. This alternative would not alleviate the issue of the roadbed undermining from poor drainage of excess runoff. The road surface would continue to crack and separate that would exasperate over time and ultimately wash the asphalt into the river. If another event similar to Tropical Storm Irene were to occur there is no guarantee that the rip/rap will secure the lower embankment. The roadbed material, being unstable, may shift the rip/rap and any high

volume/velocity runoff from the upper embankment may cause the rip/rap to slide into the river causing a massive choking effect.

SECTION IV: AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section discusses the existing conditions by resource and the potential effects of the No Action and Proposed Action alternatives.

For each resource category, the impact analysis follows the same general approach, where possible, quantitative information is provided to establish impacts. Qualitatively, these impacts will be measured based on minor, moderate, and major impacts as outlined in the chart below.

	Criteria
Negligible	The resource area would not be affected, or changes would be non-detectable or if detected, effects would be slight and local. Impacts would be well below regulatory limits.
Minor	Changes to the resource would be measurable, although the changes would be small and localized. Impacts would be within or below regulatory limits. Mitigation measures may be necessary to reduce potential effects.
Moderate	Changes to the resource would be measurable and have localized and potentially regional scale impacts. Impacts would be within or below regulatory limits, but historical conditions would be altered on a short-term basis. Mitigation measures may be necessary to reduce potential effects.
Major	Changes would be readily measurable and would have substantial consequences on a local and potentially regional level. Impacts would exceed regulatory limits. Mitigation measures to offset the effects would be required to reduce impacts, although long-term changes to the resource would be possible.

Impacts are disclosed based on the amount of change or loss of the resource from the baseline conditions. Impacts may be direct or indirect. Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by an action and occur later in time or farther removed from the area, but are reasonably foreseeable. Cumulative impacts are discussed in Section V. Resources that were not analyzed include air quality and visual resources.

4.1 PHYSICAL RESOURCES

4.1.1 CLIMATE

The following chart represents the average temperatures, wind speeds and rainfall for the month August. In contrast, the chart also contains actual and average rainfall for August 2011 and specifically August 28, which is the day that Tropical Storm Irene affected the Town of Chester. The Aug. 28 totals and averages are based on the 24 hours period from 12:00am to 12:00pm on August 28.

August Weather Statistics near Chester, VT

Avg. Temp	66°
Avg. High Temp	80°
Avg. Low Temp	53°
Clear Days	6
Partly Cloudy Days	21
Cloudy days	4
Max Avg. Wind Speed	8-15 mph
Max Wind Speed Aug. 28	25 mph
Avg. Wind Speed	0.5-4.6 mph
Avg. Wind Speed Aug. 28	8.3 mph
Avg. Rainfall in Aug.	4.02"
Rainfall Aug. 2011	10.17"
Rainfall on Aug. 28	4.70"

4.1.1.1 ENVIRONMENTAL CONSEQUENCES

For all alternatives, there are negligible environmental consequences.

4.1.2 GEOLOGY, SOILS AND VEGETATION

The soils on the site were identified using the soil classifications of the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS). The project Area of Potential Effect (APE) predominantly contains Peru, Skerry and Colonel fine sandy loam with a slope of 15-25 %.. The area to the south of the Popple Dungeon Rd, in this project area is upland, compact glacial till. This area is deep to bedrock and moderately deep to dense basal till. Peru and Skerry soil is moderately well drained, but Colonel soil tends to be somewhat poorly drained. The clay content (at this slope) ranges from 2 to 10 % with permeability ranging from 0.6 to 2 inches per hour. The seasonal high water table reaches depths of 1.0 to 2.5 feet and there tends to be no ponding affects. Road suitability in these areas is considered poor suited due to the slope with erosion hazards considered moderate.

Adjacent to the project APE to the west are two additional soil types; Croghan and Sheepscot fine sandy loam with 0 to 8 % slope and Podunk fine sandy loam with 0 to 3 % slope. Croghan soils form on sandy glaciofluvial deposits on terraces and outwash plains and Sheepscot soils form a loamy cap over sandy glaciofluvial deposits that are high in rock fragments on outwash plains and terraces. Croghan and Sheepscot soils (at this slope) contain 0 to 5% clay, permeability ranges from 6 to 20 inches per hour and is considered moderately well drained. Podunk soils form in loam over sandy alluvial deposits on floodplains that are occasionally flooded for brief duration from late fall to early spring. Podunk soils (at this slope) contain 1 to 15 % clay, permeability ranges from 0.6 to 6 inches per hour and is considered moderately well drained. Flooding in the Poduck soil can be an issue but tends to be short in duration and usually occurs in the spring.

The project APE falls in an area the EPA considers The Green Mountains/Berkshire Highlands ecoregion. This ecoregion is characterized by relatively rugged, steep, high elevation mountains, with a colder climate and different vegetation than surrounding lower elevation regions. There are some climate, geology, physiography, and vegetation transitions that occur from north to south (e.g., slightly colder with more snow in the north; more plateau-like granitic areas in the south), although these are not dramatic changes at a national scale.

Vegetation is predominantly northern hardwoods (sugar maple, beech, yellow birch), with some spruce-fir (red spruce, balsam fir, paper birch) at higher elevations (where not mapped as part of Ecoregion 58j). Montane yellow birch-red spruce forest occurs on some midslopes in the region. At lower elevations, hemlock occurs, and areas of red oak-hardwood forests.

4.1.2.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION - Under the No Action Alternative, the impact on geology and soils would not be negligible. However, the area would continue to be at risk of erosion and road washout and in some areas seasonal flooding.

ALTERNATIVE 2: PROPOSED ACTION – The impact to geology, soils and vegetation will be considered moderate. Realignment the road would alter the drainage in this area and limit the risk of erosion and flooding in an area that typical is at risk for such affects. In order to achieve the goal in this desired action, an area of trees will have to be cut down as site preparation for grading and road realignment. The impacts will have a positive outcome as the road and environment will be better protected and the town will be able to avoid costly road repair projects that have been historically an annual expense.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT – If the lower embankment were stabilized using rip/rap this area would experience a minor impact. This would assist in stabilizing the road but the long term affects would remain and potentially increase. These risks include erosion and road washout due to lack of proper drainage from the slope on the south side of the road. Also, the potential for the rip/rap to fail due to the poor drainage would be moderate

as the water runoff would continue to loosen roadbed material which would in effect loosen up the embankment rip/rap as the road material and force of the runoff would be creating opposing tensions against the embankment. If the rip/rap washed out into the South Branch of the Williams River a significant restriction would be created leading to a potential diversion of river flow that could alter the terrestrial landscape.

4.1.3 AIR QUALITY

The Clean Air Act (CAA), in accordance with 40 CFR part 50, requires the U.S. Environmental Protection Agency (EPA) to set, and states adopt, National Ambient Air Quality Standards (NAAQS) for six principle or “criteria” air pollutants. These pollutants include: Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO₂), Particulate Matter with a diameter less than or equal to ten micrometers (PM₁₀) and less than 2.5 micrometers (PM_{2.5}), Ozone (O₃), and Sulfur Dioxide (SO₂).

The EPA has designated specific areas as NAAQS Attainment or Non-Attainment areas. Attainment areas are those areas that meet ambient air quality standards and non-attainment areas are areas that do not meet quality standards for a specific pollutant. All of Vermont, including Washington County, is currently designated as an Attainment Area for all National Ambient Air Quality Standards.

During construction, there may be some minimal temporary effects on air quality that are produced by large vehicles; such as dump trucks, graders, or back hoes. There are only two parcels located within the APE and the houses associated with each are not considered to be located within the project APE. The Raymond and Mary Milanesi property is located approximately 750 feet to the east of the project start on the south side of the road and the Ugo Quazzo property is located approximately at the end point of the road realignment on the north side of the road. There are only 5 properties located within a mile radius of this project.

4.1.3.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – The impacts to air quality will be negligible.

ALTERNATIVE 2: PROPOSED ACTION – Minor: Limited to construction vehicle exhaust during construction periods only in an area that has very little population density.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT - Minor: Limited to construction vehicle exhaust during construction periods only in an area that has very little population density.

4.1.4 LAND USE

The location for the road realignment runs through the private property of two parcels. A section on the east side of the proposed realignment is located on 0.47 acres of the property owned by Raymond and Mary Milanesi. A section on the west side of the proposed realignment is located on 0.09 acres of property owned by Ugo Quazzo.

On June 13th 2005, Christopher John Milanesi: Co-Trustee of both the Raymond P. Milanesi Revocable Trust and the Mary B. Milanesi Revocable Trust and on May 20th 2005, Nina M. Huffer also Co-Trustee of both the Raymond P. Milanesi Revocable Trust and the Mary B. Milanesi Revocable Trust each signed an easement, in the presence of Notary Public: Jennifer Graham, that grants the Town of Chester a parcel of land that will accommodate the realignment. The parcel of land given over under the Milanesi Revocable Trusts starts at coordinates N43.24395 W-72.61838. These points mark the easterly extent of the re-alignment; from there the easement follows the southern edge of the current road alignment 513.25 feet where the centerline of an unnamed intermittent stream marks the property boundary of the Milanesi and Quazzo parcels. The Milanesi easement then follows the centerline of the stream 39.05 feet (N43.24289 W-72.61989) and runs east/northeast back to the coordinates N43.24395 W-72.61838, which is a distance of 550.31 feet.

On June 3rd 2004, in the presence of Notary Public Janet Rubel, Ugo Quazzo signed a similar easement that granted the Town of Chester a portion of the Quazzo parcel that would be necessary to complete the realignment. The Quazzo easement starts at N43.24280 W-72.62066, which represents the westerly extent of the road re-alignment. From that point the easement follows the southern edge of the existing road 225.99 feet where it reaches the boundary of the Quazzo/Milanesi property in the middle of the unnamed intermittent stream. The Quazzo easement follows the centerline of the stream south 39.05 feet (N43.24289 W-72.61989) and then runs west/northwest back to coordinates N43.24280 W-72.62066, which is a distance of 224.77 feet.

The section of the south Branch of Williams River adjacent to the project area, is a popular area for recreational fly fishing (See Section 4.3.3 Fish and Wildlife for more details).

4.1.4.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – The impacts to land use would potential be minor if the erosion continues. Continued erosion could have a negative impact on the species of fish in the river that could affect fishing.

ALTERNATIVE 2: PROPOSED ACTION – The impacts to land use are Minor. The Quazzo parcel is only being limited by 0.09 acres and there will be no controversy since the easement is in place. The Quazzo residence is not located on the south side of the road and is not affected by the APE. The Milanesi parcel is limited by 0.47 acres but as with the Quazzo parcel there is no controversy and the land is steep and sloping and serves no use but a forested landscape. An open field runs up a steep hillside at the western end of the project area but will only bisect a small portion of this field; it currently does serve a specific purpose. Overall, the area being taken for the road realignment was not utilized by either owner and will not affect the overall landscape.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT – The impacts to land use would potential be minor if the rip/rap material or road washes into the river. Continued erosion could have a negative impact on the species of fish in the river that could affect fishing.

4.2 Aquatic Resources

4.2.1 WATER QUALITY

The majority of land area in Chester is within the Williams River watershed. The Village of Chester is located at the confluence of the north, south and middle branches of the Williams River, which meet and form the main stem of the Williams River just southeast of VT Route 11 near Green Mountain Turnpike. The Williams River forms a broad, fertile valley through Chester. Water bodies and watercourses serve a variety of important functions, including scenic beauty, recreation, wildlife habitat, food supply, commercial and industrial uses, and drinking water supplies. The rivers and many of the streams contain healthy populations of native fish. The middle and north branches and the main stem of the Williams River offer good whitewater boating opportunities. Rivers and streams are sensitive to change, and land uses can affect water quality and river stability further downstream.

In June 2008, the Vermont Agency of Natural Resources (ANR) adopted a Basin 11 Management Plan, which includes the Williams River watershed. The primary water quality problems for the basin include water temperature warming, siltation and sedimentation, and altering the physical habitat. The primary causes of those problems include removal of riparian vegetation, stream bank modification and destabilization, and channelization. Due to the significance of these surface waters, it is important that they be protected. Protection of surface waters involves stream bank management, overseeing point source discharges of wastes, and controlling non-point sources of water pollution (for example, agricultural runoff, erosion from logging or construction, and storm water runoff from roads and impervious surfaces). Naturally vegetated buffers next to surface waters can help to filter pollutants, provide shade for fish, and habitat for birds and mammals. In addition, wider buffers (over 100 feet) can provide natural greenways and wildlife corridors.

Groundwater is Chester's primary source of drinking water. It moves underground through aquifers, which are water-bearing strata of permeable rock, sand, or gravel. Maintaining good quality and adequate quantities of groundwater are important considerations for preserving the public health and safety. Potential groundwater pollutants include septage from improperly designed or malfunctioning septic tanks and leaching fields for wastewater, leakage from underground gas and oil tanks, and improperly disposed of chemical or radioactive materials.

4.2.1.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – Moderate impact due to continued instability of road material and poor drainage. This puts the water quality at risk due to hazardous road materials entering the South Branch of the Williams River, such as; asphalt and oil deposits on the road.

ALTERNATIVE 2: PROPOSED ACTION – Negligible impact on the water quality due to an improvement in drainage and stability to the road surface that will eliminate road washouts and hazardous materials entering the river.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT - Minor impacts due to continued instability of road material and poor drainage. This puts the water quality at risk due to hazardous road materials entering the South Branch of the Williams River, such as; asphalt and oil deposits on the road.

4.2.2 WETLANDS

Executive Order (EO) 11990 (Protection of Wetlands) requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial effects of wetlands. Federal agencies, in planning their actions, are required to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided.

Neither the USFWS National Wetlands Inventory (NWI) maps nor the Vermont Agency for Natural Resources' Natural Resource Atlas show any wetlands associated directly with the project APE or along Popple Dungeon Rd.

In addition, federal agencies are required under 44 CFR Part 9 to provide public notice and review of plans for actions in floodplains and wetlands. The public notice for this disaster and public review of the Draft EA meet FEMA's public notice and review obligations.

4.2.2.1 ENVIRONMENTAL CONSEQUENCES

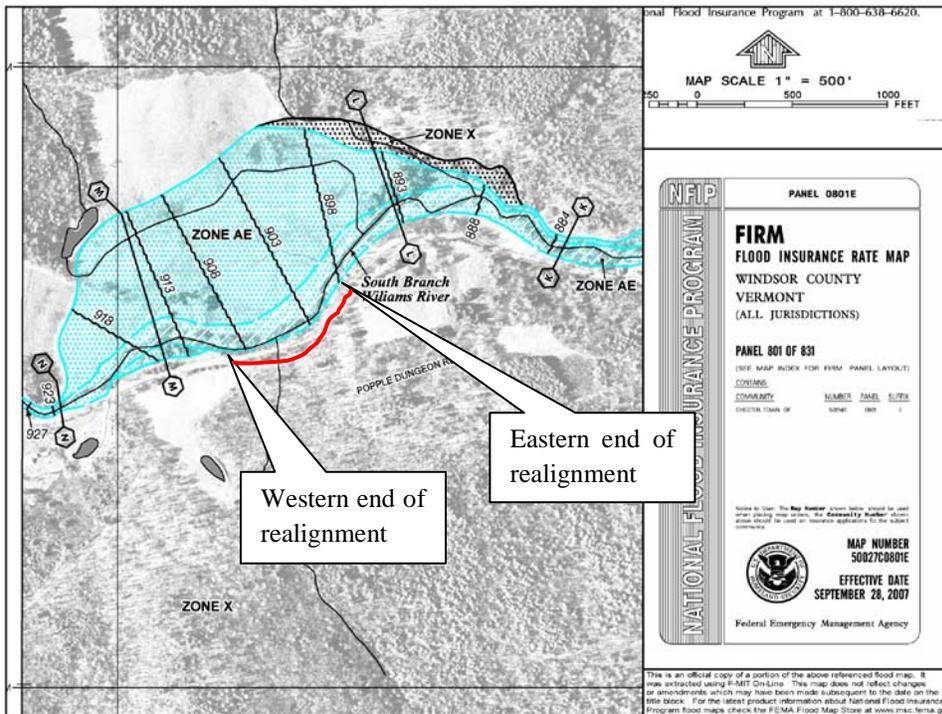
For all alternatives, there are negligible environmental consequences. Wetland resources pertinent to CWA Section 404, the U.S. Army 41 Corps of Engineers' *Programmatic General Permit for Vermont*, and those subject to local jurisdiction are not present in the affected environments. No further action under EO 11990 is required by FEMA.

4.2.3 FLOODPLAINS

EO 11988 (Floodplain Management) requires federal agencies "to avoid to the extent possible, the long and short term adverse impacts associated with occupancy and modification of the floodplain, and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." FEMA's implementing regulations are at 44 CFR Part 9, which includes an eight step decision-making process for compliance with this part. The 8-Step review is incorporated here as part of the Environmental Assessment.

This road was constructed between sections of rolling, forested hills that range in elevation from 360 to 390 ft. above sea level. The road was constructed into the slope of the hill that is to the south of the road. The elevation at the road is approximately 260 ft. above sea level. The slope continues down the lower embankment 15 ft. to the South Branch of the Williams River. At that point the topography opens slightly to a flat low-lying area approximately 1300 ft. (east/west) x 800 ft. (north/south) at the base of the rolling hill that is north of Popple Dungeon Rd. This low-lying area is a Zone AE of the floodplain according to Flood Insurance Rate Map (FIRM) community map and panel number 50027C 0801E, effective date, September 28, 2007. The South Branch of the Williams River is considered a floodway in this area.

In a February 13, 2012 email from Todd Menees, VT Agency of Natural Resources-River Management Engineer to Julie Hance, from the Town of Chester, Mr. Menees indicates that when the road was constructed, the river was “moved” to the south against the flank of the hill. He also mentions that the road constrains the river against the flank of the hill. Considering the height from the road to the river, there is little chance of the road being over-topped by floodwaters from the river level. The nearest location where the river crosses under the road is on the west side of the intersection with Old Stage Rd, approximately 1500 feet from the west end of the realignment (N43.24183 W-72.62662). Despite how close the river was “moved” towards the roadway, it is on the north side of the road at a distance that puts the road far enough from the floodplain to not be at risk from river flooding washout. The risk of road washout comes from downhill drainage runoff.



4.2.3.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – Minor impacts could be expected, in the event of a catastrophic event, similar to Tropical Storm Irene, road materials could wash into the river. Constricting the river in such a way could cause the river to overflow creating a new river channel.

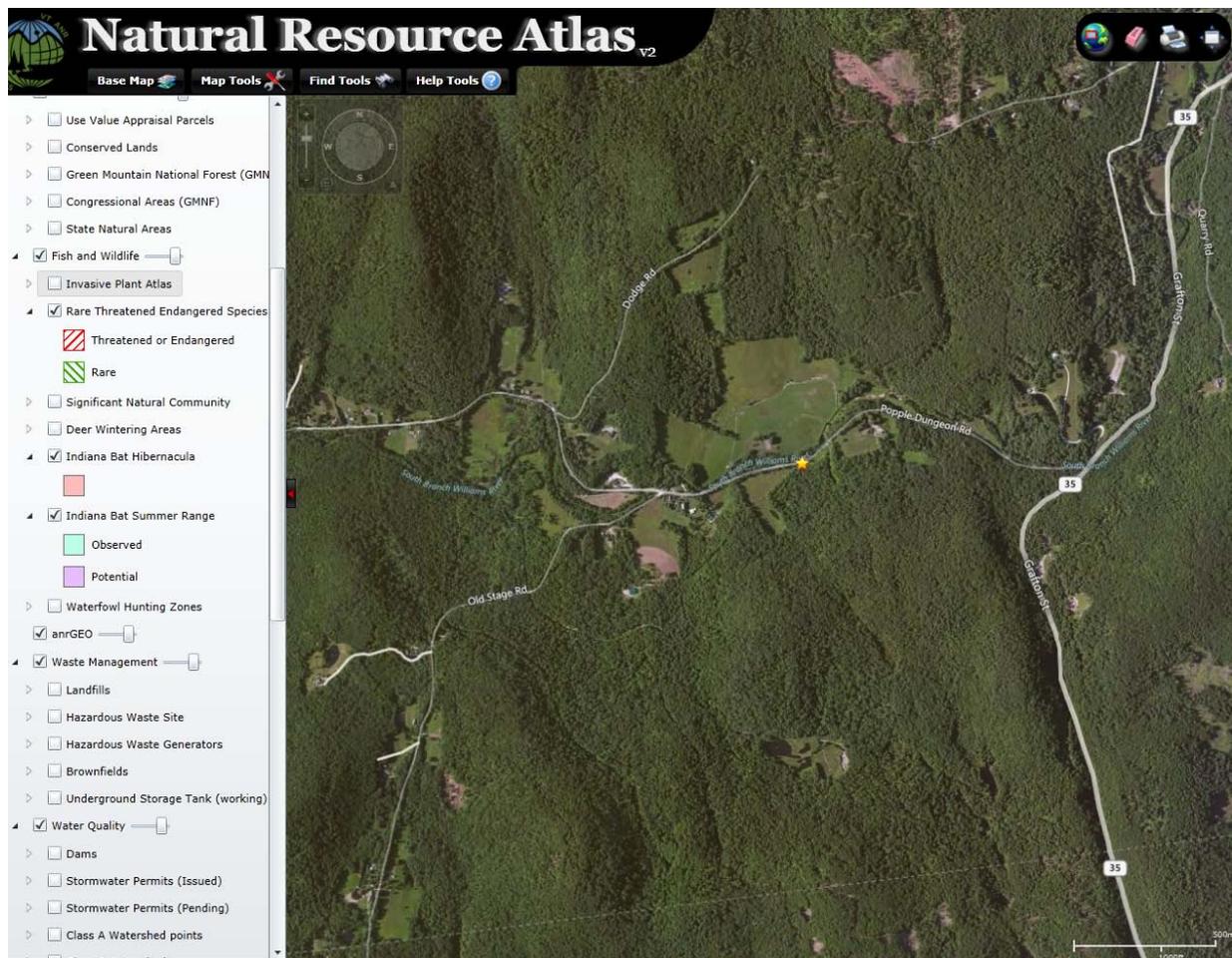
ALTERNATIVE 2: PROPOSED ACTION – Negligible impact to floodplain, this action will eliminate the risk of washouts and the floodplain would be allowed to exist in its natural state.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT - Minor impacts could be expected, in the event of a catastrophic event, similar to Tropical Storm Irene, road materials could wash into the river. Constricting the river in such a way could cause the river to overflow creating a new river channel.

4.3 Biological Resources

4.3.1 THREATENED AND ENDANGERED SPECIES AND CRITICAL HABITAT

The Endangered Species Act (ESA) serves as the primary federal protection for species and habitat, by providing a formal designation and implementing programs through which the conservation of both populations and habitats may be achieved. The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies that fund activities that may adversely affect the essential fish habitat (EFH) of federally managed fish species to consult regarding the potential adverse effects of their actions on EFH.



The map above is taken from the Vermont Agency of Natural Resources-Natural Resource Atlas. The star represents the location of the unnamed intermittent stream within the project APE. There are no federally-listed, state-listed or candidate threatened or endangered species, nor any critical habitats that might be affected by Alternatives 1-3. There are no essential fish habitats of federally-managed species anywhere near this project location.

4.3.1.1 ENVIRONMENTAL CONSEQUENCES

For all alternatives, there are negligible environmental consequences. Further consideration of ESA or MSA is not required.

4.3.2 MIGRATORY BIRDS

The Migratory Bird Treaty Act of 1918 (MBTA), as amended, provides federal protections for migratory birds, their active nests, eggs, and parts from harm, sale, or other injurious actions. The act contains no “take” provisions that enforce these protections. Consultation with the USFWS is required if an action is determined to cause a potential take of migratory birds and determines measures to minimize or avoid these impacts. The USFWS Office of Migratory Bird Management maintains a list of migratory birds (50 CFR 10.13).

This project is located within a regulatory flyway, but there are no components of this project that will be considered at a height that may take any migrating birds. If in the event telephone poles must be replaced, the standard 75 ft. height of the poles will not be a factor.

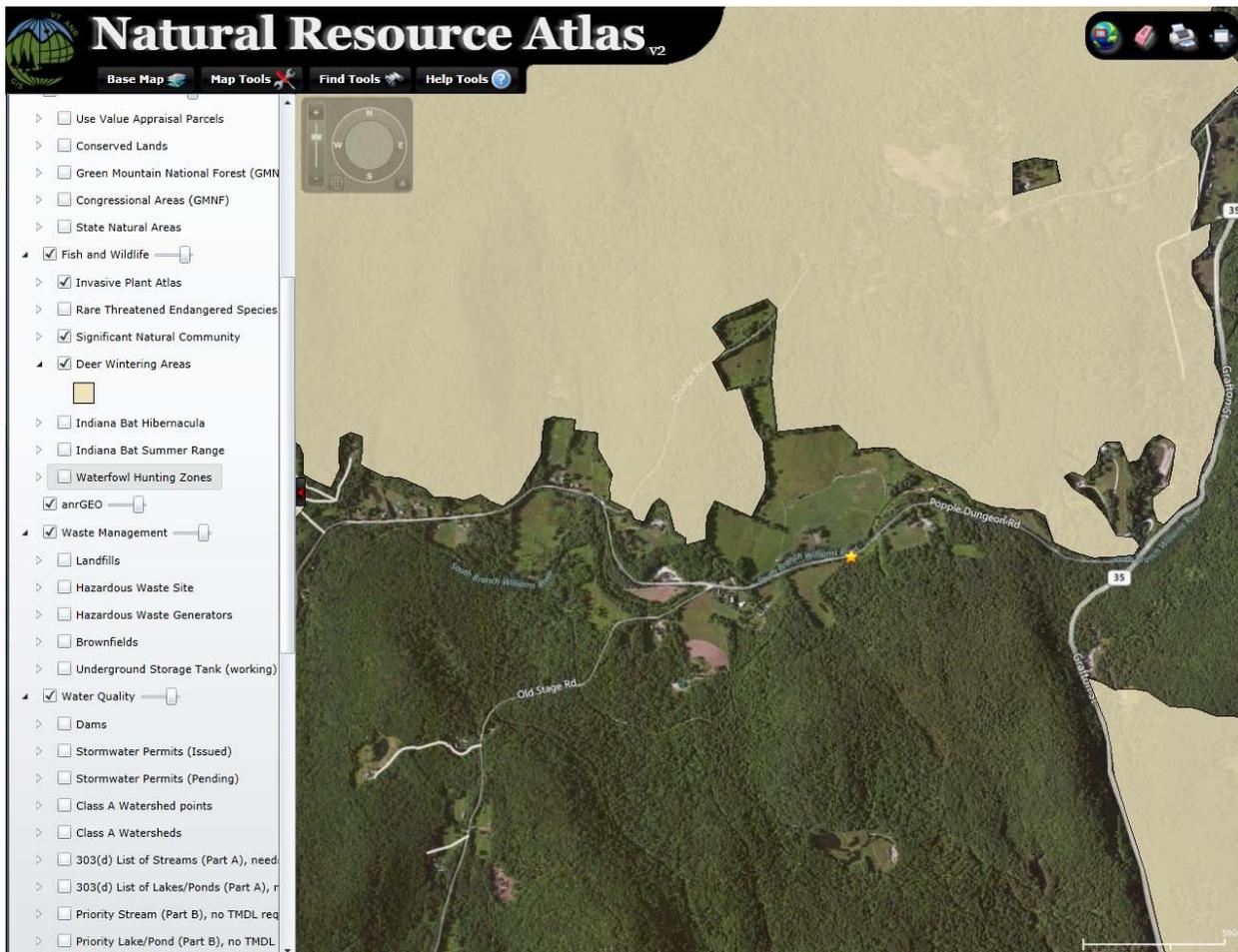
4.3.2.1 ENVIRONMENTAL CONSEQUENCES

For all alternatives, there are negligible environmental consequences. Further consideration of MBTA is not required.

4.3.3 FISH AND WILDLIFE

The South Branch of Williams River runs through a series of rolling hills that are covered with hardwood trees such as maple, beech and birch, with spruce and fir trees common at higher elevations in this area. This wooded riparian buffer provides a home for small animals and birds. Due to the steep elevation in this immediate vicinity, habitat for larger animals is not likely. As mentioned in the Land Use section, the South Branch of Williams River is traditionally a popular source for fly fishing. Species of fish that are common to this area include; Brook Trout, Brown Trout, Rainbow Trout, Largemouth Bass and Pike.

The map below shows the Deer Wintering Area (light brown) near the project area (centrally located by the star icon). To cope with Vermont's severe climatic conditions, deer have developed a survival mechanism that relies upon the use, access, and availability of winter habitat. These habitat areas are known as deer wintering areas, deer winter habitat or, more commonly, 'deer yards.' Deer winter habitat is defined as areas of mature or maturing softwood cover, with aspects tending towards the south, southeast, southwest, or even westerly and easterly facing slopes.



4.3.3.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – Minor impacts could be expected, specifically to the fish species. The no action alternative has an increased probability to deposit eroded materials into the river which will affect the species spawning and migration paths from the project location and also downstream.

ALTERNATIVE 2: PROPOSED ACTION – Minor impacts could be expected but only for the species that may be located in the area where the road will be realigned which is only a small location. Considering that much of this area is similar vegetation, species located in this immediate area could easily relocate with no repercussions.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT – Minor impacts could be expected, specifically to the fish species. This alternative has a long term potential to deposit eroded materials and added rip/rap into the river which will affect the species spawning and migration paths from the project location and also downstream.

4.4 Cultural Resources

Under Section 106 of the National Historic Preservation Act (NHPA), Federal agencies are required to consider the impacts of their actions on historic properties. Historic properties are those that are listed on or eligible for listing on the National Register of Historic Places, and are defined as districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture. The goal of the NHPA is to have federal agencies act as responsible stewards of the nation's resources when their actions affect historic properties. The historic preservation review process mandated by Section 106 is outlined in regulations issued by the Advisory Council on Historic Preservation (ACHP) 36 CFR Part 800.

Federal agencies are responsible for initiating Section 106 review, most of which takes place between the agency and the State Historic Preservation Officer (SHPO). A Programmatic Agreement among the Federal Emergency Management Agency, Vermont State Historic Preservation Officer (SHPO), Vermont Emergency Management Division of the Department of Public Safety, and the Advisory Council for Historic Preservation (executed 05/09/2011) guides the Section 106 review process in Vermont.

4.4.1 HISTORIC PROPERTIES

The town was originally chartered by New Hampshire Governor Benning Wentworth as Flamstead in 1754. The terms of the charter were not met and the town was re-chartered as New Flamstead in 1761. In 1766 a patent was issued by New York that changed the name of the town to Chester, after George Augustus Frederick, the Earl of Chester and the eldest son of King George III. But the governing authority of Chester reverted to the 1761 charter by an act of the Vermont legislature, although it left the name "Chester" in place.

Chester in its early history gained fame as the intersection of important stage coach lines. The major route from Boston to Montreal known as the Green Mountain Turnpike, passed the Hugh Henry (one of the town's first prominent settlers) farm and came into the North Village. The present Main St. was the route from Hanover, N.H., to Albany and Saratoga Springs, N.Y. Both routes brought commerce and traffic into Chester. Hugh Henry's property (now 2206 Green Mountain Turnpike in Chester) in 1780 was a thriving stage tavern. The Henry property is located approximately 2.4 miles to the east/southeast of the project location.

When the first U.S. Census was taken in 1791, Chester had a population of 981. Almost 200 years later, the 1970 census showed a population of 2,318. During the first quarter of the 19th century, Chester saw its most prosperous period. There were four (4) grist mills, nine (9) saw mills, three (3) fulling mills, one (1) oil mill, one (1) cotton mill, two (2) wool factories, five (5) general stores, six (6) taverns, one (1) distillery and four (4) tanneries within the town boundaries. There were also, three (3) lawyers and six (6) doctors practicing in Chester. None

of these sites were located within the project area. Most likely they were located in the Chester Village which is to the northwest of the confluence of the Middle Branch of the Williams River and the Williams River.

The Chester Village is a historic district listed on the National Register of Historic Places (NRHP) under criteria C. The district is bounded by Lovers Lane Brook, Maple St, Williams River, Middle Branch of Williams River and Lovers Ln. The district consists of 187 buildings, three (3) structures and one (1) object of Colonial Revival, Late Victorian and Federal style, with 48 Non-Contributing buildings. The general coordinates are N 43.26505 W-72.60083. The Chester Village Historic Village is located approximately 2.5 miles north/northeast of the project location.

In 1834 construction began on the Stone Village on North St. The village consists of ten (10) stone houses and one (1) stone church made from locally quarried stone and eight (8) additional contributing structures. The church was built in 1845. The Architects/engineers who constructed these buildings, mostly in Greek Revival or Cape Cod i-house style, were Alison and Wiley Clark. These structures are included in the Stone Village Historic District (under criteria C) and are located along North St (Rt. 103) approximately 2.6 miles to the northeast of the project location at coordinates N43.27312 W-72.59275.

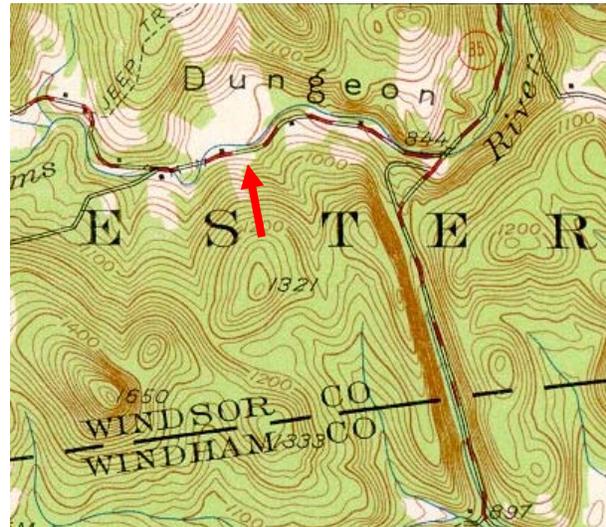
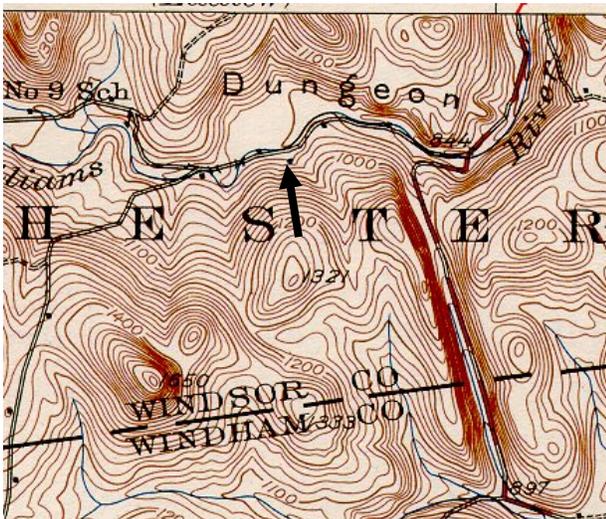
The only two properties that are listed on the NRHP are the Greenwood House and the Jeffrey House. The Greenwood House was built c. 1850 and consists of three buildings along VT. Route 103 (N43.25773 W-72.58683). The buildings represent both Greek Revival and Queen Anne style architecture and qualify for inclusion in the NRHP under criteria C. The Jeffrey House was built c. 1797 by Jabez Sargent Jr. in the Georgian style of architecture and qualifies for inclusion in the NRHP under criteria C. The house is located on North St (N43.27358 W-72.59025) which is approximately 2.6 miles to the north/northwest of the project location.

Within the project APE, there are no structures only simple stone walls ranging from 2-3 ft. wide by 2-3 ft. tall. The walls, constructed of field stones are almost assuredly property boundaries or other type of resource delineations. There are no remnant cellar holes or wells that indicate historic structures. The picture to the right of the stone wall was taken at coordinates N43.24309 W-72.61909, on October 10, 2012, looking south. The wall follows a dirt access road that begins approximately 200 ft. to the west (along existing Popple Dungeon Rd). The photo of the stone wall was taken approximately 175 ft. to the southwest of the point where the access rd. enters the



existing Popple Dungeon Rd (prior to realignment). The stone wall begins approximately 25 ft. north of where the photo was taken and continued 100+ ft. to the south (the entire length was not walked as even at the location of this photo, the wall is outside of the project APE).

The topo map below on the left is the 1933 USGS 15 Minute Series, Saxtons River VT Quadrangle (northeast corner). The map below on the right is the 1957 USGS 15 Minute Series, Saxtons River VT Quadrangle (northeast corner). The black arrow is pointing to a structure that is clearly visible on the 1933 map but in the 1957 map, the red arrow, pointing to the same



location shows no structure. It is unknown what this structure was or when it was built but based on the topography it is most likely on the Quazzo property. In any case, the structure that existed is approximately 250 ft. away from the existing Popple Dungeon Rd and therefore at least 175 ft. further south than the limits of the project APE. Furthermore, the structure is approximately 300 ft. to the southwest of the photographed stone wall. The stone wall is also located on the Milanesi property, which makes the correlation between the wall and the old structure unlikely. Considering that the (current) Quazzo and Milanesi houses are included on the 1933 map, these property boundaries would have existed at that time. The boundary has been indicated as the unnamed intermittent stream and although it is not marked on the historic topo maps, can be identified as the area to the right of the arrows (northeast of the rise in topography) where the contour curves from west to east then shoots north abruptly and quickly continues east.

4.4.1.1 ENVIRONMENTAL CONSEQUENCES

There are no historic structures of significance within the project APE. Therefore, for all alternatives, there are negligible environmental consequences. On November 19, 2012, FEMA sent the SHPO a determination letter, in accordance with the 2011 Programmatic Agreement guidelines, notifying that the undertaking discussed herein as Alternative 2 would result in “no historic properties affected”. FEMA requested concurrence with this determination to finalize the consultation process and fulfill Section 106 obligation. On January 2, 2013, VT SHPO concurred with FEMA’s determination.

4.4.2 ARCHAEOLOGICAL RESOURCES

Native American communities have lived in present-day Vermont for approximately 11,000 years. The archaeological remains they left behind are the only tangible link to their past. Archaeological sites have been identified along the Williams River and in its tributary drainages dating from the initial period of human migration into Vermont following retreat of the glaciers. Chance finds of Indian artifacts are reported in nineteenth-century town histories; archaeological surveys conducted during the past 30 years have identified and sometimes explored specific sites.

The archaeological sensitivity for the Town of Chester is focused on the location of the present-day village. This location between the Middle Branch of the Williams River and the Williams River, as well as various tributaries, would have been an ideal location for Native American habitat. The location would have provided the most fertile soil for crops, the rivers would have provided access to trade routes and the mountains that surround this area would have provided some protection. In 1997, the University of Maine in Farmington conducted a phase 1 archaeological survey for the proposed improvements to the bridge located on Rt. 103 where it crossed the Middle Branch of Williams River (N43.25789 W-72.58753). This survey identified a Native American presence that warranted additional work to examine the extent and time period of the Native American population at this location. This archaeological site is located approximately 1.9 miles to the northeast of the Popple Dungeon Rd realignment.

At the project APE the archaeological sensitivity is low. Despite proximity to the South Branch of Williams River and associated tributaries the landform is not conducive for sustained habitation. The tributaries of the South Branch of Williams River only exist in the forms of seasonal or intermittent streams that are result from the steep mountainous terrain. Vermont Division for Historic Preservation has developed a set of guidelines to assess the archaeological sensitivity of any given area called, *Environmental Predictive Model for Locating Pre-Contact Archaeological Sites*. The model takes environmental factors such as proximity to; rivers, confluences of rivers/streams, floodplains, wetlands greater than 1 acre, ridge crests/promontories, terraces, but also considers factors such as, proximity to; natural travel corridors (major rivers), quarries and existing Native American sites. The model also factors in negative impacts such as; excessive slopes and disturbed areas. Points are given (or subtracted) if the location fits under any of these criteria. Based on this model, the location of this project received a score of zero (0) points. A score of 32 is needed for a location to be considered archaeologically sensitive.

4.4.2.1 ENVIRONMENTAL CONSEQUENCES

For all alternatives, there are negligible environmental consequences. The comments regarding consultation with SHPO in section 4.4.1.1 (Environmental Consequences to Historic Properties)

applies to archaeological resources as well. The consultation with SHPO was a determination of “no historic properties affected” that applied to historic properties/structures and archaeological resources.

An inadvertent discoveries condition will be implemented on this project where in the event that archaeological materials (e.g. Native American pottery, stone tools, old bottles, historic bricks) and/or human remains are uncovered during site preparation or construction, the Town of Chester shall require that their work crew/construction contractor immediately stop ground disturbing work within the vicinity of the discovery and take reasonable measures to avoid and minimize harm to the materials and discovery area. The town is responsible for ensuring that archaeological discoveries and human remains associated with this FEMA-funded work are adequately secured, access to the area is restricted, and that FEMA Region 1 Environmental/Historic Preservation Group are promptly notified of the discovery so that they may coordinate with the Vermont State Historic Preservation Officer (SHPO). Work will not be permitted to continue until FEMA and SHPO agree on a proper course of action for the continuation of the project.

4.5 Socioeconomic Resources

4.5.1 ENVIRONMENTAL JUSTICE

Executive Order 12898 (Environmental Justice, 59 CFR 7629) directs federal agencies to make achieving environmental justice part of their mission by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations, particularly when such analysis is required by NEPA.

Socioeconomic and demographic data for residents in the project vicinity was studied to determine if a disproportionate number (defined as greater than 50 percent) of minority or low-income persons have the potential to be affected by the alternatives.

Low-income is identified as “one whose median household income is at or below the Department of Health and Human Services poverty guidelines.” Income data based on Department of Health and Human Services (HHS) guidelines are difficult to gather, so Census Bureau data are often used for environmental justice analyses.

The population of Chester, as of the 2010 U.S. Census was 3,154. The population of Windsor County, as of the 2010 U.S. Census was 56, 670. For the purpose of evaluating low income and minority populations, census statistics for Windsor County and Chester were considered; statistics for the State of Vermont are provided for comparison and context.

Low-income households are defined by the U.S. Census Bureau as those households with incomes at or below 80 percent of area median household income. For the period 2009-2010, the median household income in Windsor County was estimated at \$51,863; for Chester at \$49,713; and Vermont as a whole at \$ 49,393. Approximately 10.2% of Chester's population live below the poverty threshold, compared to 11.4% of the population of Vermont as a whole.

Racial/ethnic minorities make up a very small percentage of state, county and community 70 populations in Vermont. In Windsor County, the minority population totals less than 1,500 individuals. The White non-Hispanic population makes up 96.8%, 95.5% and 98.1% of the state, county, Chester populations, respectively. Black non-Hispanic populations make up less than 1% of the population in all cases. Asian populations make up 0.9%, 0.9% and 0.2% of the state, county and Chester populations, respectively. Hispanic-Latino populations constitute 0.9%, 1.2%. and 0.7% of the state, county and Chester populations, respectively.

4.5.1.1 ENVIRONMENTAL CONSEQUENCES

For all alternatives, there are negligible environmental consequences

4.6 Potential Hazards

4.6.1 HAZARDOUS MATERIALS

The Resource Conservation and Recovery Act (RCRA) mandates control over the treatment, storage, and disposal of hazardous waste. Subtitle D addresses the management of non-hazardous solid waste.

At the state level, the Solid Waste Program (part of the Vermont Agency for Natural Resources) does not regulate site owners or contractors with respect to managing on-site materials, but does regulate the hauling and disposal of waste.

The only potentially hazardous materials that may have an impact on this project location are volatile organic compounds (VOC). The VOCs that may effect this location are gasoline or oil that may have been absorbed in the asphalt. The asphalt that will be removed from the existing road for realignment will most likely be taken to the town garage for recycle and re-use. Considering the low levels of these VOCs that are likely to be in the pavement along this 990 ft. stretch, this recycling of asphalt would have a negligible impact on the environment.

The main hazard associated with asphalt is from the polycyclic aromatic hydrocarbons (PAHs) and alkyl PAHs in asphalt that can move into the ecosystem from the breakdown of asphalt. PAHs are potent atmospheric pollutants that consist of fused aromatic rings and do not contain heteroatoms or carry substituents. Since asphalt contains so many toxic and carcinogenic compounds and since leaching of harmful PAH compounds has been documented even in water

pipe use, asphalt should be kept out of rivers, streams, and other natural waters to the extent possible.

4.6.1.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – Minor impacts could be expected if asphalt continues to be forced apart and washed down the lower embankment into the South Branch of Williams River (as was indicated from town reports). Though there are no federal or state listed endangered or threatened species or critical habitat listed within the project area, once asphalt enters the river, the contaminants may reach as far as the river runs affecting species located miles away.

ALTERNATIVE 2: PROPOSED ACTION – Negligible impacts from hazardous materials on the environment, as erosion would be contained and asphalt would not enter river.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT - Minor impacts could be expected, because although the lower embankment would be stabilized the water runoff from the upper embankment would still cause the asphalt to washout.

4.6.2 NOISE

The EPA has developed federal noise-emission standards, identifying major sources of noise and determining appropriate noise levels for activities that would infringe on public health and welfare. The “Levels Document” is the standard reference in the field of environmental noise assessment. EPA identifies a 24-hour exposure level of 70 decibels as the level of environmental noise which will prevent any measurable hearing loss over a lifetime.

Levels of 55 decibels outdoors and 45 decibels indoors are identified as “preventing activity interference and annoyance”. U.S. Department of Transportation (USDOT) has established acceptable noise levels and ranges for construction equipment.

Construction activities would temporarily increase noise levels in the vicinity of both project areas. Regardless, both sites are sufficiently removed from residential properties to reduce noise levels to acceptable standards and not for extended periods.

4.6.2.1 ENVIRONMENTAL CONSEQUENCES

For all alternatives, there are negligible environmental consequences

4.6.3 TRAFFIC

The location for this project is in a remote section in the southwest corner of town. There are minimal egresses should there be traffic restrictions in this area. Heading east from the project location, it is 0.6 miles to Grafton Rd (Rt. 35), from this location it is 2.5 miles north to Chester Village (and Rt. 103) or 4.9 miles south along Grafton Rd. to the center of Grafton. Heading west, it is 5.4 miles along Popple Dungeon Rd to White/Horsenail Hill Rd. (3.6 miles along Popple Dungeon Rd to the town/county border into the Town of Windham, Windham County).

From White/Horsenail Hill road, it is either 0.7 miles north to Rt. 11 and an additional 3.7 miles north to the center of Andover or 2.8 miles south to the center of Windham. Heading south, it is 0.25 miles to the west to Old Stage Rd then 3.2 miles south to Rt. 121 in the Village of Houghtonville and an additional 3.1 miles east and south to the center of Grafton. There is no egress directly to the north for this location.

The Town of Chester estimates approximately 150 trips per day (week day) made on Popple Dungeon Rd. by residents alone. In Chester there are approximately 30 residences on Popple Dungeon Rd. The average trip per day per dwelling, according to the Institute of Transportation Engineers), for the Town of Chester is 9.57 trips (week days). Considering the sparse population in this section of Chester, the Town calculated a trip per day per dwelling average of 4.31 trips (week days).

During Tropical Storm Irene, August 28, 2011, this section of Popple Dungeon Rd. was damaged so severely that the road was closed for three days. According to town reports, there was no access for emergency services to reach the residences. Furthermore, the Chester Police Department and Fire Department only had access to residents via all-terrain vehicles (atvs) in order to bring in emergency supplies.

4.6.3.1 ENVIRONMENTAL CONSEQUENCES

ALTERNATIVE 1: NO ACTION – Major impacts could be possible if another flooding event occurs with road washout severe enough to close the road. Due to the threat to public safety, this impact could have severe implication if someone requires medical attention while the road is closed.

ALTERNATIVE 2: PROPOSED ACTION – Minor impacts. The demolition and reconstruction of the road would require transporting construction equipment and supplies, although efforts to recycle much of the construction debris may reduce the volume. Regardless, added trips with heavy equipment at the beginning and end of each construction day can be anticipated. Additional passenger car trips would also be necessary to transport workers and inspection staff to and from the site throughout the construction phase. These trips would be a minor addition to local traffic volumes and would not likely cause congestion.

ALTERNATIVE 3: STABILIZING THE EMBANKMENT - Minor impacts could be anticipated, because although the lower embankment would be stabilized the water runoff from the upper embankment would still cause the asphalt to washout resulting in occasional road closures that would imply the same risk as described in the *No Action* alternative consequences. There would also be the same temporary minor effects described in the *Proposed Action* alternative consequences from construction.

4.7 Summary Table

	Alternative 1 No Action	Alternative 2 Road Realignment (Proposed Action)	Alternative 3 Stabilizing the Embankment
PHYSICAL RESOURCES			
Climate	Negligible	Negligible	Negligible
Geology, Soils & Vegetation	Negligible	Moderate: A large section of hillside will be graded and removed of trees and vegetation. Drainage culverts will be added to properly accommodate water runoff.	Minor: The lower embankment would be stripped of vegetation to allow for placement of rip/rap.
Air Quality	Negligible	Minor: Temporary, during times of construction.	Minor: Temporary, during times of construction.
Land Use	Minor: Potential affects to fishing if erosion continues and fish species are impacted.	Minor: In total, 0.56 acres of land will be cleared and graded to accommodate the road realignment.	Minor: Potential affects to fishing if erosion continues and fish species are impacted.
AQUATIC RESOURCES			
Water Quality	Moderate: Increased potential for asphalt and contaminants to erode into river.	Negligible	Minor: Minimal risk for asphalt and contaminants to erode into river.
Wetlands	Negligible	Negligible	Negligible
Floodplains	Minor: Threat of road to wash out into floodplain with potential to alter geomorphology with shifting river channel.	Negligible	Minor: Threat of road to wash out into floodplain with potential to alter geomorphology with shifting river channel.
BIOLOGICAL RESOURCES			
Threatened and Endangered Species and	Negligible	Negligible	Negligible

Critical Habitat			
Migratory Birds	Negligible	Negligible	Negligible
Fish and Wildlife	Minor: Impacts to fish, spawning and migration, if erosion continues.	Minor: Impacts to the small animals and birds that utilized the area of wooded riparian buffer taken for the road realignment.	Minor: Impacts to fish, spawning and migration, if erosion continues.
CULTURAL RESOURCES			
Historic Properties	Negligible	Negligible	Negligible
Archaeological Properties	Negligible	Negligible	Negligible
SOCIOECONOMIC RESOURCES			
Environmental Justice	Negligible	Negligible	Negligible
POTENTIAL HAZARDS			
Hazardous Materials	Minor: Threat of hazardous materials found in asphalt to river if erosion continues.	Negligible	Minor: Threat of hazardous materials found in asphalt to river if erosion continues.
Noise	Negligible	Negligible	Negligible
Traffic	Major: Potential for major washout is increased which could cause road closures for extended periods, leaving residents without egress and limited to no access by emergency services.	Minor: Constructed related.	Minor: Constructed related. Potential for road closures if major washout occurs.

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16 U.S.C. 470 et seq. National Historic Preservation Act of 1966. Public Law 102 575, as amended.

16 U.S.C. 1531 et seq. Endangered Species Act of 1973.

16 U.S.C. 1801 et seq. Magnuson-Stevens Fishery conservation and Management Reauthorization Act of 2006. Public Law 94-265.

33 U.S.C. 1251 et seq. Clean Water Act of 1972.

36 CFR Part 800, Protection of Historic Properties, (incorporating amendments effective August 5, 2004).

40 CFR 50. National Primary & Secondary Ambient Air Quality Standards. 1971 as amended 1998

42 U.S.C. 7401 et seq. Clean Air Act of 1970.

42 U.S.C. 4321 et seq. National Environmental Policy Act of 1969. Public Law 91-190, as amended.

50 CFR 10.13. Migratory Bird Treaty Act of 1918, as amended.

SECTION V: CUMULATIVE EFFECTS

The Council on Environmental Quality regulations for implementing NEPA requires an assessment of cumulative effects during the decision making process for federal projects. Cumulative effects are defined 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 nonfederal) or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects are considered for both the No Action and Proposed Action alternatives. Cumulative effects were determined by combining the effects of the alternative with other past, present, and reasonably foreseeable future actions.

Based on guidelines, no significant cumulative impacts would occur from the Proposed Action Alternative. While some terrestrial habitat would be eliminated, due to the limited scope of the work and the proposed mitigation no loss of any sensitive cultural, biological or terrestrial resources is expected that would contribute a measurable amount to the cumulative effects. The road relocation would not result in increased capacity, nor are there any plans for future land use development in the area.

SECTION VI: PUBLIC INVOLVEMENT AND RESPONSE TO COMMENTS

To meet the requirements of the National Environmental Policy Act (NEPA), FEMA has prepared a Draft Environmental Assessment (EA) to identify and evaluate historic and environmental resources that might be affected by proposed road demolition, construction, mitigation or other actions associated with erosion control to a specific section of Popple Dungeon Rd. As part of its goal to ensure that good management decisions are made, FEMA invites the public to review and comment on the Draft EA and to provide FEMA with information it may not have considered in its review.

Beginning on Monday February 11, 2013, the Draft EA will be posted on FEMA's website at <http://www.fema.gov/environmental-planning-and-historic-preservation-program/environmental-documents-public-notice>, on the Vermont Emergency Management website at <http://www.vem.vermont.gov>, and on the Town's website at <http://www.chester.govoffice.com/>. The comment period will last for 14 days, ending on Monday February 25, 2013. A copy of the Draft EA will also be available by February 11, 2013 at the Chester Town Hall Offices, 556 Elm Street, Chester (8:00 am to 4:00 pm, Monday-Friday), and at the Whiting Library, 117 Main Street, Chester (10:00 am to 6:00 pm Monday, Wednesday, and Friday, 10:00 am to 2:00 pm Saturday).

Comments on the Draft EA can be submitted by mailing Jack Sullivan, Regional Environmental Officer at, FEMA Region 1, 99 High Street 6th Floor, Boston, Massachusetts 02110, or by emailing Jack.Sullivan@fema.dhs.gov, or by faxing 617-956-7574.

SECTION VII: CONCLUSION

This draft EA evaluated potentially significant resources that could be affected by three alternatives to address the erosion concerns of Popple duncheon Rd in Chester VT. The evaluations covered various physical, aquatic, biological, cultural or socioeconomic resources or potential hazards. Of the three alternatives, the proposed action of road realignment will have the most beneficial effect to quell the ongoing erosion concerns of the road in the area described in this assessment. Alternative 1-No Action, does not address the ongoing concerns of the road washing out, which is costing the town large amounts of money, negatively impacting the environment and endangering the lives and safety of residents. Alternative 3-Stablizing the embankment, provides temporary relief for erosion in to the river but fails to address the long-term effects of poor drainage and road deterioration.

Obtaining and implementing permit requirements along with appropriate Best Management Practices (BMP) will avoid or minimize any effects associated with the action. Since no significant impacts were identified during the public comment period, it is recommended that a finding of no significant environmental impact to the human or natural environment be issued for the Proposed Action Alternative.