FHWA-ID-EIS-12-01-F

Farmland Technical Report

Final Environmental Impact Statement

US-95 Thorncreek Road to Moscow

Project No. DHP-NH-4110(156);Key No 09294

Farmland Analysis

Idaho Transportation Dept.

Highway 95

Thorncreek to Moscow

DEIS

ED HAAGEN

Consulting **December 2006**

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Foreword

The following report was completed in compliance with the Farmland Protection Policy Act (FPPA), Public Law 97-98, 7 U.S.C. 4201. It evaluated the alternative routes, defined by the Idaho Transportation Department (ITD), for their impact on agricultural land. Using the Land Evaluation and Site Assessment (LESA) Protocol, it determined which of the alternatives had the least impact on agriculture in the proposed project. The original environmental studys included 10 routes located between Thorn Creek Road and the bridge across the south fork of the Palouse River, south of Moscow. The project has now been narrowed to three alternatives. This report is an update of the original evaluation. It covers the three selected alternatives and includes refinements of the boundaries made by the engineering staff at ITD. A CAD drawing, established by ITD, was georectified over the 2004 orthophoto base map of Latah County and defines the location of each alternative. Slight variations are expected once the alternative selected can be precisely engineered. The alternatives are identified by the following symbols: W4, C3, and E2. Form NRCS-CPA-106 “Farmland Conversion Impact Rating, Corridors” was completed for each of the alternatives. The GIS Analysis was done using the ArcView 3.2 program. Maps and supporting documentation are provided.

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS

Background

In 1981 Congress identified the need to implement programs and policies to protect farmland and combat urban sprawl. The Compact Cities Report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994.
The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that—to the extent possible—Federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland.

For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forestland, pastureland, cropland, or other land, but not water or urban built-up land.

Project Area

The project area is located in Latah County, in Northern Idaho. The county is 688,666 acres or 1,076 square miles and is in the transition zone between rangeland on the west and mixed coniferous forestland on the east. Large timber companies and federal and state governments own a majority of the forested part of the county (60%). The non-forested part (38%) is dominantly private ownership. The remaining 2% is made up of incorporated cities, small towns, rural development and farmsteads.

The Idaho Transportation Department has designated an area in western Latah County for environmental evaluation for the widening of US Highway 95 south of Moscow. This rectangular area is about 19 square miles and runs from the south fork of the Palouse River to Thorncreek Road and from the Idaho-Washington border east to the base of Paradise Ridge. (See figure 1.)

The area is located on the eastern edge of a geographic region referred to as the Palouse. It is part of the Columbia basalt plateau and characterized by rolling hills. The rolling hills are the result of deep wind-deposited silt (loess) that covers horizontal beds of basalt bedrock. Intersecting this landscape are intrusive granite ridges where soils are thinner and outcrops of bedrock may occur. Moscow Mountain and Paradise Ridge are examples of these granite ridges. The natural vegetation in the project area is Idaho fescue-bluebunch wheatgrass with scattered areas of shrubs. Remnants of black hawthorn and ponderosa pine also occur.

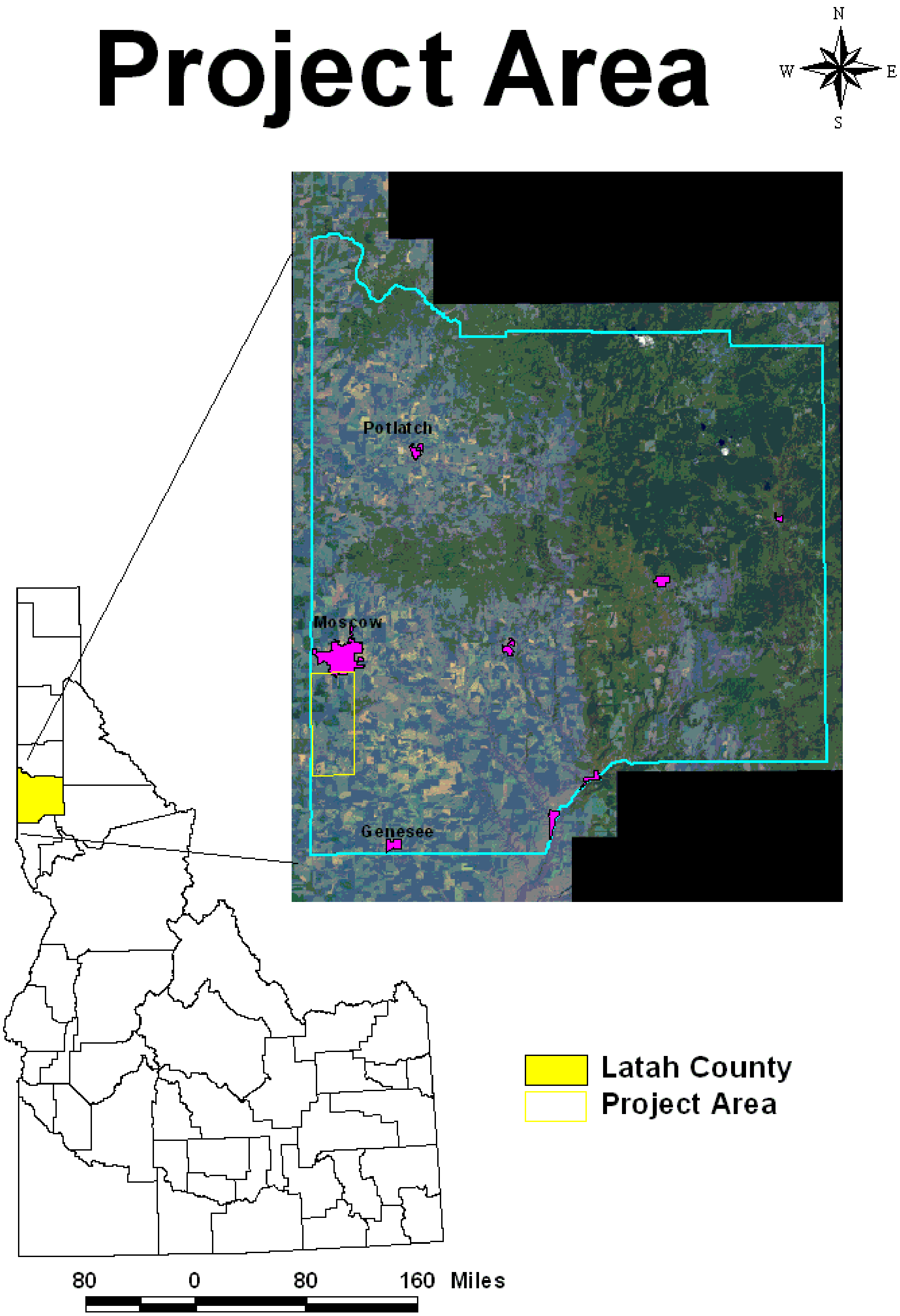

Project Area
N
W
E
S
Potlatch
Moscow
Genesee
Latah County
Project Area
80
0
80
160
Miles

Figure 1.

Description of existing conditions as they relate to agriculture.

Although the project area was dominated by grassland vegetation, very few areas remain in native vegetation today. Most of the area has been under cultivation for over 100 years. The deep fertile loess soils and climatic condition are ideal for dryland farming. The total cropland in the county is about 265,000 acres. The principal crop is winter wheat. Average yield is about 80 bushels per acre. Other crops grown in the area are barley, field peas, garbanzo beans, lentils and canola. (See table 1) These crops are usually grown in a rotation with winter wheat to prevent disease and as an erosion control practice. Spring barley or lentils followed by 2 or 3 years of winter wheat would be a normal rotation for the area. Rotations vary depending on the producer’s farming operation and the conservation programs in which they are enrolled. Of the 12,200 acres in the project area almost 11,000 acres are designated as crop fields. This includes cultivated crops (about 9,000 acres), hay or pasture (about 500 acres) and continuous vegetation (about 1,500 acres) enrolled in the Conservation Reserve Program. Shrub vegetation occurs on 550 acres and over 400 acres are developed into farmsteads, rural residences or commercial development. Forestland, highways and water make up the remainder.

Land ownership is about 98% privately owned. The state of Idaho owns several public offices and the University of Idaho has some land occupied by the arboretum. The federal ownership includes the right-of-way for Highway 95.

Farming operations are generally privately owned family farms but in many cases will include rental property. The average farm size in Latah County is 494 acres. With rental property included many producers are farming more than 1,000 acres. Most of the farms operate privately owned farm machinery. They use and support the farm services that have been established in the area. These include farm machinery dealers’ fertilizer and chemical distributors, financial institutions, and grain storage and transportation facilities.

Table 1. Latah County Crop Acres Planted 2002 to 2005 (1)

2002	2003	2004	2005	
99,842.1	94,325.7	96,419.1	97,068.3	Wheat (all)
14,897.8	17,705.5	10,361.9	10,549.6	Barley
21,234.5	25,436.4	24,612.3	21,011.0	Peas
29,150.9	28,599.8	26,200.6	31,975.6	Lentils
2,966.8	4,337.3	5,114.5	10,406.4	Garbanzo beans
479.8	456.9	322.3	228.3	Canola
291.5	68.4	250.2	452.0	Rapeseed
43,600.1	43,491.8	46,033.1	46,409.5	CRP
10,594.0	6,053.0	4,764.0	5,027.0	Hay
3,470.0	846.0	344.0	131.0	Pasture
226,527.5	221,320.8	214,422.0	223,258.7	Total Crop

1) Jim Knecht, County Executive Director
Latah County FSA Office

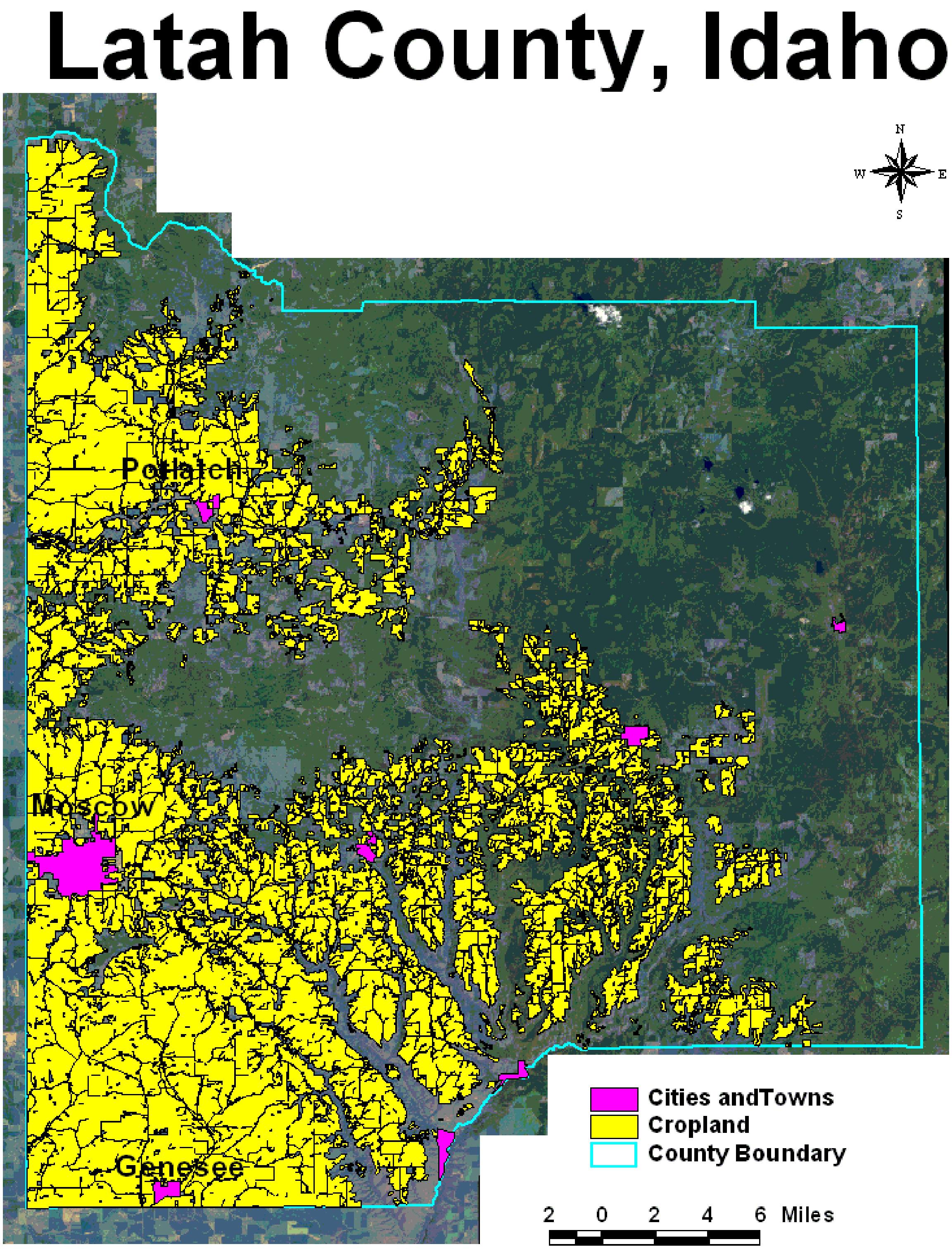

Latah County, Idaho
N
W
E
S
Potlatch
Moscow
Genesee
Cities andTowns
Cropland
County Boundary
2 0 2 4 6 Miles

Figure 2.

Alternative Routes

At public open houses on January 18-19, 2006, ITD presented the results of the environmental studies for the 10 alternatives/alignments for the U.S. 95 Thorncreek Road to Moscow project. ITD also presented the three alternatives/alignments recommended for further study, based on the results - W4, C3 and E2. (See Figure 3.) This report deals only with these three alternatives. The difference between these routes and those studied previously is that the engineering department at ITD has refined the boundaries and shortened the routes where they overlap at the south end of the project. Rather than beginning at Martinsen Road, the routes begin at the base of Reisenauer Hill on the south side.

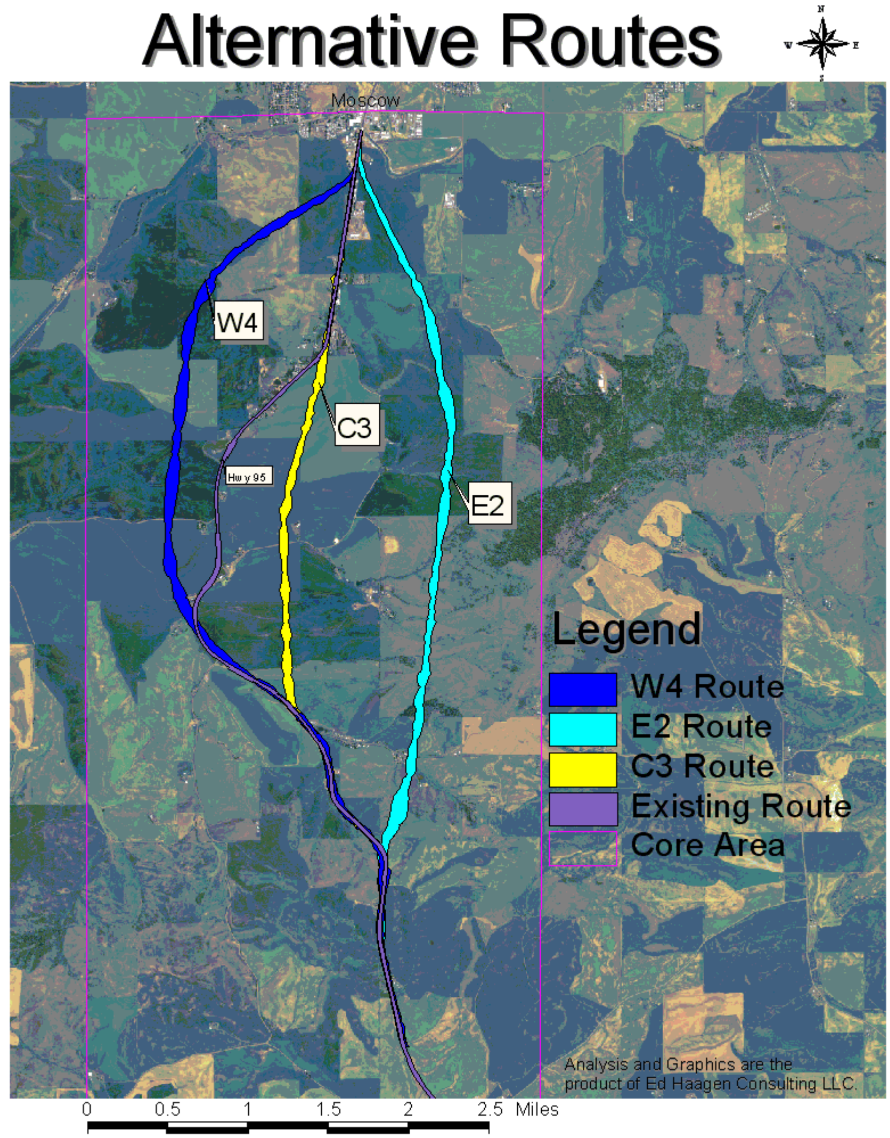
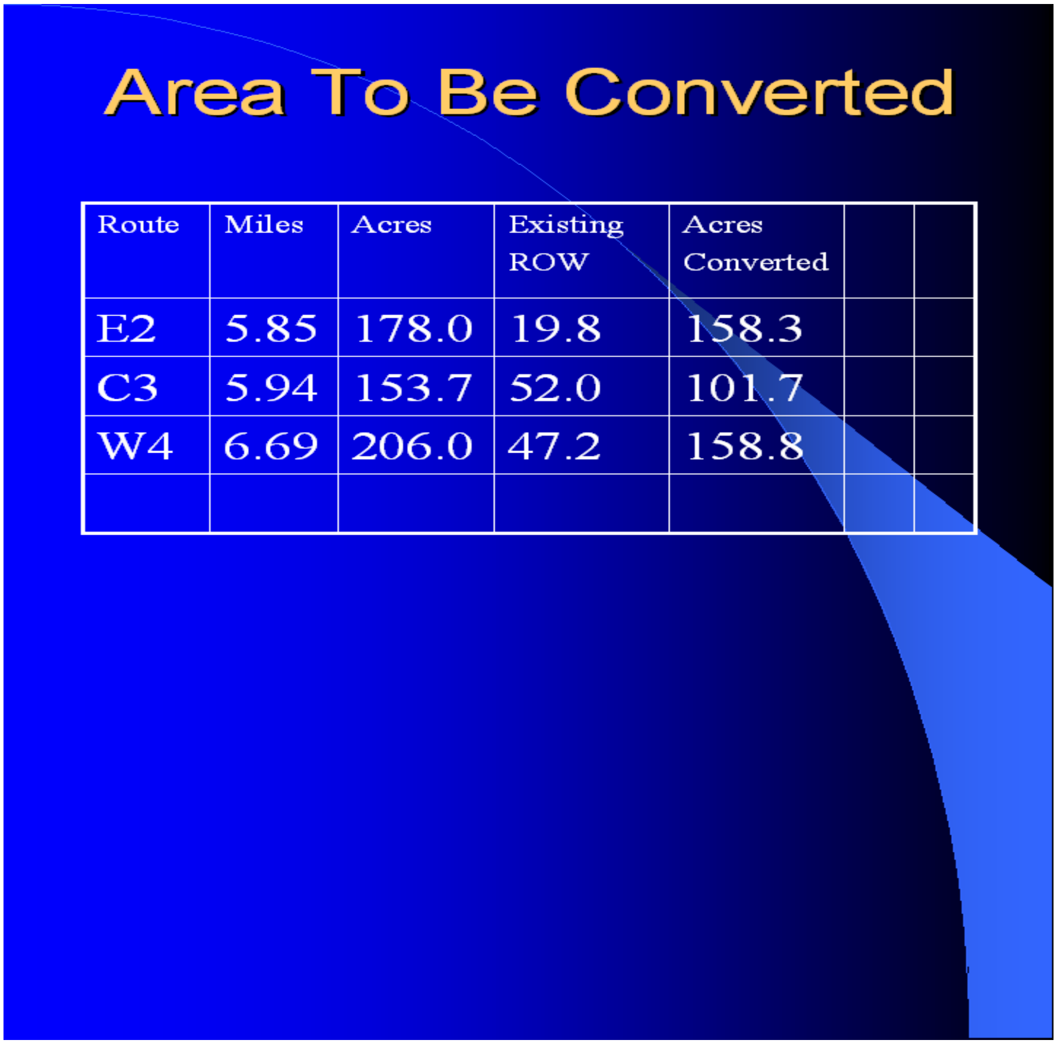


Figure 3


Area To Be Converted

Route	Miles	Acres	Existing ROW	Acres Converted		
E2	5.85	178.0	19.8	158.3		
C3	5.94	153.7	52.0	101.7		
W4	6.69	206.0	47.2	158.8		

Table 2

Determination –

A written request for determination of farmland and land evaluation information was made by the Idaho Transportation Department. The request was processed on the Farmland Conversion Impact Rating Form For Corridor Type Projects NRCS-CPA-106. (See Figure 4)

Natural Resources Conservation Service

(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I ***(To be completed by Federal Agency)***	3. Date of Land Evaluation Request	4. Sheet 1 of ______
1. Name of Project	5. Federal Agency Involved	
2. Type of Project	6. County and State	

PART II ***(To be completed by NRCS)***	1. Date Request Received by NRCS	2. Person Completing Form
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☐ NO ☐		4. Acres Irrigated / Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: %
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS

PART III ***(To be completed by Federal Agency)***	Maximum Points	Alternative Corridor For Segment ______ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres In Corridor		0	0	0	0
PART IV ***(To be completed by NRCS) Land Evaluation Information***					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V ***(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)***					
PART VI ***(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))***	**Maximum Points**				
1. Area in Nonurban Use	15				
2. Perimeter in Nonurban Use	10				
3. Percent Of Corridor Being Farmed	20				
4. Protection Provided By State And Local Government	20				
5. Size of Present Farm Unit Compared To Average	10				
6. Creation Of Nonfarmable Farmland	25				
7. Availability Of Farm Support Services	5				
8. On-Farm Investments	20				
9. Effects Of Conversion On Farm Support Services	25				
10. Compatibility With Existing Agricultural Use	10				
TOTAL CORRIDOR ASSESSMENT POINTS	160	0	0	0	0
PART VII ***(To be completed by Federal Agency)***					
Relative Value Of Farmland (From Part V)	100				
Total Corridor Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	0	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing this Part: | DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

Figure 4

The first objective is to determine if the project will convert prime or statewide important farmlands. If no important farmlands are affected, the project may proceed. If however, important farmlands will be converted, the determination must continue.

Prime Farmlands—

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The land could be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. Examples of soils that qualify as prime farmlands are Palouse silt loam, 3 to 7 percent slopes and Latahco-Thatuna silt loams, 0 to 5 percent slopes. A detailed list of criteria for prime farmland is listed at the end of this document.

Farmland of Statewide Importance

This is land, in addition to prime and unique farmland, that is of statewide importance for the production of food, fiber, forage, and oilseed crops. Criteria for defining and delineating this land are to be determined by the appropriate state agency or agencies. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some states, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by state law. A detailed list of criteria for farmland of statewide importance is listed at the end of this document.

Total Acres in Prime and Statewide Important Farmland

Route	Prime	Statewide	Prime + Statewide	Other	Total
E2	50.8	94.8	145.6	12.6	158.2
C3	25.1	69.7	94.8	6.9	101.7
W4	46.7	105.3	152.0	7.0	159.0

Table 3

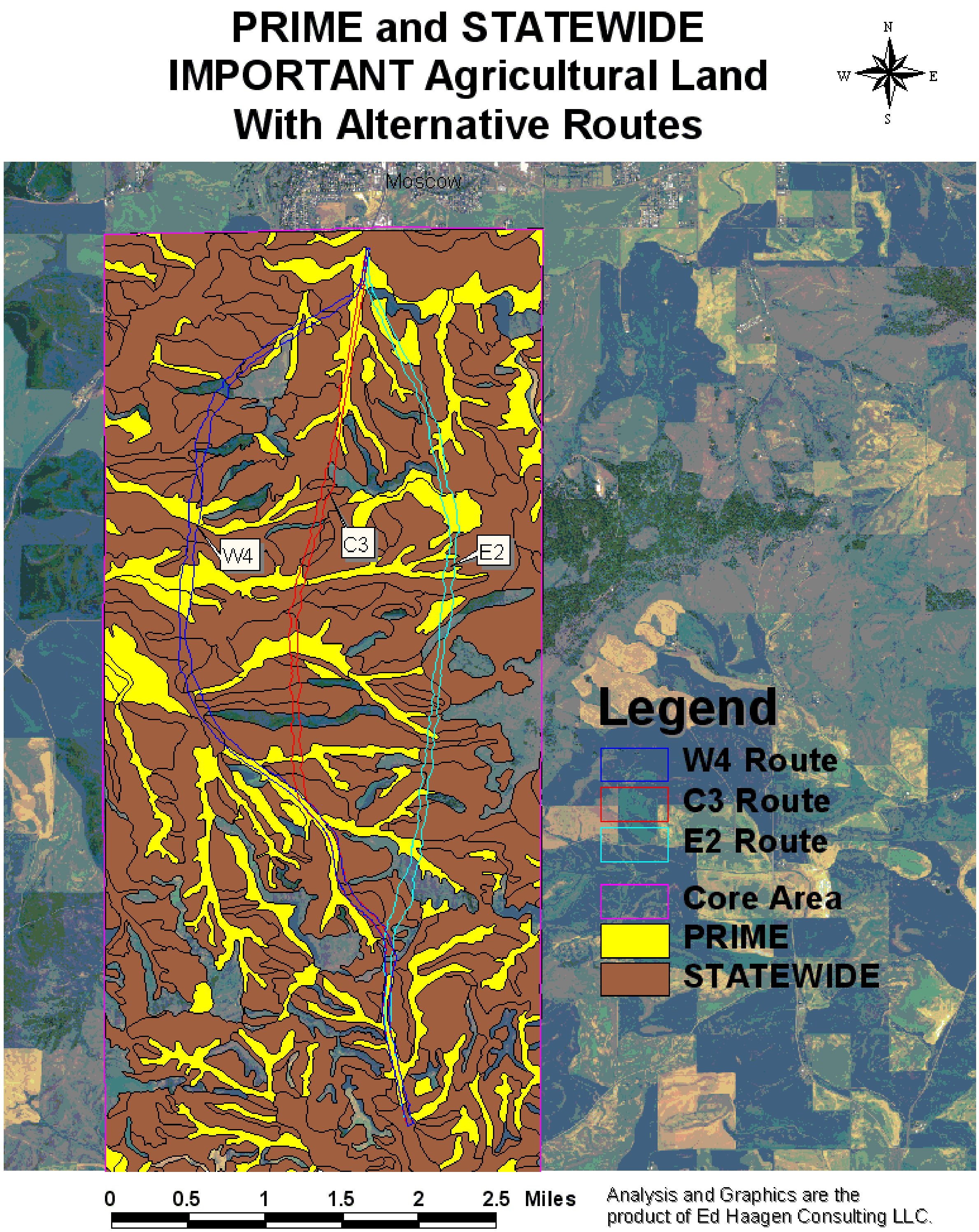

PRIME and STATEWIDE
IMPORTANT Agricultural Land
With Alternative Routes
N
W
E
S
Moscow
W4
C3
E2
Legend
W4 Route
C3 Route
E2 Route
Core Area
PRIME
STATEWIDE
0
0.5
1
1.5
2
2.5
Miles
Analysis and Graphics are the
product of Ed Haagen Consulting LLC.

Figure 5

Evaluation –

In order to establish a farmland conversion impact rating on proposed sites of federally funded or assisted projects, a land evaluation and site assessment (LESA) system was used. The roll of the LESA System is to provide systematic and objective procedures to rate and rank sites for agricultural importance. The project sponsor then uses the score as an indicator of which alternative has the least impact on agricultural land.

LESA is a system for combining soil qualities with other factors that affect the importance of the site for continued agricultural use. Soil qualities are grouped under Land Evaluation (LE). The other factors are grouped under Site Assessment (SA).

Land Evaluation (LE)

A local committee who formulated the LESA system chose winter wheat as the indicator crop in Latah County. Soils in the county were then divided into ten groups based on their similar soil characteristics, management implications and productive capabilities. Each map unit was then given a relative value between 0 and 100. This productivity index was multiplied by the number of acres of each soil type within the right-of-way and divided by the total number of acres to get a Relative Value (RV) for each alternative. A copy of the calculations used to determine the RV for each of the alternatives is included in the back of this document under "**Total Acres in Prime and Statewide Important Farmland (Tables)".**

Site Assessment (SA)

Another part of the system is the site assessment portion, which incorporates non-soil factors that impact the conversion of agricultural land. Average farm size, percent of the corridor being farmed, and creation of non-farmable units are considered. Also the effects on farm support services and on –farm investments are rated. The following pages are a detailed explanation of how each of the 10 factors were rated for each alternative. Following the evaluation scores were posted on the NRCS-CPA-106 form.

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS
Alternative W4 - DEIS
US Hwy 95 Thorn Creek to Moscow, Idaho

Explanation of answers to Part VI Site Assessment Criteria:

1. **How much land is in non-urban use within a radius of 1.0 mile from the project?** A buffer of one-mile radius around the right-of-way was generated and laid over the land use map. The area covers 10,497.6 acres. Calculations indicated that 9282.6 acres or 88.4 percent of the area was in non-urban use. A score of 14 was applied to this criterion. (See Map under Supporting Documentation at the back of this document)
2. **How much of the perimeter of the site borders in non-urban use?** The border of the right-of-way is 72,116 feet. According to measurements 89.3 percent of this perimeter is in non-urban use. A score of 9 was applied to this criterion.
3. **How much of the site has been farmed more than five of the last ten years**? 141.2 acres or 88 percent of the right-of-way proposed for conversion was farmed for five of the last ten years. 9.0 acres or 5.6 percent of this route is in the Conservation Reserve Program. A score of 19 was applied to this criterion. (See Map under Supporting Documentation at the back of this document)
4. **Is the site subject to state or local government policies or programs to protect farmland?** Based on Latah County land use maps, Latah County Comprehensive Plan 1995, approximately 85 percent of the land along the project site is zoned under Productive and Rural Protection; thus a score of 20 was applied to this criterion. Land enrolled in the Conservation Reserve Program (CRP) is under a contract that lasts from 10 to 15 years.
5. **Are the farm units containing the site as large as the average-size farming unit in the county**? The average farming operation in Latah County is 494 acres. According to FSA records the average size farm where this alternative is located is 882 acres. A score of 10 was given to this criterion.
6. **How much of the remaining land on the farm will become non-farmable if this site is selected?** This alternative produces no small parcels less than 20 acres in size; however, it splits 4 farming operations. A score of 10 was given to this criterion. (See Map under Supporting Documentation at the back of this document)
7. **Does the site have available adequate supply of farm support services and markets?** All required services are available. This project would not have an impact on farm services; therefore a score of 5 was assigned to this criterion.
8. **Does this site have substantial and well maintained on farm investments such as barns, fruit trees and vines, field terraces, drainage, irrigation, waterways, and other soil and water conservation measures?** This alternative crosses about 11 different farming operations. Although the

amount of on farm investment varies according to the number of acres in the alternative, it is safe to say that overall the investment is high. Farmsteads including barns, shops, grain storage facilities and farm machinery were observed on most of the farms. Many of the fields have soil and water conservation measures applied. Drainage has been applied to bottomland areas. A score of 20 was given to this criterion.

9. **Would this project, by converting the land to nonagricultural use, reduce the support for farm support services in the area?** Some reduction in demand for support services would be expected. However, considering there are over 266,000 acres of farmland in the county, the conversion of 159 acres would result in no significant reduction in demand for services. A score of 0 was given to this criterion.
10. **Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?** With the new highway being a limited entry access, the main factor governing the conversion of the surrounding farmland to nonagricultural use is the distance you have to drive to an access point. If the W4 alternative were chosen, it would be a short distance to the access points. Therefore, the chance of development to the surrounding farmland could be high. A score of 3 was given to this criterion.

Additional Notes

This is the longest of the three alternatives and has the most prime and statewide important farmland in the right-of-way. (152Ac.)

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS
Alternative C3 – DEIS
US Hwy 95 Thorn Creek to Moscow, Idaho

Explanation of answers to Part VI Site Assessment Criteria:

1. **How much land is in non-urban use within a radius of 1.0 mile from the project?** A buffer of one-mile radius around the right-of-way was generated and laid over the land use map. The area covers 9,542.9 acres. Calculations indicated that 8,351.1 acres or 87.5 percent of the area was in non-urban use. A score of 14 was applied to this criterion. (See Map under Supporting Documentation at the back of this document)
2. **How much of the perimeter of the site borders in non-urban use?** The border of the right-of-way is 63,956 feet. According to measurements 81 percent of this perimeter is in non-urban use. A score of 8 was applied to this criterion.
3. **How much of the site has been farmed more than five of the last ten years**? 83.2 acres or 83.2 percent of the right-of-way proposed for conversion was farmed for five of the last ten years. 9.0 acres or 8.8 percent of this route is in the Conservation Reserve Program. A score of 17 was applied to this criterion. (See Map under Supporting Documentation at the back of this document)
4. **Is the site subject to state or local government policies or programs to protect farmland?** Based on Latah County land use maps, Latah County Comprehensive Plan 1995, approximately 85 percent of the land along the project site is zoned under Productive and Rural Protection; thus a score of 20 was applied to this criterion. Land enrolled in the Conservation Reserve Program (CRP) is under a contract that lasts from 10 to 15 years.
5. **Are the farm units containing the site as large as the average-size farming unit in the county**? The average farming operation in Latah County is 494 acres. According to FSA records the average size farm where this alternative is located is 699 acres. A score of 10 was given to this criterion.
6. **How much of the remaining land on the farm will become non-farmable if this site is selected?** This alternative produces 2 small parcels less than 20 acres in size and splits 4 farming operations. A score of 13 was given to this criterion. (See Map under Supporting Documentation at the back of this document)
7. **Does the site have available adequate supply of farm support services and markets?** All required services are available. This project would not have an impact on farm services; therefore a score of 5 was assigned to this criterion.
8. **Does this site have substantial and well maintained on farm investments such as barns, fruit trees and vines, field terraces, drainage, irrigation, waterways, and other soil and water conservation measures?** This alternative crosses about 13 different farming operations. Although the amount of on farm investment varies according to the number of acres in the alternative, it is safe to say that overall the investment is high. Farmsteads including barns, shops, grain storage facilities and farm machinery were observed on most of the farms. Many

of the fields have soil and water conservation measures applied. Drainage has been applied to bottomland areas. A score of 20 was given to this criterion.

9. **Would this project, by converting the land to nonagricultural use, reduce the support for farm support services in the area?** Some reduction in demand for support services would be expected. However, considering there are over 266,000 acres of farmland in the county, the conversion of 100 acres would result in no significant reduction in demand for services. A score of 0 was given to this criterion.
10. **Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?** With the new highway being a limited entry access, the main factor governing the conversion of the surrounding farmland to nonagricultural use is the distance you have to drive to an access point. If the C3 alternative were chosen, it would be relatively close to the access points that already exist and the number of arterial roads that connect with this alternative. The chance of development to the surrounding farmland would be greater. A score of 2 was given to this criterion.

Additional Notes

This alternative has the lowest number of acres (94.8) of prime and statewide important farmland and has the lowest number of acres converted (102) in the right-of-way.

FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS
Alternative E2 – DEIS
US Hwy 95 Thorn Creek to Moscow, Idaho

Explanation of answers to Part VI Site Assessment Criteria:

1. **How much land is in non-urban use within a radius of 1.0 mile from the project?** A buffer of one-mile radius around the right-of-way was generated and laid over the land use map. The area covers 9,446.3 acres. Calculations indicated that 8,322.9 acres or 88.2 percent of the area was in non-urban use. A score of 14 was applied to this criterion. (See Map under Supporting Documentation at the back of this document.
2. **How much of the perimeter of the site borders in non-urban use?** The border of the right-of-way is 63,290 feet. According to measurements 91.6 percent this perimeter is in non-urban use. A score of 10 was applied to this criterion.
3. **How much of the site has been farmed more than five of the last ten years**? 96.2 acres or 60.8 percent of the right-of-way proposed for conversion was farmed for five of the last ten years. 43.5 acres or 27.7 percent of this route is in the Conservation Reserve Program. A score of 11 was applied to this criterion. (See Map under Supporting Documentation at the back of this document)
4. **Is the site subject to state or local government policies or programs to protect farmland?** Based on Latah County land use maps, Latah County Comprehensive Plan 1995, approximately 85 percent of the land along the project site is zoned under Productive and Rural Protection; thus a score of 20 was applied to this criterion. Land enrolled in the Conservation Reserve Program (CRP) is under a contract that lasts from 10 to 15 years.
5. **Are the farm units containing the site as large as the average-size farming unit in the county**? The average farming operation in Latah County is 494 acres. According to FSA records the average size farm where this alternative is located is 636 acres. A score of 10 was given to this criterion.
6. **How much of the remaining land on the farm will become non-farmable if this site is selected?** This alternative produces 4 small parcels less than 20 acres in size and splits 4 farming operations. A score of 17 was given to this criterion. (See Map under Supporting Documentation at the back of this document)
7. **Does the site have available adequate supply of farm support services and markets?** All required services are available. This project would not have an impact on farm services; therefore a score of 5 was assigned to this criterion.
8. **Does this site have substantial and well maintained on farm investments such as barns, fruit trees and vines, field terraces, drainage, irrigation, waterways, and other soil and water conservation measures?** This alternative crosses about 9 different farming operations. Although the amount of on farm investment varies according to the number of acres in the

alternative, it is safe to say that overall the investment is high. Farmsteads including barns, shops, grain storage facilities and farm machinery were observed on most of the farms. Many of the fields have soil and water conservation measures applied. Drainage has been applied to bottomland areas. A score of 20 was given to this criterion.

9. **Would this project, by converting the land to nonagricultural use, reduce the support for farm support services in the area?** Some reduction in demand for support services would be expected. However, considering there are over 266,000 acres of farmland in the county, the conversion of 158 acres would result in no significant reduction in demand for services. A score of 0 was given to this criterion.

10. **Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of the surrounding farmland to nonagricultural use?** With the new highway being a limited entry access, the main factor governing the conversion of the surrounding farmland to nonagricultural use is the distance you have to drive to an access point. If the E2 alternative were chosen, it would be a great distance to the access points. Therefore, the chance of development to the surrounding farmland could be less. A score of 4 was given to this criterion.

Final Assessment

A final score for each alternative is obtained by combining the LE and the SA values. The site with the lowest score would have the least impact on farmland conversion. The findings obtained by this evaluation, along with all the other assessments, are then used as a guide in making the final decision.

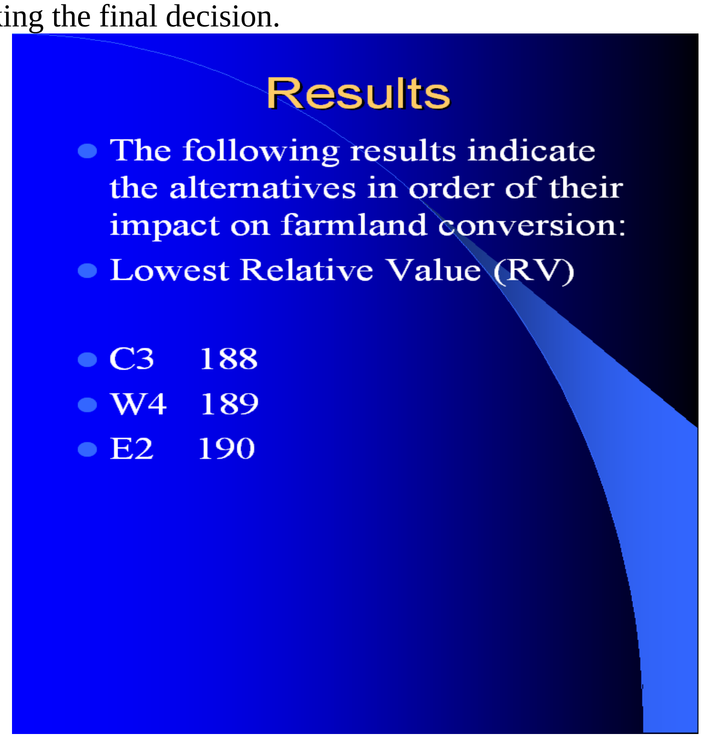


Table 4

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request 12/3/06 — 4. Sheet 1 of 1
1. Name of Project **Thorncreek Rd. to Moscow ph 2**	5. Federal Agency Involved **FHWA**
2. Type of Project **Transportation**	6. County and State **Latah County, Idaho**
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **11/20/06** — 2. Person Completing Form **Ed Haagen**
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐	4. Acres Irrigated **0** — Average Farm Size **494**
5. Major Crop(s) **Winter Wheat** — 6. Farmable Land in Government Jurisdiction Acres: %	7. Amount of Farmland As Defined in FPPA Acres: **266,300** % **38**
8. Name Of Land Evaluation System Used **LESA** — 9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS **11/27/06**

PART III *(To be completed by Federal Agency)*	Maximum Points	Alternative Corridor For Segment ____ Corridor W4	Corridor C3	Corridor E2	Corridor
A. Total Acres To Be Converted Directly		159	102	158	
B. Total Acres To Be Converted Indirectly, Or To Receive Services		0	0	0	
C. Total Acres In Corridor		159	102	158	
PART IV *(To be completed by NRCS)* **Land Evaluation Information**					
A. Total Acres Prime And Unique Farmland		47	25	51	
B. Total Acres Statewide And Local Important Farmland		105	70	95	
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0	0	0	
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		0	0	0	
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*		79	79	79	
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	**Maximum Points**				
1. Area in Nonurban Use	15	14	14	14	
2. Perimeter in Nonurban Use	10	9	8	10	
3. Percent Of Corridor Being Farmed	20	19	17	11	
4. Protection Provided By State And Local Government	20	20	20	20	
5. Size of Present Farm Unit Compared To Average	10	10	10	10	
6. Creation Of Nonfarmable Farmland	25	10	13	17	
7. Availablility Of Farm Support Services	5	5	5	5	
8. On-Farm Investments	20	20	20	20	
9. Effects Of Conversion On Farm Support Services	25	0	0	0	
10. Compatibility With Existing Agricultural Use	10	3	2	4	
TOTAL CORRIDOR ASSESSMENT POINTS	160	110	109	111	
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	79	79	79	
Total Corridor Assessment (From Part VI above or a local site assessment)	160	110	109	111	
TOTAL POINTS *(Total of above 2 lines)*	260	189	188	190	

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES ☐ NO ☑

5. Reason For Selection:

See Attached Remarks For Each Alternative

Signature of Person Completing this Part: **Ed Haagen** — DATE 12/3/06

NOTE: Complete a form for each segment with more than one Alternate Corridor

Summary of Results:

The objective of this study was to assess the impact each of the alternatives would have on farmland in the project area. To achieve this goal a farmland conversion impact rating for corridor type projects was done on each alternative. (NRCS-CPA-106 form) This analysis was also done to comply with the Farmland Protection Policy Act (FPPA). The requirements state that federal agencies involved in proposed projects that convert farmland to nonagricultural use must complete this form.

Calculations were done with the aid of a geographic information program called Arc View. To determine the extent of each alternative a CAD line drawing was provided by the Idaho Transportation Department for each of the routes and the existing Hwy 95 right-of-way. Because this analysis deals only with land use change, the existing highway was subtracted from each of the alternatives to obtain the total area to be converted. (See Table 2.) The area to be converted ranged from a low of 102 acres in route C3 to a high of 159 acres in W4. The E2 alignment was just under that with158 acres converted.

The acres of prime and statewide important farmland were calculated by placing the outline of each alignment over soil maps from the Soil Survey of Latah County. The lowest number of acres of important farmland affected was in alignment C3 with 95 acres. The highest was W4 with 152 acres. The E2 alignment impacted 146 acres of prime and statewide important farmland. (See Table 3.)

To evaluate the productive capability of the soils in each alignment you must determine the value of all the soils in that route. When the soil survey was completed, a local committee evaluated the soils and assigned a relative value to each map unit based on productive capability. Winter wheat yields were used as a base. The highest value given was 100. All other units were given a lesser value. To compare routes, the relative value of each map unit was multiplied by the number of acres within each alternative. The sum of these values was divided by the total number of acres in each route to obtain a relative value (RV) for each alternative. The (RV) for all three alternatives, when rounded off, was 79. This indicated very little difference between the productive capability of the soils within each alternative. Calculations are presented in the supporting documentation.

Another part of the evaluation, site assessment (SA), deals with impacts on the farming community that are not soil related. Ten items were assessed and the scores posted on Part VI of the form NRCS-CPA-106. A detailed explanation of the criteria and scores assigned is included with this report.

The final impact rating (IR) is the sum of soil and non-soil related criteria. The higher the rating the more of an impact there is on farmland conversion. The lowest scoring alternative was the C3 route. The next alternative was W4 with a rating of 189 and the highest rating was E2 with 190. This is a very narrow margin. The recommended alternative from the perspective of impact on farmland conversion would be the C3 alignment. The C3 option follows more of the existing right-of-way. North of Eid Road it turns north and enters the highway again at the top of the hill near Cameron Road. It has the lowest total area of 154 acres and when the existing right-of-way is taken out (52 Ac.) the area to be converted is only 102 acres. This route also has the lowest acreage of converted prime or statewide important farmland at 95 acres. The number of acres that are in active production is the lowest with 83.2 acres. During the initial studies the E2 route was promoted because of the amount of CRP acres in that route. Alternative E2 has 27.7% in CRP. However, the E2 route has more acres (96.2) actively farmed after the CRP is subtracted out.

Effects of the proposed action.

The extent of the direct and/or indirect effects on agriculture varies with each of the 3 different alternatives proposed by ITD. A detailed analysis was conducted using the Land Evaluation and Site Assessment on each alternative to determine the effects this new highway would have on agriculture.

The most direct effect would be the loss of production for the area within each right-of-way (ROW). Each alternative would result in the loss of prime and statewide important farmland. Actual acres affected for each alternative are listed in table 3. Direct impacts would also include post construction erosion and sedimentation from cut and fill areas and the interruption of surface drainage patterns.

Indirect effects are harder to measure but are equally as important to a viable agricultural community. When a right-of-way cuts across the landscape, it transects ownership patterns. Often it splits a farming operation or creates small parcels that are not economical to farm. Also the shape and access of the resulting fields may create additional expense to the producers. Impacts to the support services are also affected by the proposed action. Farm services will no longer be utilized on the area taken for the right-of-way.

The cumulative effect of constructing a new highway, in rural areas such as Latah County, is increased access for development. The increased development generally results in a loss of productive agricultural land. Although ITD has designated this project a limited entry access highway; this limitation may not prevent increased development along the highway corridor. The improved highway system between Moscow and Lewiston will be an important consideration by people interested in moving to the area. Business and industry will also consider Moscow a more desirable location to build with the new highway.

Supporting Documents:

Definitions:

Prime Farmland

Prime farmlands meet all the following criteria: Terms used in this section are defined in USDA publications: ``Soil Taxonomy, Agriculture Handbook 436''; ``Soil Survey Manual, Agriculture Handbook 18''; ``Rainfall-erosion Losses From Cropland, Agriculture Handbook 282''; ``Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss, Agriculture Handbook 346''; and ``Saline and Alkali Soils, Agriculture Handbook 60.''

(i) The soils have:

(A) Aquic, udic, ustic, or xeric moisture regimes and sufficient available water capacity within a depth of 40 inches (1 meter), or in the root zone (root zone is the part of the soil that is penetrated or can be penetrated by plant roots) if the root zone is less than 40 inches deep, to produce the commonly grown cultivated crops (cultivated crops include, but are not limited to, grain, forage, fiber, oilseed, sugar beets, sugarcane, vegetables, tobacco, orchard, vineyard, and bush fruit crops) adapted to the region in 7 or more years out of 10; or

(B) Xeric or ustic moisture regimes in which the available water capacity is limited, but the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; or,

(C) Aridic or torric moisture regimes and the area has a developed irrigation water supply that is dependable and of adequate quality; and,

(ii) The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50 cm), have a mean annual temperature higher than 32 deg. F (0 deg. C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47 deg. F (8 deg. C); in soils that have no O horizon, the mean summer temperature is higher than 59 deg. F (15 deg. C);
and,

(iii) The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep;
and,

(iv) The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown;
and,

(v) The soils can be managed so that, in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep, during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 15;
and,

(vi) The soils are not flooded frequently during the growing season (less often than once in 2 years);
and,

(vii) The product of K (erodibility factor) x percent slope is less than 2.0, and the product of I (soils erodibility) x C (climatic factor) does not exceed 60;
and

(viii) The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50 cm) and the mean annual soil temperature at a depth of 20 inches (50 cm) is less than 59 deg. F (15 deg. C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59 deg. F (15 deg. C) or higher;
and,

(ix) Less than 10 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches (7.6 cm).

Unique farmland—

(1) General. Unique farmland is land other than prime farmland that is used for the production of **specific** high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables.
(2) Specific characteristics of unique farmland. (i) Is used for a specific high-value food or fiber crop; (ii) Has a moisture supply that is adequate for the specific crop; the supply is from stored moisture, precipitation, or a developed-irrigation system; (iii) Combines favorable factors of soil quality, growing season, temperature, humidity, air drainage, elevation, aspect, or other conditions, such a nearness to market, that favor the growth of a specific food or fiber crop.

In Latah County there are no crops designated as unique, so no unique farmland occurs in the county.

Statewide Important Farmland-

Specific Criteria for the State of Idaho

I. The soils that do not qualify as prime farmlands have:
   A. Xeric or Aquic moisture regimes (enough natural precipitation to annually crop) in which the available water capacity is too low for nonirrigated farming, but the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality,

   or

   B. Aridic or torric moisture regimes and the area has a developed irrigation water supply that is dependable and of adequate quality,

or

C. Aridic or torric moisture regime bordering on Xeric and sufficient precipitation and available water capacity to crop alternate years with crops harvested at least 75 percent of planting. Yields are sufficient for economic return.

II. The soils have a temperature that is frigid, or mesic, or cryic if soils are warm enough to produce at least one crop (pergelic regimes are excluded). These are soils that, at a depth of 20 inches (50 cm), have a mean annual temperature higher than 32(F (0(C). In addition, the mean summer temperature at this depth is higher than 57(F (15(C), and

III. The soils have a pH between 4.5 and 9.0 in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep (surface layer has a pH acceptable for seed germination of common crops), and

IV. The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow hay or crops common to the area to be harvested, and

V. The soils can be managed so that during part of each year the conductivity of the saturation extract is less than 8 mmhos/cm and the exchangeable sodium percentage (ESP is less than 40 in the root zone below the surface layer, and

VI. The soils are not flooded frequently (less often than once in 2 years) for very long duration (more than 30 days) during the growing season, or the flooding is controlled so that crops common to the areas or hay can be harvested and

VII. The product of K (erodibility factor) x percent slope is less than 6 for nonirrigated and less than 3 for irrigated areas, and the product of I (soils wind erodibility factor) x C (climate factor) does not exceed 80, and

VIII. Less than 35 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches (7.6 cm) but less than 10 inches (25 cm).

IX. The soils have at least 2.5 inches of available water capacity and are at least 20 inches to bedrock or nonrippable hardpan.

Total Acres in Prime and Statewide Important Farmland Tables

W4

MUSYM	MUNAME	DETERM	PROIND	ACRES		
26	LATAHCO SILT LOAM, 0 TO 3 PERCENT SLOPES	PRIME	82	6.39	523.8	
26	LATAHCO SILT LOAM, 0 TO 3 PERCENT SLOPES	PRIME	82	8.72	714.7	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	1.10	97.1	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	2.29	201.4	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	4.68	411.7	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	1.04	91.1	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	10.29	905.5	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	5.12	450.2	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.08	7.0	
37	PALOUSE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	PRIME	82	0.24	19.6	
53	THATUNA SILT LOAM, 3 TO 7 PERCENT SLOPES	PRIME	94	6.72	631.3	46.7
25	LATAH SILT LOAM, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	2.21	156.6	
25	LATAH SILT LOAM, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	5.98	424.6	
25	LATAH SILT LOAM, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	1.46	103.8	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.40	182.4	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.05	3.4	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.10	83.4	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.44	261.4	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	7.98	606.6	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.98	74.6	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.40	182.1	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	4.42	335.7	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	8.49	645.1	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.88	142.6	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.32	100.3	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.11	84.3	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.25	18.6	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	4.57	347.3	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.99	227.5	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.43	260.6	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.13	10.1	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.74	283.9	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.01	0.6	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.95	72.0	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	5.65	462.9	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	4.19	343.5	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	6.94	568.9	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	0.51	41.4	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.01	82.8	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.14	93.2	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	5.98	454.1	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.06	156.5	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.22	92.7	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.46	111.2	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.47	120.8	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	0.21	17.2	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	6.56	537.9	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	3.13	257.0	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.80	147.8	
65	WESTLAKE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	0.02	1.3	
65	WESTLAKE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	0.74	52.3	105.3
10	GARFIELD SILT LOAM, 3 TO 30 PERCENT SLOPES		47	1.22	57.2	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	1.96	113.7	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	2.79	162.0	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	0.01	0.5	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	0.92	53.4	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	0.13	7.4	7.0
				159.01	12596.8	159.0
					79.2	

C3

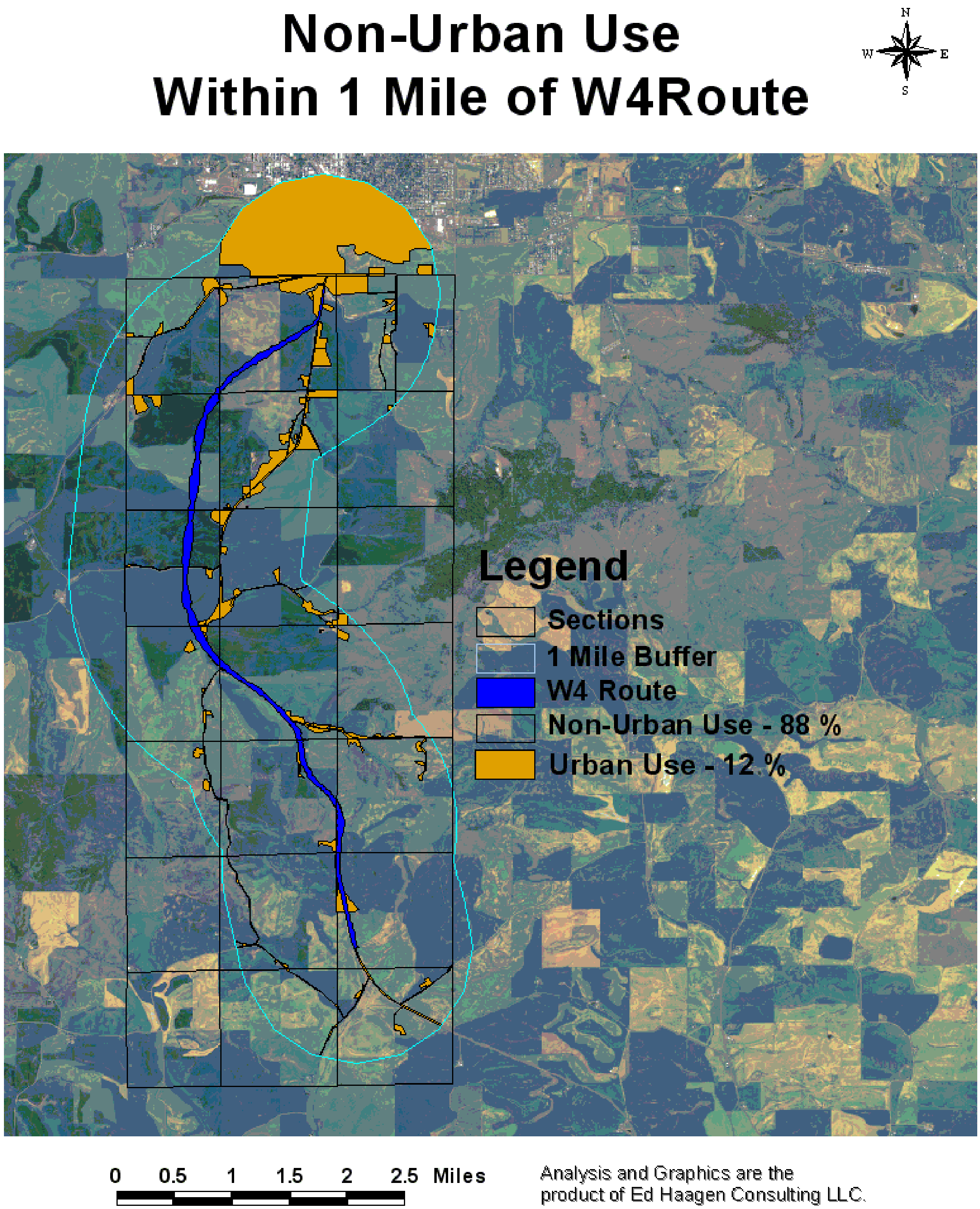
MUSYM	MUNAME	DETERM	PROIND	ACRES		
37	PALOUSE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	PRIME	82	0.13	10.25	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	4.49	395.47	
26	LATAHCO SILT LOAM, 0 TO 3 PERCENT SLOPES	PRIME	82	2.76	226.40	
26	LATAHCO SILT LOAM, 0 TO 3 PERCENT SLOPES	PRIME	82	4.53	371.62	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	1.68	147.40	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	6.78	596.99	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.04	3.87	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.00	0.09	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	4.57	402.51	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.08	7.04	25.07
65	WESTLAKE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	0.01	0.64	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	0.27	22.22	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.05	3.80	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.28	173.13	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.00	0.08	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.20	14.90	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.10	7.90	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.77	58.75	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.80	136.80	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	2.71	221.81	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	4.36	331.66	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.39	113.82	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	5.09	417.22	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.97	149.42	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.52	267.75	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.99	227.24	
25	LATAH SILT LOAM, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	1.84	130.50	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.98	226.25	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.66	50.08	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.34	109.47	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.08	233.70	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	4.02	305.44	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	6.32	518.16	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.06	232.64	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	5.18	424.51	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	3.18	261.01	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.19	90.74	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.02	77.22	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.43	184.83	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.16	12.31	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.66	135.79	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.04	79.19	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.00	0.08	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.20	91.28	
65	WESTLAKE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	0.73	51.90	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.14	93.23	69.72
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	2.94	170.46	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	0.69	40.14	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	2.25	130.73	
10	GARFIELD SILT LOAM, 3 TO 30 PERCENT SLOPES		47	1.00	46.86	6.88
				101.67	8005.30	101.67
					78.74	

E2

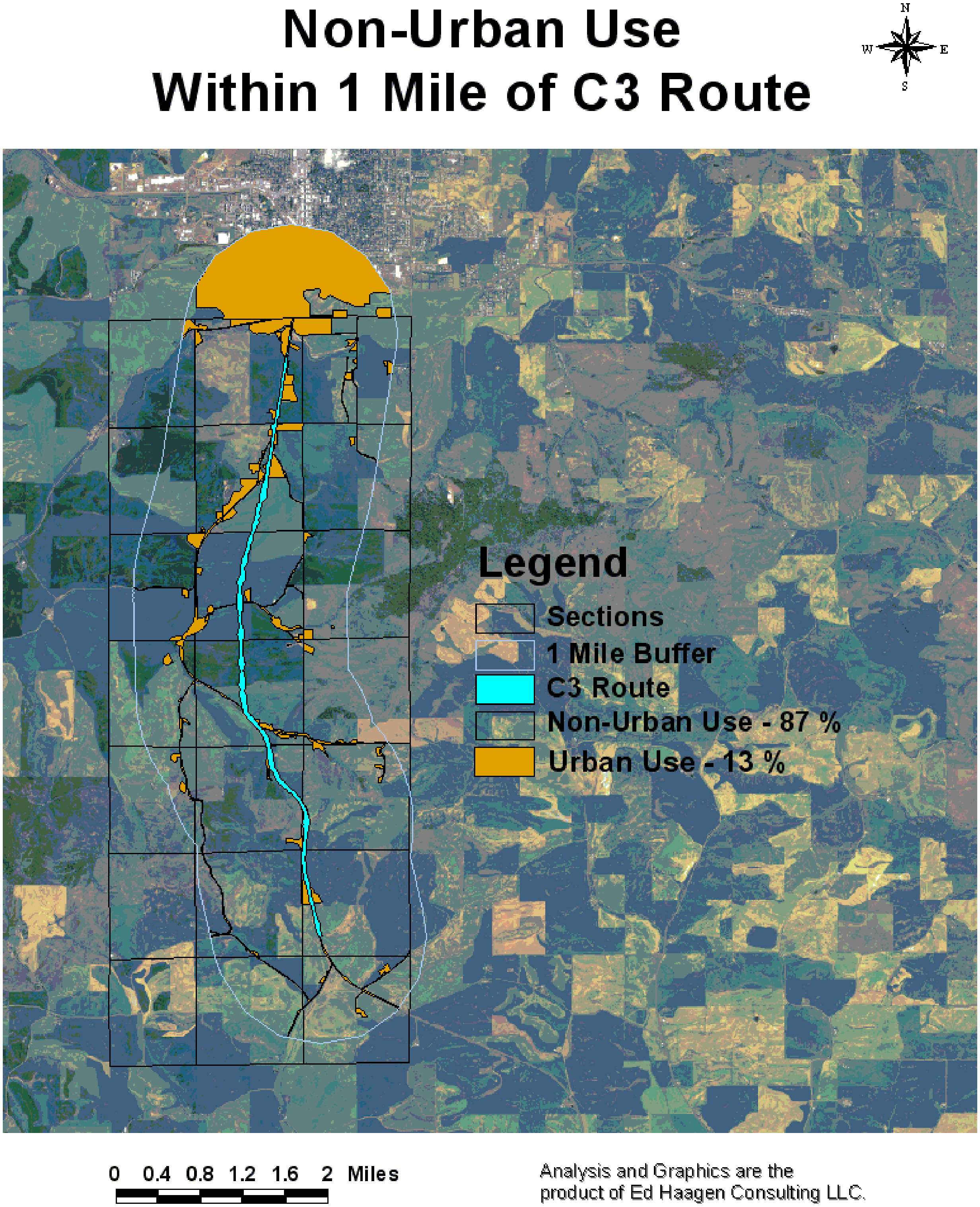
MUSYM	MUNAME	DETERM	PROIN D	ACRES		
37	PALOUSE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	PRIME	82	2.71	222.55	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	5.97	525.62	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.10	9.06	
35	PALOUSE SILT LOAM, 3 TO 7 PERCENT SLOPES	PRIME	100	10.51	1050.60	
53	THATUNA SILT LOAM, 3 TO 7 PERCENT SLOPES	PRIME	94	0.34	32.24	
35	PALOUSE SILT LOAM, 3 TO 7 PERCENT SLOPES	PRIME	100	11.18	1117.80	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	1.24	109.12	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	2.26	198.88	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.48	42.15	
35	PALOUSE SILT LOAM, 3 TO 7 PERCENT SLOPES	PRIME	100	5.18	517.50	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	1.09	96.01	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	1.23	108.24	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	4.79	421.08	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	3.65	321.46	
28	LATAHCO-THATUNA SILT LOAMS, 0 TO 5 PERCENT SLOPES	PRIME	88	0.08	6.60	50.81
65	WESTLAKE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	0.03	2.06	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	8.70	660.97	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.00	0.30	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.37	28.12	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.11	7.98	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	0.55	44.85	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.59	130.22	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	5.55	421.50	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	6.61	502.13	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.01	0.46	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.55	41.88	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.61	131.61	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	2.34	191.47	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.77	144.98	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.25	102.09	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.18	89.98	
24	LARKIN SILT LOAM, 12 TO 35 PERCENT SLOPES	STATEWIDE	71	8.00	567.93	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.94	223.52	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.17	165.15	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.92	69.69	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.50	38.08	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.06	80.41	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.76	57.61	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.78	59.20	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.95	224.50	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.19	97.66	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.61	198.51	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	3.81	289.64	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	5.95	452.43	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.46	119.56	
45	SOUTHWICK SILT LOAM, 12 TO 25 PERCENT SLOPES	STATEWIDE	65	2.08	135.27	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.50	38.00	
34	NAFF-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.07	5.24	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	0.44	33.67	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	6.73	551.78	
33	NAFF-PALOUSE SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	10.30	782.65	
57	TILMA-THATUNA SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	2.02	165.97	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	2.35	178.30	
56	TILMA-NAFF SILT LOAMS, 7 TO 25 PERCENT SLOPES	STATEWIDE	76	1.25	95.00	

65	WESTLAKE-LATAHCO SILT LOAMS, 0 TO 3 PERCENT SLOPES	STATEWIDE	71	0.74	52.82	
36	PALOUSE SILT LOAM, 7 TO 25 PERCENT SLOPES	STATEWIDE	82	1.09	89.46	94.87
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	1.13	65.31	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	0.00	0.06	
48	SPOKANE LOAM, 15 TO 35 PERCENT SLOPES		0	3.31	0.00	
54	THATUNA-NAFF SILT LOAMS, 25 TO 40 PERCENT SLOPES		58	6.68	387.67	
10	GARFIELD SILT LOAM, 3 TO 30 PERCENT SLOPES		47	0.70	33.09	
10	GARFIELD SILT LOAM, 3 TO 30 PERCENT SLOPES		47	0.06	2.82	
10	GARFIELD SILT LOAM, 3 TO 30 PERCENT SLOPES		47	0.68	32.10	12.56
				158.24	12572.60	158.24
					79.46	

Site Assessment for the 3 Alternatives

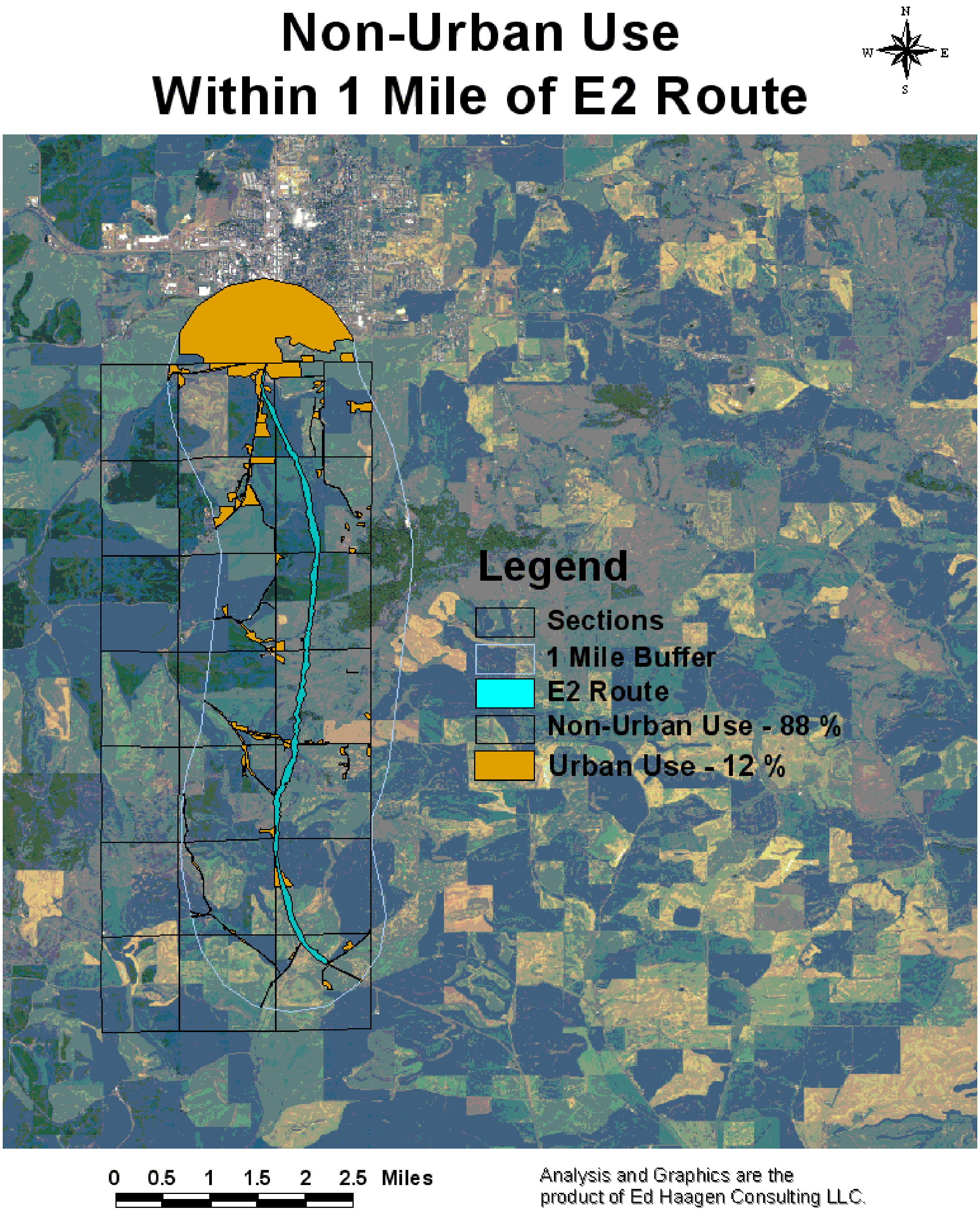


Non-Urban Use Within 1 Mile of C3 Route



Analysis and Graphics are the product of Ed Haagen Consulting LLC.

Non-Urban Use
Within 1 Mile of E2 Route



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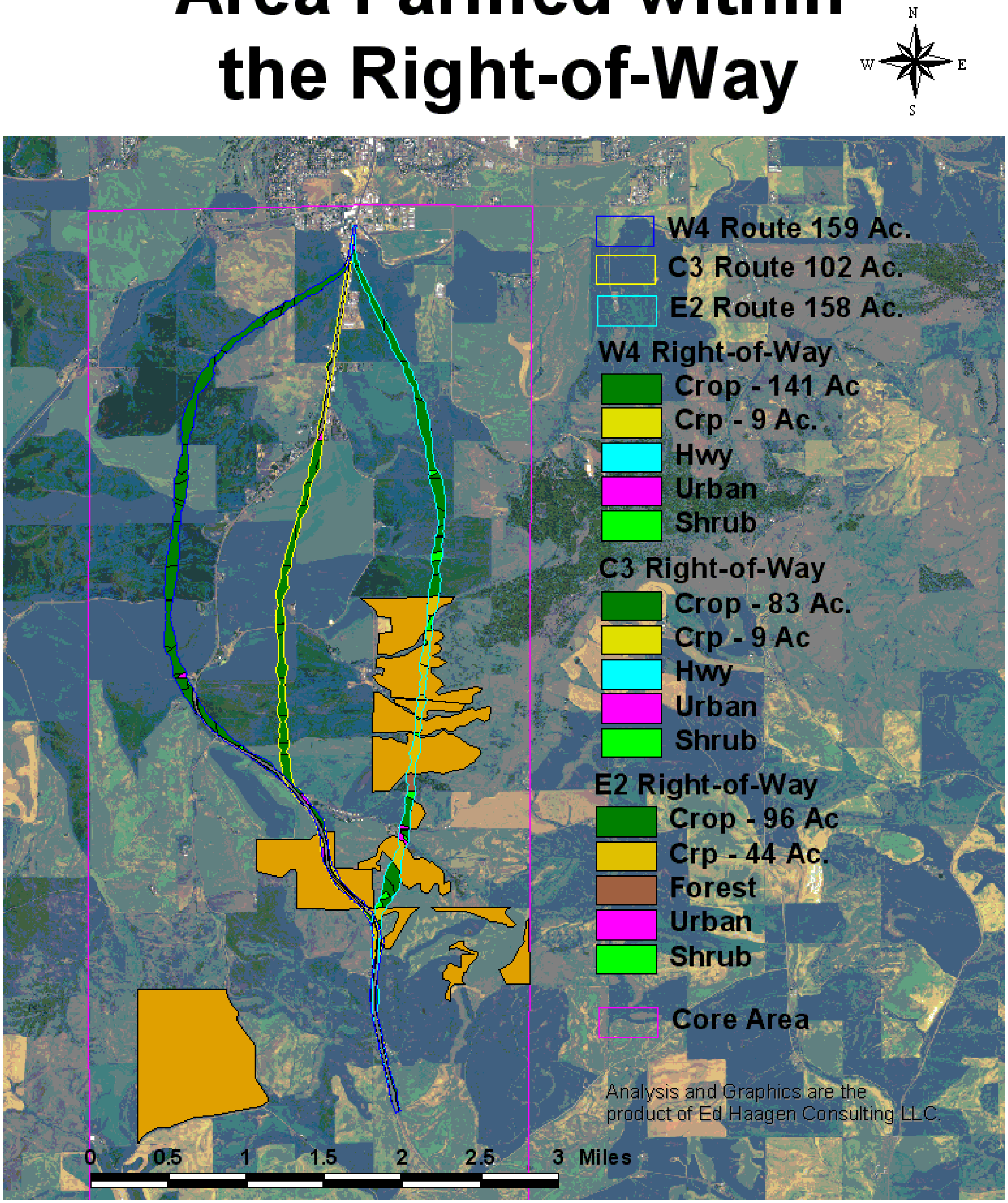
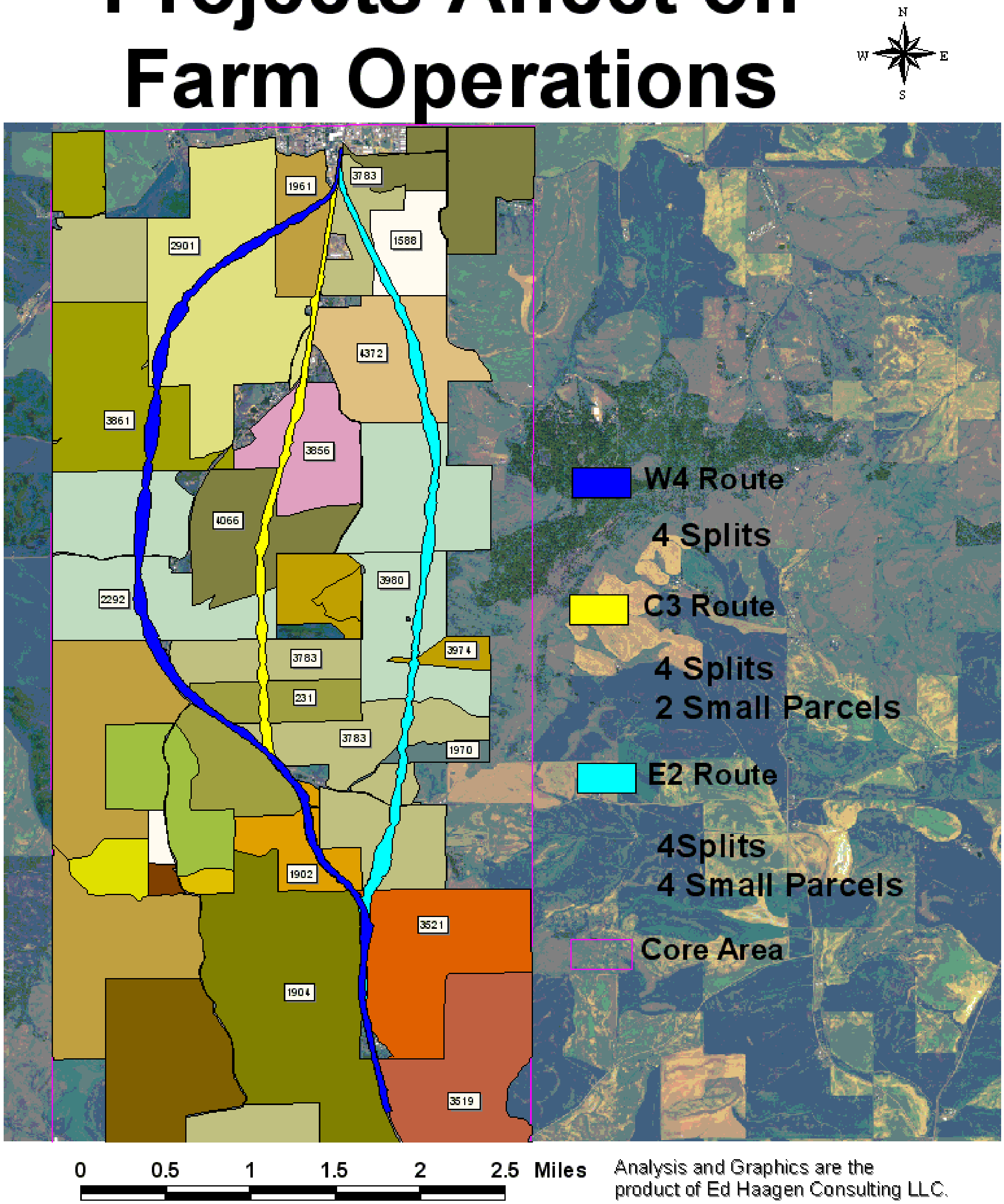
Area Farmed within the Right-of-Way



Projects Affect on Farm Operations



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